```
      name:  <unnamed>
       log:  /Users/connorbrennan/Library/CloudStorage/OneDrive-TheUniversityo
> fChicago/mmb/output/stepwise_regressions/piq_timing_max_all_det.smcl
  log type:  smcl
 opened on:  10 Jan 2025, 11:33:23
  - capture ! rm ./output/stepwise_regressions/`depvar'_`type'.pdf
  = capture ! rm ./output/stepwise_regressions/piq_timing_max_all_det.pdf
  - di "*******************************************************************
> **********"
*********************************************************************************
> **
  - di "Outcomes of bi-directional stepwise regressions with `depvar' with rul
> e fixed effects"
  = di "Outcomes of bi-directional stepwise regressions with piq_timing_max wi
> th rule fixed effects"
Outcomes of bi-directional stepwise regressions with piq_timing_max with rule
> fixed effects
  - di "Independent Variable set: `type'"
  = di "Independent Variable set: all_det"
Independent Variable set: all_det
  - di "*******************************************************************
> **********"
*********************************************************************************
> **
  - ${reg_`depvar'_`type'}
  = nbreg piq_timing_max   ln_neq cb_authors_ext estimated est_late est_early
>   wg_ndx_other stky_pr_rotemberg    stky_pr_calvo  if piq_timing_max<60 , vc
> e(r)
  ───────────────────────────────────────────────────────────────────────
> ──────────────────────────────────── begin nbreg ──────────────────────
    - if _by() {
      local BY `"by `_byvars'`_byrc0':"'
      }
    - `BY' _vce_parserun nbreg, mark(Exposure OFFset CLuster) : `0'
    = _vce_parserun nbreg, mark(Exposure OFFset CLuster) : piq_timing_max    l
> n_neq cb_authors_ext estimated est_late est_early   wg_ndx_other stky_pr_rot
> emberg    stky_pr_calvo  if piq_timing_max<60 , vce(r)
    ─────────────────────────────────────────────────────────────────────
> ─────────────────────────── begin _vce_parserun ───────────────────────
      - version 9
      - local version : di "version " string(_caller()) ":"
      - local bycall = _by()
      - _on_colon_parse `0'
      = _on_colon_parse nbreg, mark(Exposure OFFset CLuster) : piq_timing_max
>   ln_neq cb_authors_ext estimated est_late est_early   wg_ndx_other stky_pr_
```

```
> rotemberg    stky_pr_calvo  if piq_timing_max<60 , vce(r)
    ────────────────────────────────────────────────────────────
> ──────────────────────────────── begin _on_colon_parse ────────────
        - version 8.2
        - sreturn local before ""
        - sreturn local after ""
        - gettoken before after : 0, parse(":") bind match(par) quotes
        - if "`par'" != "" {
        = if "" != "" {
          local before `"(`before')"'
          }
        - if `"`before'"' == ":" {
        = if `"nbreg, mark(Exposure OFFset CLuster) "' == ":" {
          sreturn local after `"`after'"'
          exit
          }
        - while `"`COLON'"' != ":" & `"`after'"' != "" {
        = while `""' != ":" & `": piq_timing_max   ln_neq cb_authors_ext estim
> ated est_late est_early   wg_ndx_other stky_pr_rotemberg    stky_pr_calvo  i
> f piq_timing_max<60 , vce(r)"' != "" {
        - gettoken COLON after : after, parse(":") bind match(par) quotes
        - if "`par'" != "" {
        = if "" != "" {
          local before `before' (`COLON')
          local COLON
          }
        - else if `"`COLON'"' != ":" {
        = else if `":"' != ":" {
          local before `"`before' `COLON'"'
          local COLON
          }
        - }
        - while `"`COLON'"' != ":" & `"`after'"' != "" {
        = while `":"' != ":" & `" piq_timing_max   ln_neq cb_authors_ext estim
> ated est_late est_early   wg_ndx_other stky_pr_rotemberg    stky_pr_calvo  i
> f piq_timing_max<60 , vce(r)"' != "" {
          gettoken COLON after : after, parse(":") bind match(par) quotes
          if "`par'" != "" {
          local before `before' (`COLON')
          local COLON
          }
          else if `"`COLON'"' != ":" {
          local before `"`before' `COLON'"'
          local COLON
          }
          }
```

```
      - if `"`COLON'"' != ":" {
      = if `":"' != ":" {
        di as err "'' found where ':' expected"
        exit 198
        }
      - sreturn local before `"`before'"'
      = sreturn local before `"nbreg, mark(Exposure OFFset CLuster) "'
      - sreturn local after `"`after'"'
      = sreturn local after `" piq_timing_max   ln_neq cb_authors_ext estima
> ted est_late est_early   wg_ndx_other stky_pr_rotemberg    stky_pr_calvo  if
>  piq_timing_max<60 , vce(r)"'
      ────────────────────────────────────────────────────────────────────────
> ─────────────────────────────────────── end _on_colon_parse ───────────────
      - local ZERO `"`s(before)'"'
      = local ZERO `"nbreg, mark(Exposure OFFset CLuster) "'
      - local 0 `"`s(after)'"'
      = local 0 `" piq_timing_max   ln_neq cb_authors_ext estimated est_late e
> st_early   wg_ndx_other stky_pr_rotemberg    stky_pr_calvo  if piq_timing_ma
> x<60 , vce(r)"'
      - quietly syntax [anything(equalok)] [if] [in] [fw aw pw iw] [, VCE(stri
> ng asis) VCE1(string asis) LRMODEL * ]
      - if `"`vce'"' == "" {
      = if `"r"' == "" {
        MYRESULT
        exit
        }
      - local AFTER `"`0'"'
      = local AFTER `" piq_timing_max   ln_neq cb_authors_ext estimated est_la
> te est_early   wg_ndx_other stky_pr_rotemberg    stky_pr_calvo  if piq_timin
> g_max<60 , vce(r)"'
      - local 0 `"`ZERO'"'
      = local 0 `"nbreg, mark(Exposure OFFset CLuster) "'
      - syntax name(name=caller id="calling command name") [, WTYPES(string) N
> OBOOTstrap NOJACKknife NOOTHERvce NOTEST PANELdata STdata bootopts(string as
> is) jkopts(string asis) robustok multivce REQUIREDopts(namelist) NOEQLIST EQ
> opts(passthru) EQARGopts(passthru) noNEEDVARLIST COMMONopts(namelist) MARKop
> ts(passthru) SMARKopts(passthru) RMCOLLopts(passthru) RMDCOLLopts(passthru)
> NUMDEPvars(passthru) NEEDEQUAL ALLDEPSMISsing PARentheses UNPARFIRSTeq OR EQ
> UAL UNEQUALFIRSTeq IGNORENOCONS ]
      - if `"`requiredopts'"' != "" {
      = if `""' != "" {
        tempname reqopts
        .`reqopts' = ._optlist.new
        foreach req of local requiredopts {
        .`reqopts'.addopt `req', passthru
        }
```

```
        }
      - if "`wtypes'" == "" {
      = if "" == "" {
        - local wtypes fw aw pw iw
        - }
      - if "`paneldata'" != "" {
      = if "" != "" {
        local panelopt "CLuster(varname) I(varname)"
        }
      - if "`stdata'" != "" {
      = if "" != "" {
        local stopt "CLuster(varname) SHared(varname)"
        }
      - local typelist svy jackknife bootstrap
      - if "`stdata'" == "" & replay() & ! _by() {
      = if "" == "" & replay() & ! _by() {
        local ecmd `e(cmd)'
        local ecmdname `e(cmdname)'
        if `"`ecmd'"' == "" {
        error 301
        }
        else if `"`ecmd'"' != "`caller'" & `"`ecmdname'"' == "`caller'" & `:li
> st ecmd in typelist' {
        `ecmd' `0'
        MYRESULT exit
        }
        MYRESULT
        exit
        }
      - gettoken svy typelist : typelist
      - if "`reqopts'" != "" {
      = if "" != "" {
        local REQOPTLIST `"`.`reqopts'.dumpoptions'"'
        local REQOPTNAMES `"`.`reqopts'.dumpnames'"'
        }
      - local 0 `"`AFTER'"'
      = local 0 `" piq_timing_max   ln_neq cb_authors_ext estimated est_late e
> st_early   wg_ndx_other stky_pr_rotemberg   stky_pr_calvo  if piq_timing_ma
> x<60 , vce(r)"'
      - quietly syntax [anything(equalok)] [if/] [in] [`wtypes'] [, VCE(string
>  asis) VCE1(string asis) Robust NODOTS `panelopt' `stopt' `REQOPTLIST' * ]
      = quietly syntax [anything(equalok)] [if/] [in] [fw aw pw iw] [, VCE(str
> ing asis) VCE1(string asis) Robust NODOTS    * ]
      - if `:list vce === vce1' {
      = if 0 {
        local vce1
```

```
                }
    - if `"`vce1'"' != "" & "`multivce'" == "" {
    = if `""' != "" & "" == "" {
        di as err "option vce() specified multiple times"
        exit 198
        }
    - if "`robust'" != "" & "`robustok'" == "" {
    = if "" != "" & "" == "" {
        di as err "options vce() and robust may not be combined"
        exit 198
        }
    - if `"`if'"' != "" {
    = if `"piq_timing_max<60 "' != "" {
    - local if `"if (`if')"'
    = local if `"if (piq_timing_max<60 )"'
    - }
    - if "`robust'" != "" {
    = if "" != "" {
        local options `"`robust' `options'"'
        }
    - if "`weight'" != "" {
    = if "" != "" {
        local wgt [`weight'`exp']
        }
    - if `"`options'"' != "" {
    = if `""' != "" {
        local opts `"`:list retok options'"'
        }
    - gettoken uvcetype vceopts : vce, parse(" ,")
    - capture unabVCEtype, `uvcetype'
    = capture unabVCEtype, r
    ────────────────────────────────────────────────────────────────────

  > ───────────────────────── begin _vce_parserun.unabVCEtype ─────────────
        - syntax [, BOOTstrap BStrap JACKknife JACKNife JKnife Robust * ]
        - if "`bstrap'" != "" {
        = if "" != "" {
          local bootstrap bootstrap
          }
        - if "`jknife'" != "" | "`jacknife'" != "" {
        = if "" != "" | "" != "" {
          local jackknife jackknife
          }
        - local vcetype `"`jackknife' `bootstrap' `robust' `options'"'
        = local vcetype `"   robust "'
        - sreturn local vcetype `"`:list retok vcetype'"'
        = sreturn local vcetype `"robust"'
```

```
  -  if c(rc) {
     di as err "invalid vce() option"
     exit c(rc)
     }
  -  local vcetype `s(vcetype)'
  =  local vcetype robust
  -  if "`lrmodel'"!="" {
  =  if ""!="" {
     _check_lrmodel `caller', vcetype(`vcetype')
     }
  -  if `"`vce1'"' != "" & "`multivce'" != "" {
  =  if `""' != "" & "" != "" {
     gettoken uvce1type vce1opts : vce1, parse(" ,")
     capture unabVCEtype, `uvce1type'
     if c(rc) {
     di as err "invalid vce() option"
     exit c(rc)
     }
     local vce1type `s(vcetype)'
     if `:list vce1type in typelist' | `:list vcetype in typelist' {
     di as err "options vce(`vce') and vce(`vce1') cannot be combined"
     exit 198
     }
     MYRESULT
     exit
     }
  -  if _caller() >= 17 {
  -  if "`vcetype'" == "cluster" {
  =  if "robust" == "cluster" {
     gettoken vceopts vce1opts: vceopts, parse(",")
     if `:list sizeof vceopts' > 1 {
     local typelist "`typelist' cluster_multiway"
     local vcetype cluster_multiway
     if `:list sizeof vce1opts' > 0 {
     gettoken comma vce1opts: vce1opts, parse(",")
     local vce1opts: list retokenize vce1opts
     di as err "{p}VCE option " "{bf:`vce1opts'} not allowed{p_end}"
     exit 198
     }
     }
     }
  -  }
  -  if ! `:list vcetype in typelist' {
  =  if ! 0 {
```

```
  - if "`vcetype'" != "robust" & "`noothervce'" == "noothervce" {
  = if "robust" != "robust" & "" == "noothervce" {
    di as err "option vce(`uvcetype') not allowed"
    exit 198
    }
  - MYRESULT
   ────────────────────────────────────────────────────────────
> ──────────────────────────── begin _vce_parserun.MYRESULT ───────────────
  - args exit
  - sreturn local exit `"`exit'"'
  = sreturn local exit `""'
   ────────────────────────────────────────────────────────────
> ──────────────────────────── end _vce_parserun.MYRESULT ─────────────────
  - exit
   ────────────────────────────────────────────────────────────
> ──────────────────────────── end _vce_parserun ─────────────────
  - if "`s(exit)'" != "" {
  = if "" != "" {
    version 10: ereturn local cmdline `"nbreg `0'"'
    exit
    }
  - version 6, missing
  - local version : di "version " string(_caller()) ":"
  - if replay() {
    if "`e(cmd)'" != "nbreg" { error 301 }
    if _by() { error 190 }
    global S_1 = e(chi2_c)
    Display `0'
    error `e(rc)'
    exit
    }
  - `version' `BY' Estimate `0'
  = version 18:  Estimate piq_timing_max   ln_neq cb_authors_ext estimated e
> st_late est_early  wg_ndx_other stky_pr_rotemberg    stky_pr_calvo  if piq_
> timing_max<60 , vce(r)
   ────────────────────────────────────────────────────────────
> ──────────────────────────── begin nbreg.Estimate ──────────────
  - local vvpoi : di "version " string(_caller()) ", missing:"
  - if _caller() >= 11 {
  - local vv : di "version " string(_caller()) ":"
  - local mm e2
  - local negh negh
  - }
  - else {
    local vv "version 8.1:"
    local mm d2
```

```
          }
        - version 6, missing
        - local awopt = cond(_caller()<7, "aw", "")
        - syntax varlist(numeric fv ts) [fw `awopt' pw iw] [if] [in] [, IRr FROM
>  (string) Level(cilevel) OFFset(varname numeric ts) Exposure(varname numeric
>  ts) noCONstant Robust CLuster(varname) SCore(string) NOLOg LOg noDISPLAY noL
>  Rtest Dispersion(string) CRITTYPE(passthru) VCE(passthru) moptobj(passthru)
>  * ]
        = syntax varlist(numeric fv ts) [fw  pw iw] [if] [in] [, IRr FROM(string
>  ) Level(cilevel) OFFset(varname numeric ts) Exposure(varname numeric ts) noC
>  ONstant Robust CLuster(varname) SCore(string) NOLOg LOg noDISPLAY noLRtest D
>  ispersion(string) CRITTYPE(passthru) VCE(passthru) moptobj(passthru) * ]
        - local fvops = "`s(fvops)'" == "true" | _caller() >= 11
        = local fvops = "" == "true" | _caller() >= 11
        - if _by() {
          _byoptnotallowed score() `"`score'"'
          }
        - _get_diopts diopts options, `options'
        = _get_diopts diopts options,
          ────────────────────────────────────────────────────────────────
>  ──────────────────────────────────────────── begin _get_diopts ───────────────
        - version 11
        - syntax namelist(max=2) [, *]
        - gettoken name1 namelist : namelist
        - gettoken name2 namelist : namelist
        - GetDiopts diopts options, `options'
        = GetDiopts diopts options,
          ────────────────────────────────────────────────────────────────
>  ──────────────────────────────────── begin _get_diopts.GetDiopts ───────────────
          - local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLBASElevels
>  NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMPTYcells NO
>  OMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(string) sfor
>  mat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru) FVWRAPON(
>  string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru) NOABBREV
>  ABBREV
          - syntax namelist(max=2) [, `DIOPTS' *]
          = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBASElevels A
>  LLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells
>  EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat
>  (string) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passth
>  ru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passth
>  ru) NOABBREV ABBREV *]
          - opts_exclusive "`allbaselevels' `noallbaselevels'"
          = opts_exclusive " "
          ────────────────────────────────────────────────────────────────
>  ─────────────────────────────────────────── begin opts_exclusive ───────────────
```

```
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    _____
>  ──────────────────────────────── end opts_exclusive ───────────────
            – opts_exclusive "`allbaselevels' `nobaselevels'"
            = opts_exclusive " "
                    _____
>  ──────────────────────────────── begin opts_exclusive ─────────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
                    _____
>  ──────────────────────────────── end opts_exclusive ───────────────
            – opts_exclusive "`baselevels' `nobaselevels'"
            = opts_exclusive " "
                    _____
>  ──────────────────────────────── begin opts_exclusive ─────────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
```

```
          gettoken item`n' opts : opts, bind
          }
        – if `n' < 2 {
        = if 0 < 2 {
        – exit
```
> ──────────────────────────────── end opts_exclusive ──────────
```
        – opts_exclusive "`emptycells' `noemptycells'"
        = opts_exclusive " "
```
> ──────────────────────────────── begin opts_exclusive ────────
```
        – version 8.2
        – args opts optname errcode optslab
        – local opts `opts'
        = local opts
        – local n 0
        – while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
        – if `n' < 2 {
        = if 0 < 2 {
        – exit
```
> ──────────────────────────────── end opts_exclusive ──────────
```
        – opts_exclusive "`fvlabel' `nofvlabel'"
        = opts_exclusive " "
```
> ──────────────────────────────── begin opts_exclusive ────────
```
        – version 8.2
        – args opts optname errcode optslab
        – local opts `opts'
        = local opts
        – local n 0
        – while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
        – if `n' < 2 {
        = if 0 < 2 {
        – exit
```
> ──────────────────────────────── end opts_exclusive ──────────
```
        – opts_exclusive "`omitted' `noomitted'"
```

```
          = opts_exclusive " "
          _____
>  ──────────────────────────────────────── begin opts_exclusive ───────────
          – version 8.2
          – args opts optname errcode optslab
          – local opts `opts'
          = local opts
          – local n 0
          – while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          – if `n' < 2 {
          = if 0 < 2 {
          – exit
          _____
>  ──────────────────────────────────────── end opts_exclusive ─────────────
          – opts_exclusive "`lstretch' `nolstretch'"
          = opts_exclusive " "
          _____
>  ──────────────────────────────────────── begin opts_exclusive ───────────
          – version 8.2
          – args opts optname errcode optslab
          – local opts `opts'
          = local opts
          – local n 0
          – while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          – if `n' < 2 {
          = if 0 < 2 {
          – exit
          _____
>  ──────────────────────────────────────── end opts_exclusive ─────────────
          – opts_exclusive "`cnsreport' `fullcnsreport'"
          = opts_exclusive " "
          _____
>  ──────────────────────────────────────── begin opts_exclusive ───────────
          – version 8.2
          – args opts optname errcode optslab
          – local opts `opts'
          = local opts
          – local n 0
```

```
- while `"`opts'"' != "" {
= while `""' != "" {
  local ++n
  gettoken item`n' opts : opts, bind
  }
- if `n' < 2 {
= if 0 < 2 {
- exit
```
_____

> ──────────────────────────── end opts_exclusive ────────────

```
- opts_exclusive "`coeflegend' `selegend'"
= opts_exclusive " "
```
_____

> ──────────────────────────── begin opts_exclusive ──────────

```
- version 8.2
- args opts optname errcode optslab
- local opts `opts'
= local opts
- local n 0
- while `"`opts'"' != "" {
= while `""' != "" {
  local ++n
  gettoken item`n' opts : opts, bind
  }
- if `n' < 2 {
= if 0 < 2 {
- exit
```
_____

> ──────────────────────────── end opts_exclusive ────────────

```
- opts_exclusive "`noci' `nopvalues'"
= opts_exclusive " "
```
_____

> ──────────────────────────── begin opts_exclusive ──────────

```
- version 8.2
- args opts optname errcode optslab
- local opts `opts'
= local opts
- local n 0
- while `"`opts'"' != "" {
= while `""' != "" {
  local ++n
  gettoken item`n' opts : opts, bind
  }
- if `n' < 2 {
= if 0 < 2 {
- exit
```

```
 ———————————————————————————————————————————————————
> ——————————————————————————————— end opts_exclusive ———————————
          – local K : list sizeof namelist
          – gettoken c_diopts c_opts : namelist
          – opts_exclusive "`coding' `compare'"
          = opts_exclusive " "
          ———————————————————————————————————————————————————
> ——————————————————————————————— begin opts_exclusive —————————
          – version 8.2
          – args opts optname errcode optslab
          – local opts `opts'
          = local opts
          – local n 0
          – while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          – if `n' < 2 {
          = if 0 < 2 {
          – exit
          ———————————————————————————————————————————————————
> ——————————————————————————————— end opts_exclusive ———————————
          – opts_exclusive "`versus' `compare'"
          = opts_exclusive " "
          ———————————————————————————————————————————————————
> ——————————————————————————————— begin opts_exclusive —————————
          – version 8.2
          – args opts optname errcode optslab
          – local opts `opts'
          = local opts
          – local n 0
          – while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          – if `n' < 2 {
          = if 0 < 2 {
          – exit
          ———————————————————————————————————————————————————
> ——————————————————————————————— end opts_exclusive ———————————
          – opts_exclusive "`abbrev' `noabbrev'"
          = opts_exclusive " "
          ———————————————————————————————————————————————————
> ——————————————————————————————— begin opts_exclusive —————————
```

```
    - version 8.2
    - args opts optname errcode optslab
    - local opts `opts'
    = local opts
    - local n 0
    - while `"`opts'"' != "" {
    = while `""' != "" {
      local ++n
      gettoken item`n' opts : opts, bind
      }
    - if `n' < 2 {
    = if 0 < 2 {
    - exit
    _____
```

```
    - local allbaselevels `allbaselevels' `noallbaselevels'
    = local allbaselevels
    - local baselevels `baselevels' `nobaselevels'
    = local baselevels
    - local emptycells `emptycells' `noemptycells'
    = local emptycells
    - local omitted `omitted' `noomitted'
    = local omitted
    - local lstretch `lstretch' `nolstretch'
    = local lstretch
    - local fvlabel `fvlabel' `nofvlabel'
    = local fvlabel
    - local abbrev `abbrev' `noabbrev'
    = local abbrev
    - if "`allbaselevels'`baselevels'" == "" {
    = if "" == "" {
    - if c(showbaselevels) == "all" {
      local allbaselevels allbaselevels
      }
    - else if c(showbaselevels) == "on" {
      local baselevels baselevels
      }
    - }
    - if "`emptycells'" == "" {
    = if "" == "" {
    - if c(showemptycells) == "off" {
      local emptycells noemptycells
      }
    - }
    - if "`omitted'" == "" {
    = if "" == "" {
```

```
  - if c(showomitted) == "off" {
    local omitted noomitted
    }
  - }
  - if "`lstretch'" == "" {
  = if "" == "" {
  - if c(lstretch) == "off" {
    local lstretch nolstretch
    }
  - }
  - if `:length local cformat' {
  = if 0 {
    confirm numeric format `cformat'
    if fmtwidth(`"`cformat'"') > 9 {
    local cformat "%9.0g"
    di "{txt}note: invalid cformat(), using default"
    }
    sreturn local cformat `"`cformat'"'
    local cformat `"cformat(`cformat')"'
    }
  - if `:length local sformat' {
  = if 0 {
    confirm numeric format `sformat'
    if fmtwidth(`"`sformat'"') > 8 {
    local sformat "%8.2f"
    di "{txt}note: invalid sformat(), using default"
    }
    sreturn local sformat `"`sformat'"'
    local sformat `"sformat(`sformat')"'
    }
  - if `:length local pformat' {
  = if 0 {
    confirm numeric format `pformat'
    if fmtwidth(`"`pformat'"') > 5 {
    local pformat "%5.3f"
    di "{txt}note: invalid pformat(), using default"
    }
    sreturn local pformat `"`pformat'"'
    local pformat `"pformat(`pformat')"'
    }
  - if `K' == 1 & `:length local options' {
  = if 2 == 1 & 0 {
    syntax namelist(max=2) [, `DIOPTS']
    }
  - if reldif(`level', c(level)) > 1e-3 {
  = if reldif(95, c(level)) > 1e-3 {
```

```
             local levelopt level(`level')
             }
        - Wrapon , `fvwrapon'
        = Wrapon ,
             _____
>  ─────────────────────────────── begin _get_diopts.Wrapon ───────────
        - capture syntax [, WOrd WIdth]
        - if c(rc) {
          di as err "invalid fvwrapon() option;"
          syntax [, WOrd WIdth]
          exit 198
          }
        - opts_exclusive "`word' `width'" fvwrapon
        = opts_exclusive " " fvwrapon
             _____
>  ─────────────────────────────── begin opts_exclusive ───────────────
        - version 8.2
        - args opts optname errcode optslab
        - local opts `opts'
        = local opts
        - local n 0
        - while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
        - if `n' < 2 {
        = if 0 < 2 {
        - exit
             _____
>  ─────────────────────────────── end opts_exclusive ─────────────────
        - local fvwrapon `word' `width'
        = local fvwrapon
        - if `:length local fvwrapon' {
        = if 0 {
          c_local fvwrapon fvwrapon(`fvwrapon')
          }
             _____
>  ─────────────────────────────── end _get_diopts.Wrapon ─────────────
        - if "`fvwrap'" != "" {
        = if "" != "" {
          FVWrap, `fvwrap'
          }
        - c_local `c_diopts' `levelopt' `vsquish' `allbaselevels' `baselevel
> s' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `coeflegend
> ' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `compare' `fvwr
```

```
> ap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `abbrev'
        = c_local diopts
        - if `K' == 2 {
        = if 2 == 2 {
        - c_local `c_opts' `"`options'"'
        = c_local  options `""'
        - }
        - sreturn local coding `coding'
        = sreturn local coding
        - sreturn local versus `versus'
        = sreturn local versus
        - sreturn local compare `compare'
        = sreturn local compare
        - sreturn local level `level'
        = sreturn local level 95
          ─────────────────────────────────────────────────────────
> ───────────────────────────────── end _get_diopts.GetDiopts ──────────────
        - c_local `name1' `"`diopts'"'
        = c_local diopts `""'
        - local snames : s(macros)
        - foreach sname of local snames {
        - local S_`sname' = s(`sname')
        = local S_level = s(level)
        - }
        - sreturn clear
        - GetDiopts DEFAULT
          ─────────────────────────────────────────────────────────
> ───────────────────────────────── begin _get_diopts.GetDiopts ──────────────
        - local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLBASElevels
> NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMPTYcells NO
> OMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(string) sfor
> mat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru) FVWRAPON(
> string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru) NOABBREV
> ABBREV
        - syntax namelist(max=2) [, `DIOPTS' *]
        = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBASElevels A
> LLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells
> EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat
> (string) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passth
> ru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passth
> ru) NOABBREV ABBREV *]
        - opts_exclusive "`allbaselevels' `noallbaselevels'"
        = opts_exclusive " "
          ─────────────────────────────────────────────────────────
> ───────────────────────────────── begin opts_exclusive ──────────────
        - version 8.2
```

```
        – args opts optname errcode optslab
        – local opts `opts'
        = local opts
        – local n 0
        – while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
        – if `n' < 2 {
        = if 0 < 2 {
        – exit
```

> ———————————————————————— end opts_exclusive ——————————

```
      – opts_exclusive "`allbaselevels' `nobaselevels'"
      = opts_exclusive " "
```

> ———————————————————————— begin opts_exclusive ——————————

```
        – version 8.2
        – args opts optname errcode optslab
        – local opts `opts'
        = local opts
        – local n 0
        – while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
        – if `n' < 2 {
        = if 0 < 2 {
        – exit
```

> ———————————————————————— end opts_exclusive ——————————

```
      – opts_exclusive "`baselevels' `nobaselevels'"
      = opts_exclusive " "
```

> ———————————————————————— begin opts_exclusive ——————————

```
        – version 8.2
        – args opts optname errcode optslab
        – local opts `opts'
        = local opts
        – local n 0
        – while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
```

```
          }
        – if `n' < 2 {
        = if 0 < 2 {
        – exit
          _____
```

> ──────────────────────────── end opts_exclusive ────────────

```
        – opts_exclusive "`emptycells' `noemptycells'"
        = opts_exclusive " "
          _____
```

> ──────────────────────────── begin opts_exclusive ────────────

```
        – version 8.2
        – args opts optname errcode optslab
        – local opts `opts'
        = local opts
        – local n 0
        – while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
        – if `n' < 2 {
        = if 0 < 2 {
        – exit
          _____
```

> ──────────────────────────── end opts_exclusive ────────────

```
        – opts_exclusive "`fvlabel' `nofvlabel'"
        = opts_exclusive " "
          _____
```

> ──────────────────────────── begin opts_exclusive ────────────

```
        – version 8.2
        – args opts optname errcode optslab
        – local opts `opts'
        = local opts
        – local n 0
        – while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
        – if `n' < 2 {
        = if 0 < 2 {
        – exit
          _____
```

> ──────────────────────────── end opts_exclusive ────────────

```
        – opts_exclusive "`omitted' `noomitted'"
        = opts_exclusive " "
```

```
> ────────────────────────────────────────────── begin opts_exclusive ──────────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit

> ──────────────────────────────────────────────── end opts_exclusive ──────────────
            – opts_exclusive "`lstretch' `nolstretch'"
            = opts_exclusive " "

> ────────────────────────────────────────────── begin opts_exclusive ──────────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit

> ──────────────────────────────────────────────── end opts_exclusive ──────────────
            – opts_exclusive "`cnsreport' `fullcnsreport'"
            = opts_exclusive " "

> ────────────────────────────────────────────── begin opts_exclusive ──────────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
```

```
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          - if `n' < 2 {
          = if 0 < 2 {
          - exit
          _____
>  ─────────────────────────────────── end opts_exclusive ───────────────
          - opts_exclusive "`coeflegend' `selegend'"
          = opts_exclusive " "
          _____
>  ─────────────────────────────────── begin opts_exclusive ───────────────
          - version 8.2
          - args opts optname errcode optslab
          - local opts `opts'
          = local opts
          - local n 0
          - while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          - if `n' < 2 {
          = if 0 < 2 {
          - exit
          _____
>  ─────────────────────────────────── end opts_exclusive ───────────────
          - opts_exclusive "`noci' `nopvalues'"
          = opts_exclusive " "
          _____
>  ─────────────────────────────────── begin opts_exclusive ───────────────
          - version 8.2
          - args opts optname errcode optslab
          - local opts `opts'
          = local opts
          - local n 0
          - while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          - if `n' < 2 {
          = if 0 < 2 {
          - exit
          _____
```

```
> ──────────────────────────────────── end opts_exclusive ─────────────
          - local K : list sizeof namelist
          - gettoken c_diopts c_opts : namelist
          - opts_exclusive "`coding' `compare'"
          = opts_exclusive " "
          ─────────────────────────────────────────────────────────────
> ──────────────────────────────────── begin opts_exclusive ──────────
          - version 8.2
          - args opts optname errcode optslab
          - local opts `opts'
          = local opts
          - local n 0
          - while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          - if `n' < 2 {
          = if 0 < 2 {
          - exit
          ─────────────────────────────────────────────────────────────
> ──────────────────────────────────── end opts_exclusive ─────────────
          - opts_exclusive "`versus' `compare'"
          = opts_exclusive " "
          ─────────────────────────────────────────────────────────────
> ──────────────────────────────────── begin opts_exclusive ──────────
          - version 8.2
          - args opts optname errcode optslab
          - local opts `opts'
          = local opts
          - local n 0
          - while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          - if `n' < 2 {
          = if 0 < 2 {
          - exit
          ─────────────────────────────────────────────────────────────
> ──────────────────────────────────── end opts_exclusive ─────────────
          - opts_exclusive "`abbrev' `noabbrev'"
          = opts_exclusive " "
          ─────────────────────────────────────────────────────────────
> ──────────────────────────────────── begin opts_exclusive ──────────
          - version 8.2
```

```
- args opts optname errcode optslab
- local opts `opts'
= local opts
- local n 0
- while `"`opts'"' != "" {
= while `""' != "" {
  local ++n
  gettoken item`n' opts : opts, bind
  }
- if `n' < 2 {
= if 0 < 2 {
- exit
```
───

> ─────────────────────────────── end opts_exclusive ───────────────

```
- local allbaselevels `allbaselevels' `noallbaselevels'
= local allbaselevels
- local baselevels `baselevels' `nobaselevels'
= local baselevels
- local emptycells `emptycells' `noemptycells'
= local emptycells
- local omitted `omitted' `noomitted'
= local omitted
- local lstretch `lstretch' `nolstretch'
= local lstretch
- local fvlabel `fvlabel' `nofvlabel'
= local fvlabel
- local abbrev `abbrev' `noabbrev'
= local abbrev
- if "`allbaselevels'`baselevels'" == "" {
= if "" == "" {
- if c(showbaselevels) == "all" {
  local allbaselevels allbaselevels
  }
- else if c(showbaselevels) == "on" {
  local baselevels baselevels
  }
- }
- if "`emptycells'" == "" {
= if "" == "" {
- if c(showemptycells) == "off" {
  local emptycells noemptycells
  }
- }
- if "`omitted'" == "" {
= if "" == "" {
- if c(showomitted) == "off" {
```

```
      local omitted noomitted
      }
-   }
-   if "`lstretch'" == "" {
=   if "" == "" {
-   if c(lstretch) == "off" {
      local lstretch nolstretch
      }
-   }
-   if `:length local cformat' {
=   if 0 {
      confirm numeric format `cformat'
      if fmtwidth(`"`cformat'"') > 9 {
      local cformat "%9.0g"
      di "{txt}note: invalid cformat(), using default"
      }
      sreturn local cformat `"`cformat'"'
      local cformat `"cformat(`cformat')"'
      }
-   if `:length local sformat' {
=   if 0 {
      confirm numeric format `sformat'
      if fmtwidth(`"`sformat'"') > 8 {
      local sformat "%8.2f"
      di "{txt}note: invalid sformat(), using default"
      }
      sreturn local sformat `"`sformat'"'
      local sformat `"sformat(`sformat')"'
      }
-   if `:length local pformat' {
=   if 0 {
      confirm numeric format `pformat'
      if fmtwidth(`"`pformat'"') > 5 {
      local pformat "%5.3f"
      di "{txt}note: invalid pformat(), using default"
      }
      sreturn local pformat `"`pformat'"'
      local pformat `"pformat(`pformat')"'
      }
-   if `K' == 1 & `:length local options' {
=   if 1 == 1 & 0 {
      syntax namelist(max=2) [, `DIOPTS']
      }
-   if reldif(`level', c(level)) > 1e-3 {
=   if reldif(95, c(level)) > 1e-3 {
      local levelopt level(`level')
```

```
          }
        - Wrapon , `fvwrapon'
        = Wrapon ,
         ─────────────────────────────────────────────
> ──────────────────────────── begin _get_diopts.Wrapon ────────────
        - capture syntax [, WOrd WIdth]
        - if c(rc) {
          di as err "invalid fvwrapon() option;"
          syntax [, WOrd WIdth]
          exit 198
          }
        - opts_exclusive "`word' `width'" fvwrapon
        = opts_exclusive " " fvwrapon
         ─────────────────────────────────────────────
> ──────────────────────────── begin opts_exclusive ────────────────
        - version 8.2
        - args opts optname errcode optslab
        - local opts `opts'
        = local opts
        - local n 0
        - while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
        - if `n' < 2 {
        = if 0 < 2 {
        - exit
         ─────────────────────────────────────────────
> ──────────────────────────── end opts_exclusive ──────────────────
        - local fvwrapon `word' `width'
        = local fvwrapon
        - if `:length local fvwrapon' {
        = if 0 {
          c_local fvwrapon fvwrapon(`fvwrapon')
          }
         ─────────────────────────────────────────────
> ──────────────────────────── end _get_diopts.Wrapon ──────────────
        - if "`fvwrap'" != "" {
        = if "" != "" {
          FVWrap, `fvwrap'
          }
        - c_local `c_diopts' `levelopt' `vsquish' `allbaselevels' `baselevel
> s' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `coeflegend
> ' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `compare' `fvwr
> ap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `abbrev'
```

```
                = c_local DEFAULT
              ─ if `K' == 2 {
              = if 1 == 2 {
                c_local `c_opts' `"`options'"'
                }
              ─ sreturn local coding `coding'
              = sreturn local coding
              ─ sreturn local versus `versus'
              = sreturn local versus
              ─ sreturn local compare `compare'
              = sreturn local compare
              ─ sreturn local level `level'
              = sreturn local level 95
                ──────────────────────────────────────────────────────────────
>  ───────────────────────────────────────── end _get_diopts.GetDiopts ───────────────
            ─ if `"`name2'"' == "" {
            = if `"options"' == "" {
              GetDiopts DUPS, `options'
              }
            ─ else {
            ─ GetDiopts DUPS options, `options'
            = GetDiopts DUPS options,
                ──────────────────────────────────────────────────────────────
>  ──────────────────────────────────────── begin _get_diopts.GetDiopts ──────────────
            ─ local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLBASElevels
> NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMPTYcells NO
> OMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(string) sfor
> mat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru) FVWRAPON(
> string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru) NOABBREV
> ABBREV
            ─ syntax namelist(max=2) [, `DIOPTS' *]
            = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBASElevels A
> LLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells
> EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat
> (string) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passth
> ru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passth
> ru) NOABBREV ABBREV *]
            ─ opts_exclusive "`allbaselevels' `noallbaselevels'"
            = opts_exclusive " "
                ──────────────────────────────────────────────────────────────
>  ───────────────────────────────────────── begin opts_exclusive ───────────────────
              ─ version 8.2
              ─ args opts optname errcode optslab
              ─ local opts `opts'
              = local opts
              ─ local n 0
```

```
      – while `"`opts'"' != "" {
      = while `""' != "" {
        local ++n
        gettoken item`n' opts : opts, bind
        }
      – if `n' < 2 {
      = if 0 < 2 {
      – exit
```

> ─────────────────────────────────────── end opts_exclusive ─────────────
```
        – opts_exclusive "`allbaselevels' `nobaselevels'"
        = opts_exclusive " "
```

> ───────────────────────────────────── begin opts_exclusive ─────────────
```
        – version 8.2
        – args opts optname errcode optslab
        – local opts `opts'
        = local opts
        – local n 0
        – while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
        – if `n' < 2 {
        = if 0 < 2 {
        – exit
```

> ─────────────────────────────────────── end opts_exclusive ─────────────
```
        – opts_exclusive "`baselevels' `nobaselevels'"
        = opts_exclusive " "
```

> ───────────────────────────────────── begin opts_exclusive ─────────────
```
        – version 8.2
        – args opts optname errcode optslab
        – local opts `opts'
        = local opts
        – local n 0
        – while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
        – if `n' < 2 {
        = if 0 < 2 {
        – exit
```

> ─── end opts_exclusive ───────────
    – opts_exclusive "`emptycells' `noemptycells'"
    = opts_exclusive " "

> ─────────────────────────────────────── begin opts_exclusive ───────────
    – version 8.2
    – args opts optname errcode optslab
    – local opts `opts'
    = local opts
    – local n 0
    – while `"`opts'"' != "" {
    = while `""' != "" {
      local ++n
      gettoken item`n' opts : opts, bind
      }
    – if `n' < 2 {
    = if 0 < 2 {
    – exit

> ─── end opts_exclusive ───────────
    – opts_exclusive "`fvlabel' `nofvlabel'"
    = opts_exclusive " "

> ─────────────────────────────────────── begin opts_exclusive ───────────
    – version 8.2
    – args opts optname errcode optslab
    – local opts `opts'
    = local opts
    – local n 0
    – while `"`opts'"' != "" {
    = while `""' != "" {
      local ++n
      gettoken item`n' opts : opts, bind
      }
    – if `n' < 2 {
    = if 0 < 2 {
    – exit

> ─── end opts_exclusive ───────────
    – opts_exclusive "`omitted' `noomitted'"
    = opts_exclusive " "

> ─────────────────────────────────────── begin opts_exclusive ───────────
    – version 8.2
    – args opts optname errcode optslab

```
      – local opts `opts'
      = local opts
      – local n 0
      – while `"`opts'"' != "" {
      = while `""' != "" {
        local ++n
        gettoken item`n' opts : opts, bind
        }
      – if `n' < 2 {
      = if 0 < 2 {
      – exit
      ─────────────────────────────────────────────
>   ─────────────────────────────── end opts_exclusive ───────────────
      – opts_exclusive "`lstretch' `nolstretch'"
      = opts_exclusive " "
      ─────────────────────────────────────────────
>   ─────────────────────────────── begin opts_exclusive ─────────────
      – version 8.2
      – args opts optname errcode optslab
      – local opts `opts'
      = local opts
      – local n 0
      – while `"`opts'"' != "" {
      = while `""' != "" {
        local ++n
        gettoken item`n' opts : opts, bind
        }
      – if `n' < 2 {
      = if 0 < 2 {
      – exit
      ─────────────────────────────────────────────
>   ─────────────────────────────── end opts_exclusive ───────────────
      – opts_exclusive "`cnsreport' `fullcnsreport'"
      = opts_exclusive " "
      ─────────────────────────────────────────────
>   ─────────────────────────────── begin opts_exclusive ─────────────
      – version 8.2
      – args opts optname errcode optslab
      – local opts `opts'
      = local opts
      – local n 0
      – while `"`opts'"' != "" {
      = while `""' != "" {
        local ++n
        gettoken item`n' opts : opts, bind
        }
```

```
                    - if `n' < 2 {
                    = if 0 < 2 {
                    - exit
                    _____
> ──────────────────────────────── end opts_exclusive ─────────────
              - opts_exclusive "`coeflegend' `selegend'"
              = opts_exclusive " "
                    _____
> ──────────────────────────────── begin opts_exclusive ───────────
              - version 8.2
              - args opts optname errcode optslab
              - local opts `opts'
              = local opts
              - local n 0
              - while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              - if `n' < 2 {
              = if 0 < 2 {
              - exit
                    _____
> ──────────────────────────────── end opts_exclusive ─────────────
              - opts_exclusive "`noci' `nopvalues'"
              = opts_exclusive " "
                    _____
> ──────────────────────────────── begin opts_exclusive ───────────
              - version 8.2
              - args opts optname errcode optslab
              - local opts `opts'
              = local opts
              - local n 0
              - while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              - if `n' < 2 {
              = if 0 < 2 {
              - exit
                    _____
> ──────────────────────────────── end opts_exclusive ─────────────
              - local K : list sizeof namelist
              - gettoken c_diopts c_opts : namelist
              - opts_exclusive "`coding' `compare'"
```

```
          = opts_exclusive " "
          ────────────────────────────────────────────────────────
  > ──────────────────────────────────────── begin opts_exclusive ──────────────
          – version 8.2
          – args opts optname errcode optslab
          – local opts `opts'
          = local opts
          – local n 0
          – while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          – if `n' < 2 {
          = if 0 < 2 {
          – exit
          ────────────────────────────────────────────────────────
  > ──────────────────────────────────────── end opts_exclusive ────────────────
          – opts_exclusive "`versus' `compare'"
          = opts_exclusive " "
          ────────────────────────────────────────────────────────
  > ──────────────────────────────────────── begin opts_exclusive ──────────────
          – version 8.2
          – args opts optname errcode optslab
          – local opts `opts'
          = local opts
          – local n 0
          – while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          – if `n' < 2 {
          = if 0 < 2 {
          – exit
          ────────────────────────────────────────────────────────
  > ──────────────────────────────────────── end opts_exclusive ────────────────
          – opts_exclusive "`abbrev' `noabbrev'"
          = opts_exclusive " "
          ────────────────────────────────────────────────────────
  > ──────────────────────────────────────── begin opts_exclusive ──────────────
          – version 8.2
          – args opts optname errcode optslab
          – local opts `opts'
          = local opts
          – local n 0
```

```
      - while `"`opts'"' != "" {
      = while `""' != "" {
        local ++n
        gettoken item`n' opts : opts, bind
        }
      - if `n' < 2 {
      = if 0 < 2 {
      - exit
      _____
```
```
          - local allbaselevels `allbaselevels' `noallbaselevels'
          = local allbaselevels
          - local baselevels `baselevels' `nobaselevels'
          = local baselevels
          - local emptycells `emptycells' `noemptycells'
          = local emptycells
          - local omitted `omitted' `noomitted'
          = local omitted
          - local lstretch `lstretch' `nolstretch'
          = local lstretch
          - local fvlabel `fvlabel' `nofvlabel'
          = local fvlabel
          - local abbrev `abbrev' `noabbrev'
          = local abbrev
          - if "`allbaselevels'`baselevels'" == "" {
          = if "" == "" {
          - if c(showbaselevels) == "all" {
            local allbaselevels allbaselevels
            }
          - else if c(showbaselevels) == "on" {
            local baselevels baselevels
            }
          - }
          - if "`emptycells'" == "" {
          = if "" == "" {
          - if c(showemptycells) == "off" {
            local emptycells noemptycells
            }
          - }
          - if "`omitted'" == "" {
          = if "" == "" {
          - if c(showomitted) == "off" {
            local omitted noomitted
            }
          - }
          - if "`lstretch'" == "" {
```

```
= if "" == "" {
- if c(lstretch) == "off" {
  local lstretch nolstretch
  }
- }
- if `:length local cformat' {
= if 0 {
  confirm numeric format `cformat'
  if fmtwidth(`"`cformat'"') > 9 {
  local cformat "%9.0g"
  di "{txt}note: invalid cformat(), using default"
  }
  sreturn local cformat `"`cformat'"'
  local cformat `"cformat(`cformat')"'
  }
- if `:length local sformat' {
= if 0 {
  confirm numeric format `sformat'
  if fmtwidth(`"`sformat'"') > 8 {
  local sformat "%8.2f"
  di "{txt}note: invalid sformat(), using default"
  }
  sreturn local sformat `"`sformat'"'
  local sformat `"sformat(`sformat')"'
  }
- if `:length local pformat' {
= if 0 {
  confirm numeric format `pformat'
  if fmtwidth(`"`pformat'"') > 5 {
  local pformat "%5.3f"
  di "{txt}note: invalid pformat(), using default"
  }
  sreturn local pformat `"`pformat'"'
  local pformat `"pformat(`pformat')"'
  }
- if `K' == 1 & `:length local options' {
= if 2 == 1 & 0 {
  syntax namelist(max=2) [, `DIOPTS']
  }
- if reldif(`level', c(level)) > 1e-3 {
= if reldif(95, c(level)) > 1e-3 {
  local levelopt level(`level')
  }
- Wrapon , `fvwrapon'
= Wrapon ,
```

```
> ──────────────────────── begin _get_diopts.Wrapon ────────────
            – capture syntax [, WOrd WIdth]
            – if c(rc) {
              di as err "invalid fvwrapon() option;"
              syntax [, WOrd WIdth]
              exit 198
              }
            – opts_exclusive "`word' `width'" fvwrapon
            = opts_exclusive " " fvwrapon
              ────────────────────────────────────────────

> ──────────────────────── begin opts_exclusive ────────────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
              ────────────────────────────────────────────

> ──────────────────────── end opts_exclusive ──────────────────
            – local fvwrapon `word' `width'
            = local fvwrapon
            – if `:length local fvwrapon' {
            = if 0 {
              c_local fvwrapon fvwrapon(`fvwrapon')
              }
              ────────────────────────────────────────────

> ──────────────────────── end _get_diopts.Wrapon ──────────────
          – if "`fvwrap'" != "" {
          = if "" != "" {
            FVWrap, `fvwrap'
            }
          – c_local `c_diopts' `levelopt' `vsquish' `allbaselevels' `baselevel
> s' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `coeflegend
> ' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `compare' `fvwr
> ap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `abbrev'
          = c_local DUPS
          – if `K' == 2 {
          = if 2 == 2 {
          – c_local `c_opts' `"`options'"'
```

```
            = c_local  options `""'
          - }
          - sreturn local coding `coding'
          = sreturn local coding
          - sreturn local versus `versus'
          = sreturn local versus
          - sreturn local compare `compare'
          = sreturn local compare
          - sreturn local level `level'
          = sreturn local level 95
          ─────────────────────────────────────────────────────
  > ─────────────────────────────── end _get_diopts.GetDiopts ───────────────
          - c_local `name2' `"`options'"'
          = c_local options `""'
          - }
          - local DUPS : list DUPS - DEFAULT
          - gettoken DUPS : DUPS
          - if `"`DUPS'"' != "" {
          = if `""' != "" {
            if (strpos(`"`DUPS'"', "(")) {
            gettoken DUPS : DUPS, parse("(")
            local DUPS `"`DUPS'()"'
            }
            di as err "duplicate {bf:`DUPS'} option not allowed"
            exit 198
            }
          - sreturn clear
          - foreach sname of local snames {
          - sreturn local `sname' = `"`S_`sname''"'
          = sreturn local level = `"95"'
          - }
          ─────────────────────────────────────────────────────
  > ───────────────────────────────── end _get_diopts ───────────────
        - mlopts mlopts, `options' `log' `nolog'
        = mlopts mlopts,
          ─────────────────────────────────────────────────────
  > ───────────────────────────────── begin mlopts ───────────────
        - version 8.0
        - local maxoptlist MLOPTs(string) TRace TRACEDIffs GRADient HESSian SH
  > OWSTEP ITERate(int -1) TOLerance(real -1) LTOLerance(real -1) GTOLerance(rea
  > l -1) NONRTOLerance SHOWNRtolerance SHOWTOLerance NRTOLerance(real -1) QTOLe
  > rance(real -1) DIFficult HALFSTEPonly CONSTraints(string) noCNSNOTEs COLline
  > ar TECHnique(passthru) VCE(passthru) DOTS depsilon(passthru) SHOWH NOTCONCAV
  > E(passthru) USEVIEWS NOLOg LOg nrderiv
        - syntax namelist(id="macro names" min=1 max=2) [, `maxoptlist' * ]
        = syntax namelist(id="macro names" min=1 max=2) [, MLOPTs(string) TRac
```

```
> e TRACEDIffs GRADient HESSian SHOWSTEP ITERate(int −1) TOLerance(real −1) LT
> OLerance(real −1) GTOLerance(real −1) NONRTOLerance SHOWNRtolerance SHOWTOLe
> rance NRTOLerance(real −1) QTOLerance(real −1) DIFficult HALFSTEPonly CONSTr
> aints(string) noCNSNOTEs COLlinear TECHnique(passthru) VCE(passthru) DOTS de
> psilon(passthru) SHOWH NOTCONCAVE(passthru) USEVIEWS NOLOg LOg nrderiv * ]
          − gettoken dest rest : namelist
          − if "`rest'" == "" {
          = if "" == "" {
          − syntax namelist [, `maxoptlist' ]
          = syntax namelist [, MLOPTs(string) TRace TRACEDIffs GRADient HESSian
> SHOWSTEP ITERate(int −1) TOLerance(real −1) LTOLerance(real −1) GTOLerance(r
> eal −1) NONRTOLerance SHOWNRtolerance SHOWTOLerance NRTOLerance(real −1) QTO
> Lerance(real −1) DIFficult HALFSTEPonly CONSTraints(string) noCNSNOTEs COLli
> near TECHnique(passthru) VCE(passthru) DOTS depsilon(passthru) SHOWH NOTCONC
> AVE(passthru) USEVIEWS NOLOg LOg nrderiv ]
          − }
          − local mlopts `mlopts' `trace' `tracediffs' `gradient' `hessian' `sho
> wstep' `difficult' `halfsteponly' `nonrtolerance' `shownrtolerance' `showtol
> erance' `dots' `depsilon' `showh' `notconcave' `useviews' `log' `nolog' `nrd
> eriv'
          = local mlopts
          − if `tolerance'!= −1 {
          = if −1!= −1 {
            local tol "tolerance(`tolerance')"
            }
          − if `ltolerance' != −1 {
          = if −1 != −1 {
            local ltol "ltolerance(`ltolerance')"
            }
          − if `gtolerance' != −1 {
          = if −1 != −1 {
            local gtol "gtolerance(`gtolerance')"
            }
          − if `nrtolerance' != −1 {
          = if −1 != −1 {
            local nrtol "nrtolerance(`nrtolerance')"
            }
          − if `qtolerance' != −1 {
          = if −1 != −1 {
            local qtol "qtolerance(`qtolerance')"
            }
          − if `iterate' != −1 {
          = if −1 != −1 {
            local iter "iterate(`iterate')"
            }
          − sreturn clear
```

```
    - if "`technique'`vce'" != "" {
    = if "" != "" {
      ml_technique, `technique' `vce' nodefault
      if `"`s(technique)'"' != "" {
      local technique "technique(`s(technique)')"
      }
      if "`s(vce)'" != "" {
      local vce "`s(vceopt)'"
      }
      sreturn local technique "`technique'"
      sreturn local vce "`vce'"
      }
    - if "`constraints'" != "" {
    = if "" != "" {
      capture confirm name `constraints'
      if _rc {
      CheckClist constraints , constraints(`constraints')
      }
      else {
      CheckCmat `constraints'
      }
      local const "constraints(`constraints')"
      sreturn local constraints "`constraints'"
      }
    - sreturn local collinear "`collinear'"
    = sreturn local collinear ""
    - c_local `dest' `mlopts' `tol' `ltol' `gtol' `nrtol' `iter' `const' `
> cnsnotes' `collinear' `technique' `vce' `qtol'
    = c_local mlopts
    - if "`rest'" != "" {
    = if "" != "" {
      c_local `rest' `"`options'"'
      }
      ─────────────────────────────────────────────
```

────────────────────────────────── end mlopts ─────────────

```
    - local coll `s(collinear)'
    = local coll
    - local cns `s(constraints)'
    = local cns
    - local mlopts `mlopts' `crittype'
    = local mlopts
    - Dispers , `dispers'
    = Dispers ,
      ─────────────────────────────────────────────
```

> ────────────────────────────────── begin nbreg.Dispers ─────────────

```
    - sret clear
```

Friday, January 10, 2025 at 11:33 AM   Page 37

```
        - syntax [, Mean Constant ]
        - if "`constan'"=="" {
        = if ""=="" {
        - sret local dispers "mean"
        - exit
```

> ─────────────────────────────────────── end nbreg.Dispers ───────────

```
        - local dispers `s(dispers)'
        = local dispers mean
        - if "`dispers'"=="mean" {
        = if "mean"=="mean" {
        - local prog "nbreg_lf"
        - local parm "alpha"
        - local LLprog "LLalpha"
        - }
        - else {
          local prog "nbreg_al"
          local parm "delta"
          local LLprog "LLdelta"
          }
        - local title "Negative binomial regression"
        - if `"`score'"'!="" {
        = if `""'!="" {
          local nword : word count `score'
          if `nword'==1 & bsubstr("`score'",-1,1)=="*" {
          local score = bsubstr("`score'",1,length("`score'")-1)
          local score `score'1 `score'2
          local nword 2
          }
          confirm new variable `score'
          if `nword' != 2 {
          version 7: di as err "option {bf:score()} must contain the name of " "
> two new variables"
          exit 198
          }
          local scname1 : word 1 of `score'
          local scname2 : word 2 of `score'
          tempvar scvar1 scvar2
          local scopt "score(`scvar1' `scvar2')"
          }
        - if "`offset'"!="" & "`exposur'"!="" {
        = if ""!="" & ""!="" {
          version 7: di as err "options {bf:offset()} and {bf:exposure()} may no
> t be specified together"
          exit 198
          }
```

```
  - if "`constan'"!="" {
  = if ""!="" {
    local nvar : word count `varlist'
    if `nvar' == 1 {
    version 7: di as err "independent variables required with " "option {b
> f:noconstant}"
    exit 102
    }
    }
  - marksample touse
  - if `"`cluster'"'!="" {
  = if `""'!="" {
    local clopt cluster(`cluster')
    }
  - _vce_parse, argopt(CLuster) opt(Robust oim opg) old: [`weight'`exp'],
> `vce' `clopt' `robust'
  = _vce_parse, argopt(CLuster) opt(Robust oim opg) old: [], vce(r)
    ─────────────────────────────────────────────────────────────
> ─────────────────────────────────── begin _vce_parse ───────────────
  - version 10
  - _on_colon_parse `0'
  = _on_colon_parse , argopt(CLuster) opt(Robust oim opg) old: [], vce(r
> )
    ─────────────────────────────────────────────────────────────
> ──────────────────────────────── begin _on_colon_parse ─────────────
  - version 8.2
  - sreturn local before ""
  - sreturn local after ""
  - gettoken before after : 0, parse(":") bind match(par) quotes
  - if "`par'" != "" {
  = if "" != "" {
    local before `"(`before')"'
    }
  - if `"`before'"' == ":" {
  = if `", argopt(CLuster) opt(Robust oim opg) old"' == ":" {
    sreturn local after `"`after'"'
    exit
    }
  - while `"`COLON'"' != ":" & `"`after'"' != "" {
  = while `""' != ":" & `": [], vce(r)  "' != "" {
  - gettoken COLON after : after, parse(":") bind match(par) quotes
  - if "`par'" != "" {
  = if "" != "" {
    local before `before' (`COLON')
    local COLON
    }
```

```
                   - else if `"`COLON'"' != ":" {
                   = else if `":"' != ":" {
                     local before `"`before' `COLON'"'
                     local COLON
                     }
                   - }
                   - while `"`COLON'"' != ":" & `"`after'"' != "" {
                   = while `":"' != ":" & `" [], vce(r)  "' != "" {
                     gettoken COLON after : after, parse(":") bind match(par) quotes
                     if "`par'" != "" {
                     local before `before' (`COLON')
                     local COLON
                     }
                     else if `"`COLON'"' != ":" {
                     local before `"`before' `COLON'"'
                     local COLON
                     }
                     }
                   - if `"`COLON'"' != ":" {
                   = if `":"' != ":" {
                     di as err "'' found where ':' expected"
                     exit 198
                     }
                   - sreturn local before `"`before'"'
                   = sreturn local before `", argopt(CLuster) opt(Robust oim opg) old"'
                   - sreturn local after `"`after'"'
                   = sreturn local after `" [], vce(r)  "'
                   ─────────────────────────────────────────────────────────
  > ───────────────────────────────────────── end _on_colon_parse ──────────────
           - local 0 `"`s(before)'"'
           = local 0 `", argopt(CLuster) opt(Robust oim opg) old"'
           - local user `"`s(after)'"'
           = local user `" [], vce(r)  "'
           - syntax [varname(default=none)], [ OPTlist(namelist) ARGOPTlist(namel
  > ist) PWallowed(namelist) OLD_is_ok NOARGOPT_is_ok ]
           - local touse `varlist'
           = local touse
           - tempname o a
           - .`o' = ._optlist.new
           = .__000001 = ._optlist.new
             -class {
             -instance:
             -        array options  = {}
             -        array names    = {}
             -}
           - local optlist : list uniq optlist
```

```
        – foreach name of local optlist {
        – .`o'.addopt `name'
        = .__000001.addopt Robust
        ──────────────────────────────────────────────────────────
>  ─────────────────────────────────────── begin _optlist.addopt ──────────────
        – version 9
        – syntax name(name=optspec) [, PASSthru]
        – local mname = lower("`optspec'")
        = local mname = lower("Robust")
        – if "`passthru'" != "" {
        = if "" != "" {
          local optspec `optspec'(passthru)
          }
        – .options.Arrpush "`optspec'"
        = .options.Arrpush "Robust"
        – .names.Arrpush "`mname'"
        = .names.Arrpush "robust"
        ──────────────────────────────────────────────────────────
>  ──────────────────────────────────────── end _optlist.addopt ───────────────
        – }
        – .`o'.addopt `name'
        = .__000001.addopt oim
        ──────────────────────────────────────────────────────────
>  ─────────────────────────────────────── begin _optlist.addopt ──────────────
        – version 9
        – syntax name(name=optspec) [, PASSthru]
        – local mname = lower("`optspec'")
        = local mname = lower("oim")
        – if "`passthru'" != "" {
        = if "" != "" {
          local optspec `optspec'(passthru)
          }
        – .options.Arrpush "`optspec'"
        = .options.Arrpush "oim"
        – .names.Arrpush "`mname'"
        = .names.Arrpush "oim"
        ──────────────────────────────────────────────────────────
>  ──────────────────────────────────────── end _optlist.addopt ───────────────
        – }
        – .`o'.addopt `name'
        = .__000001.addopt opg
        ──────────────────────────────────────────────────────────
>  ─────────────────────────────────────── begin _optlist.addopt ──────────────
        – version 9
        – syntax name(name=optspec) [, PASSthru]
        – local mname = lower("`optspec'")
```

```
= local mname = lower("opg")
– if "`passthru'" != "" {
= if "" != "" {
  local optspec `optspec'(passthru)
  }
– .options.Arrpush "`optspec'"
= .options.Arrpush "opg"
– .names.Arrpush "`mname'"
= .names.Arrpush "opg"
```

> ───────────────────────────── end _optlist.addopt ─────────────────

```
– }
– .`a' = ._optlist.new
= .__000002 = ._optlist.new
– local argoptlist : list uniq argoptlist
– foreach name of local argoptlist {
– .`a'.addopt `name'
= .__000002.addopt CLuster
```

> ──────────────────────────── begin _optlist.addopt ────────────────

```
– version 9
– syntax name(name=optspec) [, PASSthru]
– local mname = lower("`optspec'")
= local mname = lower("CLuster")
– if "`passthru'" != "" {
= if "" != "" {
  local optspec `optspec'(passthru)
  }
– .options.Arrpush "`optspec'"
= .options.Arrpush "CLuster"
– .names.Arrpush "`mname'"
= .names.Arrpush "cluster"
```

> ───────────────────────────── end _optlist.addopt ─────────────────

```
– }
– local OPTNAMES `"`.`o'.dumpnames'"'
```

> ─────────────────────────── begin _optlist.dumpnames ──────────────

```
– version 9
– forval i = 1/`.names.arrnels' {
= forval i = 1/3 {
– local namelist `namelist' `.names[`i']'
= local namelist  robust
– }
– local namelist `namelist' `.names[`i']'
= local namelist robust oim
```

```
          − }
          − local namelist `namelist' `.names[`i']'
          = local namelist robust oim opg
          − }
          − local namelist : list uniq namelist
          − sreturn local namelist `"`namelist'"'
          = sreturn local namelist `"robust oim opg"'
          − class exit `"`namelist'"'
          = class exit `"robust oim opg"'
          ────────────────────────────────────────────
>  ──────────────────────────────── end _optlist.dumpnames ────────────────
        = local OPTNAMES `"robust oim opg"'
        − local ARGOPTNAMES `"'`.`a'.dumpnames'"'
          ────────────────────────────────────────────
>  ──────────────────────────────── begin _optlist.dumpnames ──────────────
        − version 9
        − forval i = 1/`.names.arrnels' {
        = forval i = 1/1 {
        − local namelist `namelist' `.names[`i']'
        = local namelist  cluster
        − }
        − local namelist : list uniq namelist
        − sreturn local namelist `"`namelist'"'
        = sreturn local namelist `"cluster"'
        − class exit `"`namelist'"'
        = class exit `"cluster"'
          ────────────────────────────────────────────
>  ──────────────────────────────── end _optlist.dumpnames ────────────────
        = local ARGOPTNAMES `"cluster"'
        − local AND : list OPTNAMES & ARGOPTNAMES
        − if `:list sizeof AND' {
        = if 0 {
          di as err "vcetype '`:word 1 of `AND''' specified twice"
          exit 198
          }
        − local pwallowed : list uniq pwallowed
        − local pwlist robust cluster
        − foreach n of local pwallowed {
          local lc = lower("`n'")
          local pwlist `pwlist' `lc'
          }
        − if "`old_is_ok'" != "" {
        = if "old_is_ok" != "" {
        − local ROBUST robust
        − if `:list ROBUST in OPTNAMES' {
        = if 1 {
```

```
          - local robust Robust
          - }
          - local CLUSTER cluster
          - if `:list CLUSTER in ARGOPTNAMES' {
          = if 1 {
          - local cluster CLuster(varname)
          - }
          - }
          - local 0 `"`user'"'
          = local 0 `" [], vce(r)  "'
          - syntax [fw aw pw iw] [, VCE(string asis) `robust' `cluster' ]
          = syntax [fw aw pw iw] [, VCE(string asis) Robust CLuster(varname) ]
          - if `"`vce'"' != "" {
          = if `"r"' != "" {
          - gettoken name args : vce, parse(" ,")
          - local args : list retok args
          - capture ParseVCE `o' `a' , `name'
          = capture ParseVCE __000001 __000002 , r
          ───────────────────────────────────────────────────────────
  > ──────────────────────────────── begin _vce_parse.ParseVCE ──────────────
          - gettoken O 0 : 0, parse(" ,")
          - gettoken A 0 : 0, parse(" ,")
          - local OPTSPECS `"`.`O'.dumpoptions' `.`A'.dumpoptions'"'
          ───────────────────────────────────────────────────────────
  > ──────────────────────────────── begin _optlist.dumpoptions ──────────────
          - version 9
          - forval i = 1/`.options.arrnels' {
          = forval i = 1/3 {
          - local optlist `optlist' `.options[`i']'
          = local optlist  Robust
          - }
          - local optlist `optlist' `.options[`i']'
          = local optlist Robust oim
          - }
          - local optlist `optlist' `.options[`i']'
          = local optlist Robust oim opg
          - }
          - local optlist : list uniq optlist
          - sreturn local optlist `"`optlist'"'
          = sreturn local optlist `"Robust oim opg"'
          - class exit `"`optlist'"'
          = class exit `"Robust oim opg"'
          ───────────────────────────────────────────────────────────
  > ──────────────────────────────── end _optlist.dumpoptions ────────────────
          ───────────────────────────────────────────────────────────
  > ──────────────────────────────── begin _optlist.dumpoptions ──────────────
```

```
            – version 9
            – forval i = 1/`.options.arrnels' {
            = forval i = 1/1 {
            – local optlist `optlist' `.options[`i']'
            = local optlist  CLuster
            – }
            – local optlist : list uniq optlist
            – sreturn local optlist `"`optlist'"'
            = sreturn local optlist `"CLuster"'
            – class exit `"`optlist'"'
            = class exit `"CLuster"'
           ─────────────────────────────────────────────────────────
>  ───────────────────────────────── end _optlist.dumpoptions ─────────────────
          = local OPTSPECS `"Robust oim opg CLuster"'
          – local OPTNAMES `"`.`O'.dumpnames' `.`A'.dumpnames'"'
           ─────────────────────────────────────────────────────────
>  ───────────────────────────────── begin _optlist.dumpnames ─────────────────
            – version 9
            – forval i = 1/`.names.arrnels' {
            = forval i = 1/3 {
            – local namelist `namelist' `.names[`i']'
            = local namelist  robust
            – }
            – local namelist `namelist' `.names[`i']'
            = local namelist robust oim
            – }
            – local namelist `namelist' `.names[`i']'
            = local namelist robust oim opg
            – }
            – local namelist : list uniq namelist
            – sreturn local namelist `"`namelist'"'
            = sreturn local namelist `"robust oim opg"'
            – class exit `"`namelist'"'
            = class exit `"robust oim opg"'
           ─────────────────────────────────────────────────────────
>  ───────────────────────────────── end _optlist.dumpnames ─────────────────
           ─────────────────────────────────────────────────────────
>  ───────────────────────────────── begin _optlist.dumpnames ─────────────────
            – version 9
            – forval i = 1/`.names.arrnels' {
            = forval i = 1/1 {
            – local namelist `namelist' `.names[`i']'
            = local namelist  cluster
            – }
            – local namelist : list uniq namelist
            – sreturn local namelist `"`namelist'"'
```

```
                = sreturn local namelist `"cluster"'
                - class exit `"`namelist'"'
                = class exit `"cluster"'
                ─────────────────────────────────────────────────────────

> ───────────────────────────────── end _optlist.dumpnames ──────────────
            = local OPTNAMES `"robust oim opg cluster"'
            - syntax [, `OPTSPECS']
            = syntax [, Robust oim opg CLuster]
            - foreach OPT of local OPTNAMES {
            - if `"``OPT''"' != "" {
            = if `"robust"' != "" {
            - return local vce `OPT'
            = return local vce robust
            - continue, break
              }
              }
                ─────────────────────────────────────────────────────────

> ───────────────────────────────── end _vce_parse.ParseVCE ─────────────
          - if c(rc) {
            di as err "vcetype {bf:`name'} not allowed"
            exit 198
            }
          - local name `r(vce)'
          = local name robust
          - if "`weight'" == "pweight" & !`:list name in pwlist' {
          = if "" == "pweight" & !1 {
            di as err "pweights are not allowed with vce(`name')"
            exit 198
            }
          - return add
          - if `"`robust'"' != "" & !inlist("`name'","","robust","eim","oim","cl
> uster") {
          = if `""' != "" & !inlist("robust","","robust","eim","oim","cluster")
> {
            opts_exclusive "`robust' vce(`name')"
            }
          - if "`name'" == "cluster" {
          = if "robust" == "cluster" {
            if `"`args'"' == "" {
            di as err "invalid vce(cluster) option"
            exit 198
            }
            confirm var `args'
            unab args : `args'
            local markout `args'
            if "`cluster'" != "" {
```

```
  if !`:list args == cluster' {
  di as err "options cluster() and vce(cluster) are in conflict"
  exit 100
  }
  }
  }
- else if "`cluster'" != "" & !inlist("`name'","eim","oim") {
= else if "" != "" & !inlist("robust","eim","oim") {
  opts_exclusive "cluster() vce(`name')"
  }
- if `"`args'"' != "" {
= if `""' != "" {
  if ! `:list name in ARGOPTNAMES' {
  di as err "invalid vce() option"
  exit 198
  }
  if "`name'" == "hc2" {
  confirm var `args'
  unab args : `args'
  local markout `args'
  }
  return local vceargs `"`:list retok args'"'
  }
- else if `:list name in ARGOPTNAMES' {
= else if 0 {
  if "`noargopt_is_ok'" == "" {
  di as err "invalid vce() option"
  exit 198
  }
  }
- }
- else {
  if "`weight'" == "pweight" | "`robust'" != "" {
  local vce robust
  }
  if "`cluster'" != "" {
  local vce cluster
  local args `cluster'
  local markout `cluster'
  }
  return local vce `"`vce'"'
  return local vceargs `"`args'"'
  }
- if "`return(vce)'" != "" {
= if "robust" != "" {
- if `"`return(vceargs)'"' != "" {
```

```
      = if `""' != "" {
          local ss " "
          }
      - return local vceopt `"vce(`return(vce)'`ss'`return(vceargs)')"'
      = return local vceopt `"vce(robust)"'
      - }
      - if "`return(vce)'" == "cluster" {
      = if "robust" == "cluster" {
          return local cluster `return(vceargs)'
          }
      - if inlist("`return(vce)'", "robust", "cluster") {
      = if inlist("robust", "robust", "cluster") {
      - return local robust robust
      - }
      - if "`touse'" != "" {
      = if "" != "" {
          if "`markout'" != "" {
          markout `touse' `markout', strok
          }
          }
        ──────────────────────────────────────────────────────
> ──────────────────────────────── end _vce_parse ────────────────
      - local cluster `r(cluster)'
      = local cluster
      - local robust `r(robust)'
      = local robust robust
      - local vce `"`r(vceopt)'"'
      = local vce `"vce(robust)"'
      - if `"`cluster'"'!="" {
      = if `""'!="" {
          markout `touse' `cluster', strok
          }
      - if "`exposur'"!="" {
      = if ""!="" {
          capture assert `exposur' > 0 if `touse'
          if _rc {
          version 7: di as err "option {bf:exposure()} must be greater than zero
> "
          exit 459
          }
          tempvar offset
          qui gen double `offset' = ln(`exposur')
          local offvar "ln(`exposur')"
          }
      - if "`offset'"!="" {
      = if ""!="" {
```

```
        markout `touse' `offset'
        local offopt "offset(`offset')"
        if "`offvar'"=="" {
        local offvar "`offset'"
        }
        }
    - gettoken y xvars : varlist
    - _fv_check_depvar `y'
    = _fv_check_depvar piq_timing_max
    - tsunab y : `y'
    = tsunab y : piq_timing_max
                    ────────────────────────────────────────
>   ─────────────────────────────────────── begin tsunab ───────────────
        - version 6
        - gettoken user 0: 0, parse(" :")
        - gettoken colon 0: 0, parse(" :")
        - if `"`colon'"' != ":" { error 198 }
        = if `":"' != ":" { error 198 }
        - syntax [varlist(ts default=empty)] [, MIN(integer 1) MAX(integer 320
> 00) NAME(string)]
        - c_local `user' `varlist'
        = c_local y piq_timing_max
        - local n : word count `varlist'
        = local n : word count piq_timing_max
        - if `n'>=`min' & `n'<=`max' { exit }
        = if 1>=1 & 1<=32000 { exit }
                    ────────────────────────────────────────
>   ─────────────────────────────────────── end tsunab ─────────────────
      - local yname : subinstr local y "." "_"
      - if "`weight'"!="" {
      = if ""!="" {
        if "`weight'"=="fweight" {
        local wt `"[fw`exp']"'
        }
        else local wt `"[aw`exp']"'
        }
      - summarize `y' `wt' if `touse', meanonly
      = summarize piq_timing_max  if __000000, meanonly
      - if r(N) == 0 { error 2000 }
      - if r(N) == 1 { error 2001 }
      - if r(min) < 0 {
        version 7: di as err "{bf:`y'} must be greater than or equal to zero"
        exit 459
        }
      - if r(min) == r(max) & r(min) == 0 {
        version 7: di as err "{bf:`y'} is zero for all observations"
```

```
        exit 498
        }
      - tempname mean
      - scalar `mean' = r(mean)
      = scalar __000001 = r(mean)
      - if "`display'"=="" {
      = if ""=="" {
      - capture assert `y' == int(`y') if `touse'
      = capture assert piq_timing_max == int(piq_timing_max) if __000000
      - if _rc {
        di in gr "note: you are responsible for " "interpretation of non-count
>  dep. variable"
        }
      - }
      - if "`display'"=="" & "`weight'"=="aweight" {
      = if ""=="" & ""=="aweight" {
        di in gr "note: you are responsible for interpretation " "of analytic
> weights"
        }
      - if `fvops' {
      = if 1 {
      - local rmcoll "version 11: _rmcoll"
      - }
      - else local rmcoll _rmcoll
      - if "`display'"!="" & "`weight'"=="aweight" {
      = if ""!="" & ""=="aweight" {
        `rmcoll' `xvars' [iw`exp'] if `touse', `constan' `coll'
        }
      - else `rmcoll' `xvars' [`weight'`exp'] if `touse', `constan' `coll'
      = else version 11: _rmcoll  ln_neq cb_authors_ext estimated est_late est
> _early wg_ndx_other stky_pr_rotemberg stky_pr_calvo [] if __000000,
note: est_early omitted because of collinearity.
      - local xvars `r(varlist)'
      = local xvars ln_neq cb_authors_ext estimated est_late o.est_early wg_nd
> x_other stky_pr_rotemberg stky_pr_calvo
      - _parse_iterlog, `log' `nolog'
      = _parse_iterlog,
        ─────────────────────────────────────────────────────────────────────
> ──────────────────────────────────────── begin _parse_iterlog ────────────
      - version 16
      - syntax [, NOLOG LOG]
      - if "`log'`nolog'" != "" {
      = if "" != "" {
        opts_exclusive "`log' `nolog'"
        }
      - else if "`c(iterlog)'" == "on" {
```

```
           = else if "on" == "on" {
           – local log log
           – }
           – else {
             local nolog nolog
             }
           – sreturn local log `log'
           = sreturn local log log
           – sreturn local nolog `nolog'
           = sreturn local nolog
           ────────────────────────────────────────────────
>  ──────────────────────────────── end _parse_iterlog ───────────────
        – local log "`s(nolog)'"
        = local log ""
        – if "`log'"!="" | "`display'"!="" { local nohead "*" }
        = if ""!="" | ""!="" { local nohead "*" }
        – if `"`from'"'=="" & "`lrtest'"=="" {
        = if `""'=="" & ""=="" {
        – if "`robust'`cns'`cluster'"!="" | "`weight'"=="pweight" {
        = if "robust"!="" | ""=="pweight" {
        – local lrtest "nolrtest"
        – }
        – `nohead' di in gr _n "Fitting Poisson model:"
        =  di in gr _n "Fitting Poisson model:"

Fitting Poisson model:
        – `vvpoi' poisson `y' `xvars' [`weight'`exp'] if `touse', nodisplay `off
> opt' `constan' `mlopts' `robust'
        = version 18, missing: poisson piq_timing_max ln_neq cb_authors_ext esti
> mated est_late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo [] i
> f __000000, nodisplay    robust
           ────────────────────────────────────────────────
>  ──────────────────────────────── begin poisson ───────────────
          – if _by() {
            local BY `"by `_byvars'`_byrc0':"'
            }
          – `BY' _vce_parserun poisson, mark(Exposure OFFset CLuster) : `0'
          =  _vce_parserun poisson, mark(Exposure OFFset CLuster) : piq_timing_m
> ax ln_neq cb_authors_ext estimated est_late o.est_early wg_ndx_other stky_pr
> _rotemberg stky_pr_calvo [] if __000000, nodisplay    robust
              ────────────────────────────────────────────────
>  ──────────────────────────────── begin _vce_parserun ───────────────
            – version 9
            – local version : di "version " string(_caller()) ":"
            – local bycall = _by()
            – _on_colon_parse `0'
```

```
          = _on_colon_parse poisson, mark(Exposure OFFset CLuster) : piq_timin
> g_max ln_neq cb_authors_ext estimated est_late o.est_early wg_ndx_other stky
> _pr_rotemberg stky_pr_calvo [] if __000000, nodisplay    robust
         ──────────────────────────────────────────────────────
> ──────────────────────────────── begin _on_colon_parse ──────────────
          – version 8.2
          – sreturn local before ""
          – sreturn local after ""
          – gettoken before after : 0, parse(":") bind match(par) quotes
          – if "`par'" != "" {
          = if "" != "" {
            local before `"(`before')"'
            }
          – if `"`before'"' == ":" {
          = if `"poisson, mark(Exposure OFFset CLuster) "' == ":" {
            sreturn local after `"`after'"'
            exit
            }
          – while `"`COLON'"' != ":" & `"`after'"' != "" {
          = while `""' != ":" & `": piq_timing_max ln_neq cb_authors_ext est
> imated est_late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo []
> if __000000, nodisplay    robust"' != "" {
          – gettoken COLON after : after, parse(":") bind match(par) quotes
          – if "`par'" != "" {
          = if "" != "" {
            local before `before' (`COLON')
            local COLON
            }
          – else if `"`COLON'"' != ":" {
          = else if `":"' != ":" {
            local before `"`before' `COLON'"'
            local COLON
            }
          – }
          – while `"`COLON'"' != ":" & `"`after'"' != "" {
          = while `":"' != ":" & `" piq_timing_max ln_neq cb_authors_ext est
> imated est_late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo []
> if __000000, nodisplay    robust"' != "" {
            gettoken COLON after : after, parse(":") bind match(par) quotes
            if "`par'" != "" {
            local before `before' (`COLON')
            local COLON
            }
            else if `"`COLON'"' != ":" {
            local before `"`before' `COLON'"'
            local COLON
```

```
                }
                }
              - if `"`COLON'"' != ":" {
              = if `":"' != ":" {
                di as err "'' found where ':' expected"
                exit 198
                }
              - sreturn local before `"`before'"'
              = sreturn local before `"poisson, mark(Exposure OFFset CLuster) "'
              - sreturn local after `"`after'"'
              = sreturn local after `" piq_timing_max ln_neq cb_authors_ext esti
>  mated est_late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo [] i
>  f __000000, nodisplay    robust"'
                ─────────────────────────────────────────────────────────
>  ──────────────────────────────────── end _on_colon_parse ───────────────
            - local ZERO `"`s(before)'"'
            = local ZERO `"poisson, mark(Exposure OFFset CLuster) "'
            - local 0 `"`s(after)'"'
            = local 0 `" piq_timing_max ln_neq cb_authors_ext estimated est_late
>   o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo [] if __000000, no
>  display    robust"'
            - quietly syntax [anything(equalok)] [if] [in] [fw aw pw iw] [, VCE(
>  string asis) VCE1(string asis) LRMODEL * ]
            - if `"`vce'"' == "" {
            = if `""' == "" {
            - MYRESULT
                ─────────────────────────────────────────────────────────
>  ──────────────────────────────────── begin _vce_parserun.MYRESULT ───────
              - args exit
              - sreturn local exit `"`exit'"'
              = sreturn local exit `""'
                ─────────────────────────────────────────────────────────
>  ──────────────────────────────────── end _vce_parserun.MYRESULT ─────────
            - exit
                ─────────────────────────────────────────────────────────
>  ──────────────────────────────────── end _vce_parserun ─────────────
          - if "`s(exit)'" != "" {
          = if "" != "" {
            version 10: ereturn local cmdline `"poisson `0'"'
            exit
            }
          - version 6, missing
          - local version : di "version " string(_caller()) ":"
          - if replay() {
            if "`e(cmd)'" != "poisson" {
            error 301
```

```
            }
            if _by() { error(190) }
            Display `0'
            error `e(rc)'
            exit
            }
        - `version' `BY' Estimate `0'
        = version 18:  Estimate piq_timing_max ln_neq cb_authors_ext estimated
>  est_late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo [] if __0
> 00000, nodisplay    robust
                     ─────────────────────────────────────────────────────────
> ──────────────────────────────────────── begin poisson.Estimate ─────────────
            - local vv "version 8.1:"
            - local mm d2
            - local eval poiss_lf
            - version 6, missing
            - local awopt = cond(_caller()<7, "aw", "")
            - syntax varlist(numeric fv ts) [fw `awopt' pw iw] [if] [in] [, IRr
> FROM(string) Level(cilevel) OFFset(varname numeric ts) Exposure(varname nume
> ric ts) noCONstant Robust CLuster(varname) SCore(string) noDISPLAY CRITTYPE(
> passthru) MATAevaluator moptobj(passthru) * ]
            = syntax varlist(numeric fv ts) [fw  pw iw] [if] [in] [, IRr FROM(st
> ring) Level(cilevel) OFFset(varname numeric ts) Exposure(varname numeric ts)
>  noCONstant Robust CLuster(varname) SCore(string) noDISPLAY CRITTYPE(passthr
> u) MATAevaluator moptobj(passthru) * ]
            - local fvops = "`s(fvops)'" == "true" | _caller() >= 11
            = local fvops = "true" == "true" | _caller() >= 11
            - if `fvops' {
            = if 1 {
            - local vv : di "version " string(max(11,_caller())) ", missing:"
            - local mm e2
            - if "`mataevaluator'" != "" {
            = if "" != "" {
              local eval mopt__poisson_e2()
              }
            - local negh negh
            - }
            - if _by() {
              _byoptnotallowed score `"`score'"'
              }
            - _get_diopts diopts options, `options'
            = _get_diopts diopts options,
                     ─────────────────────────────────────────────────────────
> ──────────────────────────────────────── begin _get_diopts ──────────────────
            - version 11
            - syntax namelist(max=2) [, *]
```

```
                 ─ gettoken name1 namelist : namelist
                 ─ gettoken name2 namelist : namelist
                 ─ GetDiopts diopts options, `options'
                 = GetDiopts diopts options,
                 ────────────────────────────────────────────────────
 > ──────────────────────────────── begin _get_diopts.GetDiopts ───────────────
                 ─ local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLBASElev
 > els NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMPTYcell
 > s NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(string)
 > sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru) FVWRA
 > PON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru) NOABB
 > REV ABBREV
                 ─ syntax namelist(max=2) [, `DIOPTS' *]
                 = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBASEleve
 > ls ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYce
 > lls EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cfo
 > rmat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(pa
 > ssthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(pa
 > ssthru) NOABBREV ABBREV *]
                 ─ opts_exclusive "`allbaselevels' `noallbaselevels'"
                 = opts_exclusive " "
                 ────────────────────────────────────────────────────
 > ───────────────────────────────── begin opts_exclusive ─────────────────
                 ─ version 8.2
                 ─ args opts optname errcode optslab
                 ─ local opts `opts'
                 = local opts
                 ─ local n 0
                 ─ while `"`opts'"' != "" {
                 = while `""' != "" {
                   local ++n
                   gettoken item`n' opts : opts, bind
                   }
                 ─ if `n' < 2 {
                 = if 0 < 2 {
                 ─ exit
                 ────────────────────────────────────────────────────
 > ────────────────────────────────── end opts_exclusive ─────────────────
                 ─ opts_exclusive "`allbaselevels' `nobaselevels'"
                 = opts_exclusive " "
                 ────────────────────────────────────────────────────
 > ───────────────────────────────── begin opts_exclusive ─────────────────
                 ─ version 8.2
                 ─ args opts optname errcode optslab
                 ─ local opts `opts'
                 = local opts
```

```
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
              ─────────────────────────────────────────
>  ─────────────────────────────── end opts_exclusive ─────────────
          – opts_exclusive "`baselevels' `nobaselevels'"
          = opts_exclusive " "
              ─────────────────────────────────────────
>  ─────────────────────────────── begin opts_exclusive ───────────
          – version 8.2
          – args opts optname errcode optslab
          – local opts `opts'
          = local opts
          – local n 0
          – while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          – if `n' < 2 {
          = if 0 < 2 {
          – exit
              ─────────────────────────────────────────
>  ─────────────────────────────── end opts_exclusive ─────────────
          – opts_exclusive "`emptycells' `noemptycells'"
          = opts_exclusive " "
              ─────────────────────────────────────────
>  ─────────────────────────────── begin opts_exclusive ───────────
          – version 8.2
          – args opts optname errcode optslab
          – local opts `opts'
          = local opts
          – local n 0
          – while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          – if `n' < 2 {
          = if 0 < 2 {
```

```
              – exit
            ─────────────────────────────────────────────────────
> ─────────────────────────────────────── end opts_exclusive ───────────
            – opts_exclusive "`fvlabel' `nofvlabel'"
            = opts_exclusive " "
            ─────────────────────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ─────────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
            ─────────────────────────────────────────────────────
> ─────────────────────────────────────── end opts_exclusive ───────────
            – opts_exclusive "`omitted' `noomitted'"
            = opts_exclusive " "
            ─────────────────────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ─────────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
            ─────────────────────────────────────────────────────
> ─────────────────────────────────────── end opts_exclusive ───────────
            – opts_exclusive "`lstretch' `nolstretch'"
            = opts_exclusive " "
            ─────────────────────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ─────────────
            – version 8.2
```

```
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
            ─────────────────────────────────────────────
>  ──────────────────────────────────── end opts_exclusive ──────────────
            – opts_exclusive "`cnsreport' `fullcnsreport'"
            = opts_exclusive " "
            ─────────────────────────────────────────────
>  ──────────────────────────────────── begin opts_exclusive ────────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
            ─────────────────────────────────────────────
>  ──────────────────────────────────── end opts_exclusive ──────────────
            – opts_exclusive "`coeflegend' `selegend'"
            = opts_exclusive " "
            ─────────────────────────────────────────────
>  ──────────────────────────────────── begin opts_exclusive ────────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
```

```
          }
        – if `n' < 2 {
        = if 0 < 2 {
        – exit
                    ────────────────────────────────────
> ──────────────────────────── end opts_exclusive ────────────
        – opts_exclusive "`noci' `nopvalues'"
        = opts_exclusive " "
                    ────────────────────────────────────
> ──────────────────────────── begin opts_exclusive ──────────
        – version 8.2
        – args opts optname errcode optslab
        – local opts `opts'
        = local opts
        – local n 0
        – while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
        – if `n' < 2 {
        = if 0 < 2 {
        – exit
                    ────────────────────────────────────
> ──────────────────────────── end opts_exclusive ────────────
        – local K : list sizeof namelist
        – gettoken c_diopts c_opts : namelist
        – opts_exclusive "`coding' `compare'"
        = opts_exclusive " "
                    ────────────────────────────────────
> ──────────────────────────── begin opts_exclusive ──────────
        – version 8.2
        – args opts optname errcode optslab
        – local opts `opts'
        = local opts
        – local n 0
        – while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
        – if `n' < 2 {
        = if 0 < 2 {
        – exit
                    ────────────────────────────────────
> ──────────────────────────── end opts_exclusive ────────────
```

```
            – opts_exclusive "`versus' `compare'"
            = opts_exclusive " "
            ─────────────────────────────────────────────────
>  ─────────────────────────────── begin opts_exclusive ─────────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
            ─────────────────────────────────────────────────
>  ──────────────────────────────── end opts_exclusive ──────────────
            – opts_exclusive "`abbrev' `noabbrev'"
            = opts_exclusive " "
            ─────────────────────────────────────────────────
>  ─────────────────────────────── begin opts_exclusive ─────────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
            ─────────────────────────────────────────────────
>  ──────────────────────────────── end opts_exclusive ──────────────
            – local allbaselevels `allbaselevels' `noallbaselevels'
            = local allbaselevels
            – local baselevels `baselevels' `nobaselevels'
            = local baselevels
            – local emptycells `emptycells' `noemptycells'
            = local emptycells
            – local omitted `omitted' `noomitted'
            = local omitted
```

```
- local lstretch `lstretch' `nolstretch'
= local lstretch
- local fvlabel `fvlabel' `nofvlabel'
= local fvlabel
- local abbrev `abbrev' `noabbrev'
= local abbrev
- if "`allbaselevels'`baselevels'" == "" {
= if "" == "" {
- if c(showbaselevels) == "all" {
  local allbaselevels allbaselevels
  }
- else if c(showbaselevels) == "on" {
  local baselevels baselevels
  }
- }
- if "`emptycells'" == "" {
= if "" == "" {
- if c(showemptycells) == "off" {
  local emptycells noemptycells
  }
- }
- if "`omitted'" == "" {
= if "" == "" {
- if c(showomitted) == "off" {
  local omitted noomitted
  }
- }
- if "`lstretch'" == "" {
= if "" == "" {
- if c(lstretch) == "off" {
  local lstretch nolstretch
  }
- }
- if `:length local cformat' {
= if 0 {
  confirm numeric format `cformat'
  if fmtwidth(`"`cformat'"') > 9 {
  local cformat "%9.0g"
  di "{txt}note: invalid cformat(), using default"
  }
  sreturn local cformat `"`cformat'"'
  local cformat `"cformat(`cformat')"'
  }
- if `:length local sformat' {
= if 0 {
  confirm numeric format `sformat'
```

```
               if fmtwidth(`"`sformat'"') > 8 {
               local sformat "%8.2f"
               di "{txt}note: invalid sformat(), using default"
               }
               sreturn local sformat `"`sformat'"'
               local sformat `"sformat(`sformat')"'
               }
   - if `:length local pformat' {
   = if 0 {
               confirm numeric format `pformat'
               if fmtwidth(`"`pformat'"') > 5 {
               local pformat "%5.3f"
               di "{txt}note: invalid pformat(), using default"
               }
               sreturn local pformat `"`pformat'"'
               local pformat `"pformat(`pformat')"'
               }
   - if `K' == 1 & `:length local options' {
   = if 2 == 1 & 0 {
               syntax namelist(max=2) [, `DIOPTS']
               }
   - if reldif(`level', c(level)) > 1e-3 {
   = if reldif(95, c(level)) > 1e-3 {
               local levelopt level(`level')
               }
   - Wrapon , `fvwrapon'
   = Wrapon ,
               ──────────────────────────────────────────────
 > ───────────────────────────── begin _get_diopts.Wrapon ──────────────
           - capture syntax [, WOrd WIdth]
           - if c(rc) {
             di as err "invalid fvwrapon() option;"
             syntax [, WOrd WIdth]
             exit 198
             }
           - opts_exclusive "`word' `width'" fvwrapon
           = opts_exclusive " " fvwrapon
             ──────────────────────────────────────────────
 > ───────────────────────────── begin opts_exclusive ──────────────
           - version 8.2
           - args opts optname errcode optslab
           - local opts `opts'
           = local opts
           - local n 0
           - while `"`opts'"' != "" {
           = while `""' != "" {
```

```
                        local ++n
                        gettoken item`n' opts : opts, bind
                        }
                  - if `n' < 2 {
                  = if 0 < 2 {
                  - exit
                  ─────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ──────────────
            - local fvwrapon `word' `width'
            = local fvwrapon
            - if `:length local fvwrapon' {
            = if 0 {
              c_local fvwrapon fvwrapon(`fvwrapon')
              }
            ─────────────────────────────────────────────
> ──────────────────────────────── end _get_diopts.Wrapon ──────────
            - if "`fvwrap'" != "" {
            = if "" != "" {
              FVWrap, `fvwrap'
              }
            - c_local `c_diopts' `levelopt' `vsquish' `allbaselevels' `basel
> evels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `coefle
> gend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `compare' `
> fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `abbrev'
            = c_local diopts
            - if `K' == 2 {
            = if 2 == 2 {
            - c_local `c_opts' `"`options'"'
            = c_local  options `""'
            - }
            - sreturn local coding `coding'
            = sreturn local coding
            - sreturn local versus `versus'
            = sreturn local versus
            - sreturn local compare `compare'
            = sreturn local compare
            - sreturn local level `level'
            = sreturn local level 95
            ─────────────────────────────────────────────
> ──────────────────────────────── end _get_diopts.GetDiopts ───────
          - c_local `name1' `"`diopts'"'
          = c_local diopts `""'
          - local snames : s(macros)
          - foreach sname of local snames {
          - local S_`sname' = s(`sname')
          = local S_level = s(level)
```

```
        – }
        – local S_`sname' = s(`sname')
        = local S_fvops = s(fvops)
        – }
        – sreturn clear
        – GetDiopts DEFAULT
        ────────────────────────────────────────────────
> ──────────────────────────── begin _get_diopts.GetDiopts ──────────────
        – local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLBASElev
> els NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMPTYcell
> s NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(string)
> sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru) FVWRA
> PON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru) NOABB
> REV ABBREV
        – syntax namelist(max=2) [, `DIOPTS' *]
        = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBASEleve
> ls ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYce
> lls EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cfo
> rmat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(pa
> ssthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(pa
> ssthru) NOABBREV ABBREV *]
        – opts_exclusive "`allbaselevels' `noallbaselevels'"
        = opts_exclusive " "
        ────────────────────────────────────────────────
> ──────────────────────────── begin opts_exclusive ──────────────
        – version 8.2
        – args opts optname errcode optslab
        – local opts `opts'
        = local opts
        – local n 0
        – while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
        – if `n' < 2 {
        = if 0 < 2 {
        – exit
        ────────────────────────────────────────────────
> ──────────────────────────── end opts_exclusive ──────────────
        – opts_exclusive "`allbaselevels' `nobaselevels'"
        = opts_exclusive " "
        ────────────────────────────────────────────────
> ──────────────────────────── begin opts_exclusive ──────────────
        – version 8.2
        – args opts optname errcode optslab
```

```
          − local opts `opts'
          = local opts
          − local n 0
          − while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          − if `n' < 2 {
          = if 0 < 2 {
          − exit
          ─────────────────────────────────────────────
```

> ──────────────────────────── end opts_exclusive ─────────────

```
        − opts_exclusive "`baselevels' `nobaselevels'"
        = opts_exclusive " "
          ─────────────────────────────────────────────
```

> ──────────────────────────── begin opts_exclusive ─────────────

```
        − version 8.2
        − args opts optname errcode optslab
        − local opts `opts'
        = local opts
        − local n 0
        − while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
        − if `n' < 2 {
        = if 0 < 2 {
        − exit
          ─────────────────────────────────────────────
```

> ──────────────────────────── end opts_exclusive ─────────────

```
        − opts_exclusive "`emptycells' `noemptycells'"
        = opts_exclusive " "
          ─────────────────────────────────────────────
```

> ──────────────────────────── begin opts_exclusive ─────────────

```
        − version 8.2
        − args opts optname errcode optslab
        − local opts `opts'
        = local opts
        − local n 0
        − while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
```

```
                     – if `n' < 2 {
                     = if 0 < 2 {
                     – exit
                     ───────────────────────────────────────────
>  ──────────────────────────────────── end opts_exclusive ────────────
             – opts_exclusive "`fvlabel' `nofvlabel'"
             = opts_exclusive " "
                     ───────────────────────────────────────────
>  ──────────────────────────────────── begin opts_exclusive ──────────
             – version 8.2
             – args opts optname errcode optslab
             – local opts `opts'
             = local opts
             – local n 0
             – while `"`opts'"' != "" {
             = while `""' != "" {
               local ++n
               gettoken item`n' opts : opts, bind
               }
             – if `n' < 2 {
             = if 0 < 2 {
             – exit
                     ───────────────────────────────────────────
>  ──────────────────────────────────── end opts_exclusive ────────────
             – opts_exclusive "`omitted' `noomitted'"
             = opts_exclusive " "
                     ───────────────────────────────────────────
>  ──────────────────────────────────── begin opts_exclusive ──────────
             – version 8.2
             – args opts optname errcode optslab
             – local opts `opts'
             = local opts
             – local n 0
             – while `"`opts'"' != "" {
             = while `""' != "" {
               local ++n
               gettoken item`n' opts : opts, bind
               }
             – if `n' < 2 {
             = if 0 < 2 {
             – exit
                     ───────────────────────────────────────────
>  ──────────────────────────────────── end opts_exclusive ────────────
             – opts_exclusive "`lstretch' `nolstretch'"
             = opts_exclusive " "
                     ───────────────────────────────────────────
```

```
> ────────────────────────── begin opts_exclusive ──────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
                ──────────────────────────────────────────────
> ────────────────────────── end opts_exclusive ──────────
           – opts_exclusive "`cnsreport' `fullcnsreport'"
           = opts_exclusive " "
                ──────────────────────────────────────────────
> ────────────────────────── begin opts_exclusive ──────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
                ──────────────────────────────────────────────
> ────────────────────────── end opts_exclusive ──────────
           – opts_exclusive "`coeflegend' `selegend'"
           = opts_exclusive " "
                ──────────────────────────────────────────────
> ────────────────────────── begin opts_exclusive ──────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
```

```
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
                ─────────────────────────────────────────────────────

>  ──────────────────────────────────────── end opts_exclusive ─────────────
                – opts_exclusive "`noci' `nopvalues'"
                = opts_exclusive " "
                ─────────────────────────────────────────────────────

>  ──────────────────────────────────────── begin opts_exclusive ───────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
                ─────────────────────────────────────────────────────

>  ──────────────────────────────────────── end opts_exclusive ─────────────
                – local K : list sizeof namelist
                – gettoken c_diopts c_opts : namelist
                – opts_exclusive "`coding' `compare'"
                = opts_exclusive " "
                ─────────────────────────────────────────────────────

>  ──────────────────────────────────────── begin opts_exclusive ───────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
```

```
> ———————————————————————————————————————————————————————————————————————— end opts_exclusive ————————————————
            – opts_exclusive "`versus' `compare'"
            = opts_exclusive " "
            ————————————————————————————————————————————————————————————————————————————————————————————————
> ——————————————————————————————————————————————————————————————————————— begin opts_exclusive ——————————————
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
            ————————————————————————————————————————————————————————————————————————————————————————————————
> ———————————————————————————————————————————————————————————————————————— end opts_exclusive ————————————————
            – opts_exclusive "`abbrev' `noabbrev'"
            = opts_exclusive " "
            ————————————————————————————————————————————————————————————————————————————————————————————————
> ——————————————————————————————————————————————————————————————————————— begin opts_exclusive ——————————————
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
            ————————————————————————————————————————————————————————————————————————————————————————————————
> ———————————————————————————————————————————————————————————————————————— end opts_exclusive ————————————————
            – local allbaselevels `allbaselevels' `noallbaselevels'
            = local allbaselevels
            – local baselevels `baselevels' `nobaselevels'
            = local baselevels
            – local emptycells `emptycells' `noemptycells'
            = local emptycells
```

```
-  local omitted `omitted' `noomitted'
=  local omitted
-  local lstretch `lstretch' `nolstretch'
=  local lstretch
-  local fvlabel `fvlabel' `nofvlabel'
=  local fvlabel
-  local abbrev `abbrev' `noabbrev'
=  local abbrev
-  if "`allbaselevels'`baselevels'" == "" {
=  if "" == "" {
-  if c(showbaselevels) == "all" {
   local allbaselevels allbaselevels
   }
-  else if c(showbaselevels) == "on" {
   local baselevels baselevels
   }
-  }
-  if "`emptycells'" == "" {
=  if "" == "" {
-  if c(showemptycells) == "off" {
   local emptycells noemptycells
   }
-  }
-  if "`omitted'" == "" {
=  if "" == "" {
-  if c(showomitted) == "off" {
   local omitted noomitted
   }
-  }
-  if "`lstretch'" == "" {
=  if "" == "" {
-  if c(lstretch) == "off" {
   local lstretch nolstretch
   }
-  }
-  if `:length local cformat' {
=  if 0 {
   confirm numeric format `cformat'
   if fmtwidth(`"`cformat'"') > 9 {
   local cformat "%9.0g"
   di "{txt}note: invalid cformat(), using default"
   }
   sreturn local cformat `"`cformat'"'
   local cformat `"cformat(`cformat')"'
   }
-  if `:length local sformat' {
```

```
                        = if 0 {
                          confirm numeric format `sformat'
                          if fmtwidth(`"`sformat'"') > 8 {
                          local sformat "%8.2f"
                          di "{txt}note: invalid sformat(), using default"
                          }
                          sreturn local sformat `"`sformat'"'
                          local sformat `"sformat(`sformat')"'
                          }
                        - if `:length local pformat' {
                        = if 0 {
                          confirm numeric format `pformat'
                          if fmtwidth(`"`pformat'"') > 5 {
                          local pformat "%5.3f"
                          di "{txt}note: invalid pformat(), using default"
                          }
                          sreturn local pformat `"`pformat'"'
                          local pformat `"pformat(`pformat')"'
                          }
                        - if `K' == 1 & `:length local options' {
                        = if 1 == 1 & 0 {
                          syntax namelist(max=2) [, `DIOPTS']
                          }
                        - if reldif(`level', c(level)) > 1e-3 {
                        = if reldif(95, c(level)) > 1e-3 {
                          local levelopt level(`level')
                          }
                        - Wrapon , `fvwrapon'
                        = Wrapon ,
                       ────────────────────────────────────────────
>  ───────────────────────────────── begin _get_diopts.Wrapon ─────────────
                        - capture syntax [, WOrd WIdth]
                        - if c(rc) {
                          di as err "invalid fvwrapon() option;"
                          syntax [, WOrd WIdth]
                          exit 198
                          }
                        - opts_exclusive "`word' `width'" fvwrapon
                        = opts_exclusive " " fvwrapon
                       ────────────────────────────────────────────
>  ──────────────────────────────────── begin opts_exclusive ──────────────
                        - version 8.2
                        - args opts optname errcode optslab
                        - local opts `opts'
                        = local opts
                        - local n 0
```

```
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────────
>   ───────────────────────────────── end opts_exclusive ────────────────
                  – local fvwrapon `word' `width'
                  = local fvwrapon
                  – if `:length local fvwrapon' {
                  = if 0 {
                    c_local fvwrapon fvwrapon(`fvwrapon')
                    }
                    ─────────────────────────────────────────────
>   ───────────────────────────────── end _get_diopts.Wrapon ─────────────
                  – if "`fvwrap'" != "" {
                  = if "" != "" {
                    FVWrap, `fvwrap'
                    }
                  – c_local `c_diopts' `levelopt' `vsquish' `allbaselevels' `basel
>   evels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `coefle
>   gend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `compare' `
>   fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `abbrev'
                  = c_local DEFAULT
                  – if `K' == 2 {
                  = if 1 == 2 {
                    c_local `c_opts' `"`options'"'
                    }
                  – sreturn local coding `coding'
                  = sreturn local coding
                  – sreturn local versus `versus'
                  = sreturn local versus
                  – sreturn local compare `compare'
                  = sreturn local compare
                  – sreturn local level `level'
                  = sreturn local level 95
                    ─────────────────────────────────────────────
>   ───────────────────────────────── end _get_diopts.GetDiopts ──────────
                 – if `"`name2'"' == "" {
                 = if `"options"' == "" {
                   GetDiopts DUPS, `options'
                   }
                 – else {
```

```
              – GetDiopts DUPS options, `options'
              = GetDiopts DUPS options,
              ─────────────────────────────────────────────
> ─────────────────────────── begin _get_diopts.GetDiopts ───────────────
              – local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLBASElev
> els NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMPTYcell
> s NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(string)
> sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru) FVWRA
> PON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru) NOABB
> REV ABBREV
              – syntax namelist(max=2) [, `DIOPTS' *]
              = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBASEleve
> ls ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYce
> lls EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cfo
> rmat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(pa
> ssthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(pa
> ssthru) NOABBREV ABBREV *]
              – opts_exclusive "`allbaselevels' `noallbaselevels'"
              = opts_exclusive " "
              ─────────────────────────────────────────────
> ──────────────────────────── begin opts_exclusive ────────────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
              ─────────────────────────────────────────────
> ───────────────────────────── end opts_exclusive ────────────────
              – opts_exclusive "`allbaselevels' `nobaselevels'"
              = opts_exclusive " "
              ─────────────────────────────────────────────
> ──────────────────────────── begin opts_exclusive ────────────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
```

```
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
                ─────────────────────────────────────────
>  ──────────────────────────────── end opts_exclusive ──────────────
                – opts_exclusive "`baselevels' `nobaselevels'"
                = opts_exclusive " "
                ─────────────────────────────────────────
>  ─────────────────────────────── begin opts_exclusive ─────────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
                ─────────────────────────────────────────
>  ──────────────────────────────── end opts_exclusive ──────────────
                – opts_exclusive "`emptycells' `noemptycells'"
                = opts_exclusive " "
                ─────────────────────────────────────────
>  ─────────────────────────────── begin opts_exclusive ─────────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
                ─────────────────────────────────────────
```

```
> ─────────────────────────── end opts_exclusive ───────────
              – opts_exclusive "`fvlabel' `nofvlabel'"
              = opts_exclusive " "
              ────────────────────────────────────────────────

> ─────────────────────────── begin opts_exclusive ─────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
              ────────────────────────────────────────────────

> ─────────────────────────── end opts_exclusive ───────────
              – opts_exclusive "`omitted' `noomitted'"
              = opts_exclusive " "
              ────────────────────────────────────────────────

> ─────────────────────────── begin opts_exclusive ─────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
              ────────────────────────────────────────────────

> ─────────────────────────── end opts_exclusive ───────────
              – opts_exclusive "`lstretch' `nolstretch'"
              = opts_exclusive " "
              ────────────────────────────────────────────────

> ─────────────────────────── begin opts_exclusive ─────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
```

```
                     = local opts
                     – local n 0
                     – while `"`opts'"' != "" {
                     = while `""' != "" {
                       local ++n
                       gettoken item`n' opts : opts, bind
                       }
                     – if `n' < 2 {
                     = if 0 < 2 {
                     – exit
                     ─────────────────────────────────────────────
```

```
                     – opts_exclusive "`cnsreport' `fullcnsreport'"
                     = opts_exclusive " "
                     ─────────────────────────────────────────────
```

```
                     – version 8.2
                     – args opts optname errcode optslab
                     – local opts `opts'
                     = local opts
                     – local n 0
                     – while `"`opts'"' != "" {
                     = while `""' != "" {
                       local ++n
                       gettoken item`n' opts : opts, bind
                       }
                     – if `n' < 2 {
                     = if 0 < 2 {
                     – exit
                     ─────────────────────────────────────────────
```

```
                     – opts_exclusive "`coeflegend' `selegend'"
                     = opts_exclusive " "
                     ─────────────────────────────────────────────
```

```
                     – version 8.2
                     – args opts optname errcode optslab
                     – local opts `opts'
                     = local opts
                     – local n 0
                     – while `"`opts'"' != "" {
                     = while `""' != "" {
                       local ++n
                       gettoken item`n' opts : opts, bind
                       }
                     – if `n' < 2 {
```

```
              = if 0 < 2 {
              – exit
              ─────────────────────────────────────────
> ───────────────────────────── end opts_exclusive ─────────
              – opts_exclusive "`noci' `nopvalues'"
              = opts_exclusive " "
              ─────────────────────────────────────────
> ───────────────────────────── begin opts_exclusive ───────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
              ─────────────────────────────────────────
> ───────────────────────────── end opts_exclusive ─────────
              – local K : list sizeof namelist
              – gettoken c_diopts c_opts : namelist
              – opts_exclusive "`coding' `compare'"
              = opts_exclusive " "
              ─────────────────────────────────────────
> ───────────────────────────── begin opts_exclusive ───────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
              ─────────────────────────────────────────
> ───────────────────────────── end opts_exclusive ─────────
              – opts_exclusive "`versus' `compare'"
              = opts_exclusive " "
```

```
> ─────────────────────────────────────────────────────────
> ─────────────────────────────── begin opts_exclusive ───────────────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
                ─────────────────────────────────────────────────────────
> ─────────────────────────────── end opts_exclusive ───────────────────
                – opts_exclusive "`abbrev' `noabbrev'"
                = opts_exclusive " "
                ─────────────────────────────────────────────────────────
> ─────────────────────────────── begin opts_exclusive ───────────────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
                ─────────────────────────────────────────────────────────
> ─────────────────────────────── end opts_exclusive ───────────────────
                – local allbaselevels `allbaselevels' `noallbaselevels'
                = local allbaselevels
                – local baselevels `baselevels' `nobaselevels'
                = local baselevels
                – local emptycells `emptycells' `noemptycells'
                = local emptycells
                – local omitted `omitted' `noomitted'
                = local omitted
                – local lstretch `lstretch' `nolstretch'
                = local lstretch
```

```
-   local fvlabel `fvlabel' `nofvlabel'
=   local fvlabel
-   local abbrev `abbrev' `noabbrev'
=   local abbrev
-   if "`allbaselevels'`baselevels'" == "" {
=   if "" == "" {
-   if c(showbaselevels) == "all" {
    local allbaselevels allbaselevels
    }
-   else if c(showbaselevels) == "on" {
    local baselevels baselevels
    }
-   }
-   if "`emptycells'" == "" {
=   if "" == "" {
-   if c(showemptycells) == "off" {
    local emptycells noemptycells
    }
-   }
-   if "`omitted'" == "" {
=   if "" == "" {
-   if c(showomitted) == "off" {
    local omitted noomitted
    }
-   }
-   if "`lstretch'" == "" {
=   if "" == "" {
-   if c(lstretch) == "off" {
    local lstretch nolstretch
    }
-   }
-   if `:length local cformat' {
=   if 0 {
    confirm numeric format `cformat'
    if fmtwidth(`"`cformat'"') > 9 {
    local cformat "%9.0g"
    di "{txt}note: invalid cformat(), using default"
    }
    sreturn local cformat `"`cformat'"'
    local cformat `"cformat(`cformat')"'
    }
-   if `:length local sformat' {
=   if 0 {
    confirm numeric format `sformat'
    if fmtwidth(`"`sformat'"') > 8 {
    local sformat "%8.2f"
```

```
               di "{txt}note: invalid sformat(), using default"
               }
     sreturn local sformat `"`sformat'"'
     local sformat `"sformat(`sformat')"'
               }
   ─ if `:length local pformat' {
   = if 0 {
     confirm numeric format `pformat'
     if fmtwidth(`"`pformat'"') > 5 {
     local pformat "%5.3f"
     di "{txt}note: invalid pformat(), using default"
               }
     sreturn local pformat `"`pformat'"'
     local pformat `"pformat(`pformat')"'
               }
   ─ if `K' == 1 & `:length local options' {
   = if 2 == 1 & 0 {
     syntax namelist(max=2) [, `DIOPTS']
               }
   ─ if reldif(`level', c(level)) > 1e-3 {
   = if reldif(95, c(level)) > 1e-3 {
     local levelopt level(`level')
               }
   ─ Wrapon , `fvwrapon'
   = Wrapon ,
               ─────────────────────────────────────────────
 > ─────────────────────────── begin _get_diopts.Wrapon ───────────
   ─ capture syntax [, WOrd WIdth]
   ─ if c(rc) {
     di as err "invalid fvwrapon() option;"
     syntax [, WOrd WIdth]
     exit 198
               }
   ─ opts_exclusive "`word' `width'" fvwrapon
   = opts_exclusive " " fvwrapon
               ─────────────────────────────────────────────
 > ─────────────────────────── begin opts_exclusive ───────────────
   ─ version 8.2
   ─ args opts optname errcode optslab
   ─ local opts `opts'
   = local opts
   ─ local n 0
   ─ while `"`opts'"' != "" {
   = while `""' != "" {
     local ++n
     gettoken item`n' opts : opts, bind
```

```
            }
          - if `n' < 2 {
          = if 0 < 2 {
          - exit
          _____
```

> ─────────────────────────────────── end opts_exclusive ─────────────────

```
        - local fvwrapon `word' `width'
        = local fvwrapon
        - if `:length local fvwrapon' {
        = if 0 {
          c_local fvwrapon fvwrapon(`fvwrapon')
          }
          _____
```

> ─────────────────────────────────── end _get_diopts.Wrapon ────────────

```
        - if "`fvwrap'" != "" {
        = if "" != "" {
          FVWrap, `fvwrap'
          }
        - c_local `c_diopts' `levelopt' `vsquish' `allbaselevels' `basel
```
> evels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `coefle
> gend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `compare' `
> fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `abbrev'
```
        = c_local DUPS
        - if `K' == 2 {
        = if 2 == 2 {
        - c_local `c_opts' `"`options'"'
        = c_local  options `""'
        - }
        - sreturn local coding `coding'
        = sreturn local coding
        - sreturn local versus `versus'
        = sreturn local versus
        - sreturn local compare `compare'
        = sreturn local compare
        - sreturn local level `level'
        = sreturn local level 95
          _____
```

> ─────────────────────────────────── end _get_diopts.GetDiopts ─────────

```
        - c_local `name2' `"`options'"'
        = c_local options `""'
        - }
        - local DUPS : list DUPS - DEFAULT
        - gettoken DUPS : DUPS
        - if `"`DUPS'"' != "" {
        = if `""' != "" {
          if (strpos(`"`DUPS'"', "(")) {
```

```
                    gettoken DUPS : DUPS, parse("(")
                    local DUPS `"`DUPS'()"'
                    }
                    di as err "duplicate {bf:`DUPS'} option not allowed"
                    exit 198
                    }
              - sreturn clear
              - foreach sname of local snames {
              - sreturn local `sname' = `"`S_`sname''"'
              = sreturn local level = `"95"'
              - }
              - sreturn local `sname' = `"`S_`sname''"'
              = sreturn local fvops = `"true"'
              - }
              ─────────────────────────────────────────────────────
> ───────────────────────────────────────────── end _get_diopts ──────────────
          - mlopts mlopts, `options'
          = mlopts mlopts,
              ─────────────────────────────────────────────────────
> ──────────────────────────────────────────── begin mlopts ──────────────
          - version 8.0
          - local maxoptlist MLOPTs(string) TRace TRACEDIffs GRADient HESSia
> n SHOWSTEP ITERate(int -1) TOLerance(real -1) LTOLerance(real -1) GTOLerance
> (real -1) NONRTOLerance SHOWNRtolerance SHOWTOLerance NRTOLerance(real -1) Q
> TOLerance(real -1) DIFficult HALFSTEPonly CONSTraints(string) noCNSNOTEs COL
> linear TECHnique(passthru) VCE(passthru) DOTS depsilon(passthru) SHOWH NOTCO
> NCAVE(passthru) USEVIEWS NOLOg LOg nrderiv
          - syntax namelist(id="macro names" min=1 max=2) [, `maxoptlist' *
> ]
          = syntax namelist(id="macro names" min=1 max=2) [, MLOPTs(string)
> TRace TRACEDIffs GRADient HESSian SHOWSTEP ITERate(int -1) TOLerance(real -1
> ) LTOLerance(real -1) GTOLerance(real -1) NONRTOLerance SHOWNRtolerance SHOW
> TOLerance NRTOLerance(real -1) QTOLerance(real -1) DIFficult HALFSTEPonly CO
> NSTraints(string) noCNSNOTEs COLlinear TECHnique(passthru) VCE(passthru) DOT
> S depsilon(passthru) SHOWH NOTCONCAVE(passthru) USEVIEWS NOLOg LOg nrderiv *
>  ]
          - gettoken dest rest : namelist
          - if "`rest'" == "" {
          = if "" == "" {
          - syntax namelist [, `maxoptlist' ]
          = syntax namelist [, MLOPTs(string) TRace TRACEDIffs GRADient HESS
> ian SHOWSTEP ITERate(int -1) TOLerance(real -1) LTOLerance(real -1) GTOLeran
> ce(real -1) NONRTOLerance SHOWNRtolerance SHOWTOLerance NRTOLerance(real -1)
>  QTOLerance(real -1) DIFficult HALFSTEPonly CONSTraints(string) noCNSNOTEs C
> OLlinear TECHnique(passthru) VCE(passthru) DOTS depsilon(passthru) SHOWH NOT
> CONCAVE(passthru) USEVIEWS NOLOg LOg nrderiv ]
```

```
                       – }
                       – local mlopts `mlopts' `trace' `tracediffs' `gradient' `hessian'
> `showstep' `difficult' `halfsteponly' `nonrtolerance' `shownrtolerance' `sho
> wtolerance' `dots' `depsilon' `showh' `notconcave' `useviews' `log' `nolog'
> `nrderiv'
                       = local mlopts
                       – if `tolerance'!= –1 {
                       = if –1!= –1 {
                         local tol "tolerance(`tolerance')"
                         }
                       – if `ltolerance' != –1 {
                       = if –1 != –1 {
                         local ltol "ltolerance(`ltolerance')"
                         }
                       – if `gtolerance' != –1 {
                       = if –1 != –1 {
                         local gtol "gtolerance(`gtolerance')"
                         }
                       – if `nrtolerance' != –1 {
                       = if –1 != –1 {
                         local nrtol "nrtolerance(`nrtolerance')"
                         }
                       – if `qtolerance' != –1 {
                       = if –1 != –1 {
                         local qtol "qtolerance(`qtolerance')"
                         }
                       – if `iterate' != –1 {
                       = if –1 != –1 {
                         local iter "iterate(`iterate')"
                         }
                       – sreturn clear
                       – if "`technique'`vce'" != "" {
                       = if "" != "" {
                         ml_technique, `technique' `vce' nodefault
                         if `"`s(technique)'"' != "" {
                         local technique "technique(`s(technique)')"
                         }
                         if "`s(vce)'" != "" {
                         local vce "`s(vceopt)'"
                         }
                         sreturn local technique "`technique'"
                         sreturn local vce "`vce'"
                         }
                       – if "`constraints'" != "" {
                       = if "" != "" {
                         capture confirm name `constraints'
```

```
                if _rc {
                CheckClist constraints , constraints(`constraints')
                }
                else {
                CheckCmat `constraints'
                }
                local const "constraints(`constraints')"
                sreturn local constraints "`constraints'"
                }
            - sreturn local collinear "`collinear'"
            = sreturn local collinear ""
            - c_local `dest' `mlopts' `tol' `ltol' `gtol' `nrtol' `iter' `cons
> t' `cnsnotes' `collinear' `technique' `vce' `qtol'
            = c_local mlopts
            - if "`rest'" != "" {
            = if "" != "" {
                c_local `rest' `"`options'"'
                }
                ─────────────────────────────────────────────────────

> ───────────────────────────────────────────── end mlopts ──────────────
            - local coll `s(collinear)'
            = local coll
            - local cns `s(constraints)'
            = local cns
            - local mlopts `mlopts' `crittype'
            = local mlopts
            - if `"`score'"'!="" {
            = if `""'!="" {
                confirm new variable `score'
                local nword : word count `score'
                if `nword' > 1 {
                di in red "score() must contain the name of only " "one new variab
> le"
                exit 198
                }
                tempvar scvar
                local scopt score(`scvar')
                }
            - if "`offset'"!="" & "`exposur'"!="" {
            = if ""!="" & ""!="" {
                di in red "only one of offset() or exposure() can be specified"
                exit 198
                }
            - if "`constan'"!="" {
            = if ""!="" {
                local nvar : word count `varlist'
```

```
            if `nvar' == 1 {
            di in red "independent variables required with " "noconstant optio
>  n"
            exit 100
            }
            }
        - marksample touse
        - if `"`cluster'"' !="" {
        = if `""' !="" {
          markout `touse' `cluster', strok
          local clopt cluster(`cluster')
          }
        - if "`exposur'"!="" {
        = if ""!="" {
          capture assert `exposur' > 0 if `touse'
          if _rc {
          di in red "exposure() must be greater than zero"
          exit 459
          }
          tempvar offset
          qui gen double `offset' = ln(`exposur')
          local offvar "ln(`exposur')"
          }
        - if "`offset'"!="" {
        = if ""!="" {
          markout `touse' `offset'
          local offopt "offset(`offset')"
          if "`offvar'"=="" {
          local offvar "`offset'"
          }
          }
        - gettoken y xvars : varlist
        - _fv_check_depvar `y'
        = _fv_check_depvar piq_timing_max
        - tsunab y : `y'
        = tsunab y : piq_timing_max
          ─────────────────────────────────────────────────────────
>  ─────────────────────────────────────────────── begin tsunab ─────────────
        - version 6
        - gettoken user 0: 0, parse(" :")
        - gettoken colon 0: 0, parse(" :")
        - if `"`colon'"' != ":" { error 198 }
        = if `":"' != ":" { error 198 }
        - syntax [varlist(ts default=empty)] [, MIN(integer 1) MAX(integer
>  32000) NAME(string)]
        - c_local `user' `varlist'
```

```
                = c_local y piq_timing_max
                – local n : word count `varlist'
                = local n : word count piq_timing_max
                – if `n'>=`min' & `n'<=`max' { exit }
                = if 1>=1 & 1<=32000 { exit }
                ─────────────────────────────────────────────────────
> ─────────────────────────────────────────── end tsunab ───────────────
              – local yname : subinstr local y "." "_"
              – if "`weight'"!="" {
              = if ""!="" {
                if "`weight'"=="fweight" {
                local wt `"[fw`exp']"'
                }
                else if "`weight'"=="iweight" {
                local wt `"[iw`exp']"'
                }
                else local wt `"[aw`exp']"'
                }
              – summarize `y' `wt' if `touse', meanonly
              = summarize piq_timing_max  if __000002, meanonly
              – if r(N) == 0 { error 2000 }
              – if r(N) == 1 { error 2001 }
              – if r(min) < 0 {
                di in red "`y' must be greater than or equal to zero"
                exit 459
                }
              – if r(min) == r(max) & r(min) == 0 {
                di in red "`y' is zero for all observations"
                exit 498
                }
              – tempname mean nobs
              – scalar `mean' = r(mean)
              = scalar __000003 = r(mean)
              – scalar `nobs' = r(N)
              = scalar __000004 = r(N)
              – if "`display'"=="" {
              = if "nodisplay"=="" {
                capture assert `y' == int(`y') if `touse'
                if _rc {
                __NeW_Note `0'
                }
                }
              – if "`display'"=="" & "`weight'"=="aweight" {
              = if "nodisplay"=="" & ""=="aweight" {
                di in blu "note: you are responsible for interpretation " "of anal
> ytic weights."
```

```
                  }
            - if "`constan'`cns'"=="" & "`cluster'"=="" & "`weight'"!="pweight"
>  {
            = if ""=="" & ""=="" & ""!="pweight" {
            - tempname c
            - if "`offset'"!="" {
            = if ""!="" {
              SolveC `y' `offset' [`weight'`exp'] if `touse', n(`nobs') mean(`me
>  an')
              scalar `c' = r(_cons)
              if `c'>=. {
              di in blu "note: exposure = exp(`offvar') overflows;" _n "        co
>  uld not estimate constant-only model" _c
              if "`exposur'"=="" {
              di in blu _n "         use exposure() option for exposure = `offvar'.
>  "
              }
              else di in blu "."
              local cfail 1
              }
              local c "`c'+`offset'"
              }
            - else scalar `c' = ln(`mean')
            = else scalar __000005 = ln(__000003)
            - if "`cfail'"=="" {
            = if ""=="" {
            - LikePois `y' `c' [`weight'`exp'] if `touse', n(`nobs')
            = LikePois piq_timing_max __000005 [] if __000002, n(__000004)
                  ─────────────────────────────────────────────────────────────
>  ──────────────────────────────────────── begin poisson.LikePois ─────────────
            - gettoken y 0 : 0
            - gettoken xb 0 : 0
            - syntax [fw aw pw iw] [if] , Nobs(string)
            - if "`weight'"!="" {
            = if ""!="" {
              if "`weight'"=="fweight" {
              local wt `"[fw`exp']"'
              }
              else if "`weight'"=="iweight" {
              local wt `"[iw`exp']"'
              }
              else local wt `"[aw`exp']"'
              }
            - tempvar lnf
            - qui gen double `lnf' = `y'*(`xb')-exp(`xb')-lngamma(`y'+1) `if'
            = qui gen double __000006 = piq_timing_max*(__000005)-exp(__000005
```

```
> )-lngamma(piq_timing_max+1) if __000002
          - summarize `lnf' `wt' `if', meanonly
          = summarize __000006  if __000002, meanonly
          - if r(N) != `nobs' { exit }
          = if r(N) != __000004 { exit }
          - if "`weight'"=="aweight" {
          = if ""=="aweight" {
            ret scalar lnf = r(N)*r(mean)
            }
          - else ret scalar lnf = r(sum)
          _____

> _____ end poisson.LikePois _____
          - if r(lnf)<. {
          - local ll0 "lf0(1 `r(lnf)')"
          = local ll0 "lf0(1 -401.5531151051299)"
          - }
          - else {
            di in blu "note: could not compute " "constant-only model log like
> lihood."
            }
          - }
          - }
          - if `fvops' {
          = if 1 {
          - local rmcoll "version 11: _rmcoll"
          - }
          - else local rmcoll _rmcoll
          - if "`display'"!="" & "`weight'"=="aweight" {
          = if "nodisplay"!="" & ""=="aweight" {
            `rmcoll' `xvars' [iw`exp'] if `touse', `constan' `coll'
            }
          - else `rmcoll' `xvars' [`weight'`exp'] if `touse', `constan' `coll'
          = else version 11: _rmcoll  ln_neq cb_authors_ext estimated est_late
>  o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo [] if __000002,
          - local xvars `r(varlist)'
          = local xvars ln_neq cb_authors_ext estimated est_late o.est_early w
> g_ndx_other stky_pr_rotemberg stky_pr_calvo
          - if "`from'"=="" {
          = if ""=="" {
          - `vv' Ipois `y' `xvars' [`weight'`exp'] if `touse', n(`nobs') mean(
> `mean') `constan' `offopt'
          = version 18, missing: Ipois piq_timing_max ln_neq cb_authors_ext es
> timated est_late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo []
>  if __000002, n(__000004) mean(__000003)
          _____

> _____ begin poisson.Ipois _____
```

```
          - local vv : display "version " string(_caller()) ", missing:"
          - version 6, missing
          - syntax varlist(fv ts) [fw aw pw iw/] [if] , Nobs(string) Mean(st
> ring) [ noCONstant OFFset(string) ]
          - gettoken y xvars : varlist
          - tempvar xb z
          - tempname b1 b2 lnf1
          - if "`weight'"!="" {
        = if ""!="" {
          local awt `"[aw=`exp']"'
          local wt `"(`exp')*"'
          local exp `"=`exp'"'
          }
          - quietly {
          - if "`offset'"!="" {
        = if ""!="" {
          tempvar ynew
          gen double `ynew' = `y' - `offset'*`mean' `if'
          local poff "+`offset'"
          }
          - else local ynew `y'
        = else local ynew piq_timing_max
          - `vv' _regress `ynew' `xvars' `awt' `if', `constan'
        = version 18, missing: _regress piq_timing_max  ln_neq cb_authors_
> ext estimated est_late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_ca
> lvo  if __000002,
          ────────────────────────────────────────────────
> ──────────────────────────────── begin _ereturn_display ─────────────
          - version 11
          - if "`e(b)'" == "" & "`e(V)'" == "" {
        = if "matrix" == "" & "matrix" == "" {
          exit
          }
          - if "`e(cmd)'" == "regress" {
        = if "regress" == "regress" {
          - local ALTOPT Beta
          - }
          - syntax [, eform(passthru) First neq(integer -1) PLus `ALTOPT'
> *]
        = syntax [, eform(passthru) First neq(integer -1) PLus Beta *]
          - _get_mcompare, `options'
        = _get_mcompare, level(95.00) fvwrap(1)
          ────────────────────────────────────────────────
> ──────────────────────────────── begin _get_mcompare ─────────────
          - version 11
          - local cmd `"`e(cmd)'"'
```

```
                = local cmd `"regress"'
                - syntax [name(name=caller)] [, *]
                - local is_pwc = inlist("pwcompare", "`cmd'", "`caller'") | in
> list("pwmean", "`cmd'", "`caller'")
                = local is_pwc = inlist("pwcompare", "regress", "") | inlist("
> pwmean", "regress", "")
                - local is_marg = inlist("margins", "`cmd'", "`e(cmd2)'", "`ca
> ller'")
                = local is_marg = inlist("margins", "regress", "", "")
                - local OPTIONS NOADJust BONferroni DUNCan DUNNett SCHeffe SID
> ak SNK TUKey ADJustall
                - if `is_pwc' {
                = if 0 {
                  syntax [name] [, `OPTIONS' MCOMPare(string) *]
                  }
                - else {
                - syntax [name] [, MCOMPare(string) *]
                - local suboption mcompare()
                - }
                - sreturn clear
                - sreturn local options `"`options'"'
                = sreturn local options `"level(95.00) fvwrap(1)"'
                - if `is_pwc' {
                = if 0 {
                  local METHOD `noadjust' `bonferroni' `duncan' `dunnett' `sch
> effe' `sidak' `snk' `tukey'
                  local METHOD : list uniq METHOD
                  opts_exclusive "`METHOD'"
                  local ALL `adjustall'
                  opts_exclusive "`noadjust' `ALL'"
                  }
                - local 0 `", `mcompare'"'
                = local 0 `", "'
                - capture syntax [, `OPTIONS']
                = capture syntax [, NOADJust BONferroni DUNCan DUNNett SCHeffe
>  SIDak SNK TUKey ADJustall]
                - if c(rc) {
                  di as err "invalid mcompare() option;"
                  di as err "method '`mcompare'' not allowed"
                  error 198
                  }
                - local METHOD `METHOD' `noadjust' `bonferroni' `duncan' `dunn
> ett' `scheffe' `sidak' `snk' `tukey'
                = local METHOD
                - local METHOD : list uniq METHOD
                - local ALL `ALL' `adjustall'
```

```
                = local ALL
                – local ALL : list uniq ALL
                – opts_exclusive "`METHOD'" `suboption'
                = opts_exclusive "" mcompare()
                ───────────────────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ──────────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit

                ───────────────────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ────────────────
                – if "`METHOD'" == "" {
                = if "" == "" {
                – if "`ALL'" != "" {
                = if "" != "" {
                  di as err "multiple comparison method required with the adju
> stall option"

                  exit 198
                  }
                – local METHOD noadjust
                – local noadjust noadjust
                – }
                – opts_exclusive "`ALL' `noadjust'" `suboption'
                = opts_exclusive " noadjust" mcompare()
                ───────────────────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ──────────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts  noadjust
                – local n 0
                – while `"`opts'"' != "" {
                = while `"noadjust"' != "" {
                – local ++n
                – gettoken item`n' opts : opts, bind
                = gettoken item1 opts : opts, bind
```

```
                    –   }
                    –   while `"`opts'"' != "" {
                    =   while `""' != "" {
                        local ++n
                        gettoken item`n' opts : opts, bind
                        }
                    –   if `n' < 2 {
                    =   if 1 < 2 {
                    –   exit
                    ─────────────────────────────────────────
```

> ──────────────────────────────── end opts_exclusive ──────────────

```
                    –   local EXCLUDE duncan dunnett snk tukey
                    –   if `:list METHOD in EXCLUDE' {
                    =   if 0 {
                        if `is_pwc' {
                        local opt : copy local METHOD
                        }
                        else {
                        local opt "mcompare(`METHOD')"
                        }
                        local cmdlist anova manova regress mvreg pwmean
                        if "`cmd'" == "pwcompare" {
                        local cmd `"`e(cmd_est)'"'
                        }
                        if `is_marg' {
                        local cmd margins
                        }
                        if !`:list cmd in cmdlist' | !`is_pwc' {
                        di as err `"method `opt' is not allowed with results from `c
> md'"'
                        exit 322
                        }
                        if `"`e(prefix)'"' == "svy" {
                        di as err `"method `opt' is not allowed with results using t
> he svy prefix"'
                        exit 322
                        }
                        local vce `"`e(vce)'"'
                        if !inlist("`vce'", "", "ols") {
                        di as err `"method `opt' is not allowed with results using v
> ce(`vce')"'
                        exit 322
                        }
                        }
                    –   local EXCLUDE duncan dunnett snk tukey scheffe
                    –   if `:list METHOD in EXCLUDE' {
```

```
                    = if 0 {
                      if "`ALL'" != "" {
                      di as err `"option adjustall is not allowed with method `MET
> HOD'"'
                      exit 198
                      }
                      }
                    - sreturn local method `"`METHOD'"'
                    = sreturn local method `"noadjust"'
                    - sreturn local adjustall `"`ALL'"'
                    = sreturn local adjustall `""'
                    ─────────────────────────────────────────────
> ───────────────────────────────── end _get_mcompare ─────────────────
                    - if "`s(method)'" != "" {
                    = if "noadjust" != "" {
                    - loca mcopt mcompare(`s(method)' `s(adjustall)')
                    = loca mcopt mcompare(noadjust )
                    - }
                    - _get_diopts diopts, `s(options)'
                    = _get_diopts diopts, level(95.00) fvwrap(1)
                    ─────────────────────────────────────────────
> ───────────────────────────────── begin _get_diopts ─────────────────
                    - version 11
                    - syntax namelist(max=2) [, *]
                    - gettoken name1 namelist : namelist
                    - gettoken name2 namelist : namelist
                    - GetDiopts diopts options, `options'
                    = GetDiopts diopts options, level(95.00) fvwrap(1)
                    ─────────────────────────────────────────────
> ───────────────────────────── begin _get_diopts.GetDiopts ───────────────
                    - local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLBAS
> Elevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMPTY
> cells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(stri
> ng) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru) F
> VWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru) N
> OABBREV ABBREV
                    - syntax namelist(max=2) [, `DIOPTS' *]
                    = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBASE
> levels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMP
> TYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND
>  cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRA
> P(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYP
> E(passthru) NOABBREV ABBREV *]
                    - opts_exclusive "`allbaselevels' `noallbaselevels'"
                    = opts_exclusive " "
                    ─────────────────────────────────────────────
```

```
> ─────────────────────────── begin opts_exclusive ───────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────────────
> ─────────────────────────── end opts_exclusive ─────────────────
                  – opts_exclusive "`allbaselevels' `nobaselevels'"
                  = opts_exclusive " "
                    ─────────────────────────────────────────────────
> ─────────────────────────── begin opts_exclusive ───────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────────────
> ─────────────────────────── end opts_exclusive ─────────────────
                  – opts_exclusive "`baselevels' `nobaselevels'"
                  = opts_exclusive " "
                    ─────────────────────────────────────────────────
> ─────────────────────────── begin opts_exclusive ───────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
```

```
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
                  ──────────────────────────────────────────
>  ──────────────────────────────── end opts_exclusive ─────────
                – opts_exclusive "`emptycells' `noemptycells'"
                = opts_exclusive " "
                  ──────────────────────────────────────────
>  ──────────────────────────────── begin opts_exclusive ───────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
                  ──────────────────────────────────────────
>  ──────────────────────────────── end opts_exclusive ─────────
                – opts_exclusive "`fvlabel' `nofvlabel'"
                = opts_exclusive " "
                  ──────────────────────────────────────────
>  ──────────────────────────────── begin opts_exclusive ───────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
                  ──────────────────────────────────────────
>  ──────────────────────────────── end opts_exclusive ─────────
```

```
               – opts_exclusive "`omitted' `noomitted'"
             = opts_exclusive " "
             ─────────────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ──────────
             – version 8.2
             – args opts optname errcode optslab
             – local opts `opts'
             = local opts
             – local n 0
             – while `"`opts'"' != "" {
             = while `""' != "" {
               local ++n
               gettoken item`n' opts : opts, bind
               }
             – if `n' < 2 {
             = if 0 < 2 {
             – exit
             ─────────────────────────────────────────────
> ─────────────────────────────────── end opts_exclusive ──────────
             – opts_exclusive "`lstretch' `nolstretch'"
             = opts_exclusive " "
             ─────────────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ──────────
             – version 8.2
             – args opts optname errcode optslab
             – local opts `opts'
             = local opts
             – local n 0
             – while `"`opts'"' != "" {
             = while `""' != "" {
               local ++n
               gettoken item`n' opts : opts, bind
               }
             – if `n' < 2 {
             = if 0 < 2 {
             – exit
             ─────────────────────────────────────────────
> ─────────────────────────────────── end opts_exclusive ──────────
             – opts_exclusive "`cnsreport' `fullcnsreport'"
             = opts_exclusive " "
             ─────────────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ──────────
             – version 8.2
             – args opts optname errcode optslab
             – local opts `opts'
             = local opts
```

```
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────
> ─────────────────────────── end opts_exclusive ──────────
              – opts_exclusive "`coeflegend' `selegend'"
              = opts_exclusive " "
                    ─────────────────────────────────────────
> ─────────────────────────── begin opts_exclusive ────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────
> ─────────────────────────── end opts_exclusive ──────────
              – opts_exclusive "`noci' `nopvalues'"
              = opts_exclusive " "
                    ─────────────────────────────────────────
> ─────────────────────────── begin opts_exclusive ────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
```

```
                        – exit
                        ─────────────────────────────────────────────
>  ────────────────────────────── end opts_exclusive ──────────────
                        – local K : list sizeof namelist
                        – gettoken c_diopts c_opts : namelist
                        – opts_exclusive "`coding' `compare'"
                        = opts_exclusive " "
                        ─────────────────────────────────────────────
>  ────────────────────────────── begin opts_exclusive ─────────────
                        – version 8.2
                        – args opts optname errcode optslab
                        – local opts `opts'
                        = local opts
                        – local n 0
                        – while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        – if `n' < 2 {
                        = if 0 < 2 {
                        – exit
                        ─────────────────────────────────────────────
>  ────────────────────────────── end opts_exclusive ──────────────
                        – opts_exclusive "`versus' `compare'"
                        = opts_exclusive " "
                        ─────────────────────────────────────────────
>  ────────────────────────────── begin opts_exclusive ─────────────
                        – version 8.2
                        – args opts optname errcode optslab
                        – local opts `opts'
                        = local opts
                        – local n 0
                        – while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        – if `n' < 2 {
                        = if 0 < 2 {
                        – exit
                        ─────────────────────────────────────────────
>  ────────────────────────────── end opts_exclusive ──────────────
                        – opts_exclusive "`abbrev' `noabbrev'"
                        = opts_exclusive " "
                        ─────────────────────────────────────────────
```

```
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
```

```
                  – local allbaselevels `allbaselevels' `noallbaselevels'
                  = local allbaselevels
                  – local baselevels `baselevels' `nobaselevels'
                  = local baselevels
                  – local emptycells `emptycells' `noemptycells'
                  = local emptycells
                  – local omitted `omitted' `noomitted'
                  = local omitted
                  – local lstretch `lstretch' `nolstretch'
                  = local lstretch
                  – local fvlabel `fvlabel' `nofvlabel'
                  = local fvlabel
                  – local abbrev `abbrev' `noabbrev'
                  = local abbrev
                  – if "`allbaselevels'`baselevels'" == "" {
                  = if "" == "" {
                  – if c(showbaselevels) == "all" {
                    local allbaselevels allbaselevels
                    }
                  – else if c(showbaselevels) == "on" {
                    local baselevels baselevels
                    }
                  – }
                  – if "`emptycells'" == "" {
                  = if "" == "" {
                  – if c(showemptycells) == "off" {
                    local emptycells noemptycells
                    }
                  – }
                  – if "`omitted'" == "" {
```

```
=  if "" == "" {
-  if c(showomitted) == "off" {
   local omitted noomitted
   }
-  }
-  if "`lstretch'" == "" {
=  if "" == "" {
-  if c(lstretch) == "off" {
   local lstretch nolstretch
   }
-  }
-  if `:length local cformat' {
=  if 0 {
   confirm numeric format `cformat'
   if fmtwidth(`"`cformat'"') > 9 {
   local cformat "%9.0g"
   di "{txt}note: invalid cformat(), using default"
   }
   sreturn local cformat `"`cformat'"'
   local cformat `"cformat(`cformat')"'
   }
-  if `:length local sformat' {
=  if 0 {
   confirm numeric format `sformat'
   if fmtwidth(`"`sformat'"') > 8 {
   local sformat "%8.2f"
   di "{txt}note: invalid sformat(), using default"
   }
   sreturn local sformat `"`sformat'"'
   local sformat `"sformat(`sformat')"'
   }
-  if `:length local pformat' {
=  if 0 {
   confirm numeric format `pformat'
   if fmtwidth(`"`pformat'"') > 5 {
   local pformat "%5.3f"
   di "{txt}note: invalid pformat(), using default"
   }
   sreturn local pformat `"`pformat'"'
   local pformat `"pformat(`pformat')"'
   }
-  if `K' == 1 & `:length local options' {
=  if 2 == 1 & 0 {
   syntax namelist(max=2) [, `DIOPTS']
   }
-  if reldif(`level', c(level)) > 1e-3 {
```

```
                = if reldif(95, c(level)) > 1e-3 {
                  local levelopt level(`level')
                  }
                - Wrapon , `fvwrapon'
                = Wrapon ,
                  _____
> _____ begin _get_diopts.Wrapon _____
                - capture syntax [, WOrd WIdth]
                - if c(rc) {
                  di as err "invalid fvwrapon() option;"
                  syntax [, WOrd WIdth]
                  exit 198
                  }
                - opts_exclusive "`word' `width'" fvwrapon
                = opts_exclusive " " fvwrapon
                  _____
> _____ begin opts_exclusive _____
                - version 8.2
                - args opts optname errcode optslab
                - local opts `opts'
                = local opts
                - local n 0
                - while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                - if `n' < 2 {
                = if 0 < 2 {
                - exit
                  _____
> _____ end opts_exclusive _____
                - local fvwrapon `word' `width'
                = local fvwrapon
                - if `:length local fvwrapon' {
                = if 0 {
                  c_local fvwrapon fvwrapon(`fvwrapon')
                  }
                  _____
> _____ end _get_diopts.Wrapon _____
                - if "`fvwrap'" != "" {
                = if "fvwrap(1)" != "" {
                - FVWrap, `fvwrap'
                = FVWrap, fvwrap(1)
                  _____
> _____ begin _get_diopts.FVWrap _____
```

```
                     – syntax, fvwrap(integer)
                     – if `fvwrap' < 0 {
                     = if 1 < 0 {
                       di as err "{p}invalid option {bf:fvwrap(`fvwrap')}; " "n
> onnegative integer required{p_end}"
                       exit 198
                       }
                     ────────────────────────────────────────
> ──────────────────────────── end _get_diopts.FVWrap ─────────────
                   – }
                   – c_local `c_diopts' `levelopt' `vsquish' `allbaselevels' `b
> aselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `co
> eflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `compar
> e' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `abb
> rev'
                   = c_local diopts                    fvwrap(1)
                   – if `K' == 2 {
                   = if 2 == 2 {
                   – c_local `c_opts' `"`options'"'
                   = c_local  options `""'
                   – }
                   – sreturn local coding `coding'
                   = sreturn local coding
                   – sreturn local versus `versus'
                   = sreturn local versus
                   – sreturn local compare `compare'
                   = sreturn local compare
                   – sreturn local level `level'
                   = sreturn local level 95
                     ────────────────────────────────────────
> ──────────────────────────── end _get_diopts.GetDiopts ──────────────
                 – c_local `name1' `"`diopts'"'
                 = c_local diopts `"fvwrap(1)"'
                 – local snames : s(macros)
                 – foreach sname of local snames {
                 – local S_`sname' = s(`sname')
                 = local S_level = s(level)
                 – }
                 – local S_`sname' = s(`sname')
                 = local S_method = s(method)
                 – }
                 – local S_`sname' = s(`sname')
                 = local S_options = s(options)
                 – }
                 – sreturn clear
                 – GetDiopts DEFAULT
```

```
> ──────────────────────────────── begin _get_diopts.GetDiopts ───────────────
                    - local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLBAS
> Elevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMPTY
> cells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(stri
> ng) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru) F
> VWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru) N
> OABBREV ABBREV
                    - syntax namelist(max=2) [, `DIOPTS' *]
                    = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBASE
> levels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMP
> TYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND
>  cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRA
> P(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYP
> E(passthru) NOABBREV ABBREV *]
                    - opts_exclusive "`allbaselevels' `noallbaselevels'"
                    = opts_exclusive " "

> ──────────────────────────────── begin opts_exclusive ──────────────────────
                  - version 8.2
                  - args opts optname errcode optslab
                  - local opts `opts'
                  = local opts
                  - local n 0
                  - while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  - if `n' < 2 {
                  = if 0 < 2 {
                  - exit

> ──────────────────────────────── end opts_exclusive ────────────────────────
                  - opts_exclusive "`allbaselevels' `nobaselevels'"
                  = opts_exclusive " "

> ──────────────────────────────── begin opts_exclusive ──────────────────────
                  - version 8.2
                  - args opts optname errcode optslab
                  - local opts `opts'
                  = local opts
                  - local n 0
                  - while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
```

```
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ──────────────────────────────────────────────
>  ────────────────────────────────── end opts_exclusive ──────────────
            – opts_exclusive "`baselevels' `nobaselevels'"
            = opts_exclusive " "
                    ──────────────────────────────────────────────
>  ────────────────────────────────── begin opts_exclusive ────────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
                    ──────────────────────────────────────────────
>  ────────────────────────────────── end opts_exclusive ──────────────
            – opts_exclusive "`emptycells' `noemptycells'"
            = opts_exclusive " "
                    ──────────────────────────────────────────────
>  ────────────────────────────────── begin opts_exclusive ────────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
                    ──────────────────────────────────────────────
>  ────────────────────────────────── end opts_exclusive ──────────────
            – opts_exclusive "`fvlabel' `nofvlabel'"
```

```
                = opts_exclusive " "
              ─────────────────────────────────────────────
>  ─────────────────────────────────── begin opts_exclusive ───────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
              ─────────────────────────────────────────────
>  ─────────────────────────────────── end opts_exclusive ─────────────
              – opts_exclusive "`omitted' `noomitted'"
              = opts_exclusive " "
              ─────────────────────────────────────────────
>  ─────────────────────────────────── begin opts_exclusive ───────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
              ─────────────────────────────────────────────
>  ─────────────────────────────────── end opts_exclusive ─────────────
              – opts_exclusive "`lstretch' `nolstretch'"
              = opts_exclusive " "
              ─────────────────────────────────────────────
>  ─────────────────────────────────── begin opts_exclusive ───────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
```

```
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  ─────────────────────────────────────────────
> ───────────────────────────────────── end opts_exclusive ─────────────
                – opts_exclusive "`cnsreport' `fullcnsreport'"
                = opts_exclusive " "
                  ─────────────────────────────────────────────
> ───────────────────────────────────── begin opts_exclusive ───────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  ─────────────────────────────────────────────
> ───────────────────────────────────── end opts_exclusive ─────────────
                – opts_exclusive "`coeflegend' `selegend'"
                = opts_exclusive " "
                  ─────────────────────────────────────────────
> ───────────────────────────────────── begin opts_exclusive ───────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
```

```
> ───────────────────────────────────────── end opts_exclusive ──────────────
            – opts_exclusive "`noci' `nopvalues'"
            = opts_exclusive " "

> ───────────────────────────────────────── begin opts_exclusive ────────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit

> ───────────────────────────────────────── end opts_exclusive ──────────────
            – local K : list sizeof namelist
            – gettoken c_diopts c_opts : namelist
            – opts_exclusive "`coding' `compare'"
            = opts_exclusive " "

> ───────────────────────────────────────── begin opts_exclusive ────────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit

> ───────────────────────────────────────── end opts_exclusive ──────────────
            – opts_exclusive "`versus' `compare'"
            = opts_exclusive " "

> ───────────────────────────────────────── begin opts_exclusive ────────────
```

```
                           – version 8.2
                           – args opts optname errcode optslab
                           – local opts `opts'
                           = local opts
                           – local n 0
                           – while `"`opts'"' != "" {
                           = while `""' != "" {
                             local ++n
                             gettoken item`n' opts : opts, bind
                             }
                           – if `n' < 2 {
                           = if 0 < 2 {
                           – exit
                           ─────────────────────────────────────────
>  ────────────────────────────── end opts_exclusive ──────────────
                       – opts_exclusive "`abbrev' `noabbrev'"
                       = opts_exclusive " "
                           ─────────────────────────────────────────
>  ────────────────────────────── begin opts_exclusive ────────────
                       – version 8.2
                       – args opts optname errcode optslab
                       – local opts `opts'
                       = local opts
                       – local n 0
                       – while `"`opts'"' != "" {
                       = while `""' != "" {
                         local ++n
                         gettoken item`n' opts : opts, bind
                         }
                       – if `n' < 2 {
                       = if 0 < 2 {
                       – exit
                           ─────────────────────────────────────────
>  ────────────────────────────── end opts_exclusive ──────────────
                       – local allbaselevels `allbaselevels' `noallbaselevels'
                       = local allbaselevels
                       – local baselevels `baselevels' `nobaselevels'
                       = local baselevels
                       – local emptycells `emptycells' `noemptycells'
                       = local emptycells
                       – local omitted `omitted' `noomitted'
                       = local omitted
                       – local lstretch `lstretch' `nolstretch'
                       = local lstretch
                       – local fvlabel `fvlabel' `nofvlabel'
                       = local fvlabel
```

```
-  local abbrev `abbrev' `noabbrev'
=  local abbrev
-  if "`allbaselevels'`baselevels'" == "" {
=  if "" == "" {
-  if c(showbaselevels) == "all" {
   local allbaselevels allbaselevels
   }
-  else if c(showbaselevels) == "on" {
   local baselevels baselevels
   }
-  }
-  if "`emptycells'" == "" {
=  if "" == "" {
-  if c(showemptycells) == "off" {
   local emptycells noemptycells
   }
-  }
-  if "`omitted'" == "" {
=  if "" == "" {
-  if c(showomitted) == "off" {
   local omitted noomitted
   }
-  }
-  if "`lstretch'" == "" {
=  if "" == "" {
-  if c(lstretch) == "off" {
   local lstretch nolstretch
   }
-  }
-  if `:length local cformat' {
=  if 0 {
   confirm numeric format `cformat'
   if fmtwidth(`"`cformat'"') > 9 {
   local cformat "%9.0g"
   di "{txt}note: invalid cformat(), using default"
   }
   sreturn local cformat `"`cformat'"'
   local cformat `"cformat(`cformat')"'
   }
-  if `:length local sformat' {
=  if 0 {
   confirm numeric format `sformat'
   if fmtwidth(`"`sformat'"') > 8 {
   local sformat "%8.2f"
   di "{txt}note: invalid sformat(), using default"
   }
```

```
                    sreturn local sformat `"'`sformat'"'
                    local sformat `'"sformat(`sformat')"'
                    }
          - if `:length local pformat' {
        = if 0 {
                    confirm numeric format `pformat'
                    if fmtwidth(`"'`pformat'"'`) > 5 {
                    local pformat "%5.3f"
                    di "{txt}note: invalid pformat(), using default"
                    }
                    sreturn local pformat `"'`pformat'"'
                    local pformat `'"pformat(`pformat')"'
                    }
          - if `K' == 1 & `:length local options' {
        = if 1 == 1 & 0 {
                    syntax namelist(max=2) [, `DIOPTS']
                    }
          - if reldif(`level', c(level)) > 1e-3 {
        = if reldif(95, c(level)) > 1e-3 {
                    local levelopt level(`level')
                    }
          - Wrapon , `fvwrapon'
        = Wrapon ,
                    ───────────────────────────────────────────────
>  ───────────────────────────── begin _get_diopts.Wrapon ─────────────
          - capture syntax [, WOrd WIdth]
          - if c(rc) {
              di as err "invalid fvwrapon() option;"
              syntax [, WOrd WIdth]
              exit 198
              }
          - opts_exclusive "`word' `width'" fvwrapon
        = opts_exclusive " " fvwrapon
                    ───────────────────────────────────────────────
>  ───────────────────────────── begin opts_exclusive ─────────────────
          - version 8.2
          - args opts optname errcode optslab
          - local opts `opts'
        = local opts
          - local n 0
          - while `"'`opts'"'` != "" {
        = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
          - if `n' < 2 {
```

```
                        = if 0 < 2 {
                        – exit
                        ───────────────────────────────────────────
>  ──────────────────────────────  end opts_exclusive  ──────────────
                    – local fvwrapon `word' `width'
                    = local fvwrapon
                    – if `:length local fvwrapon' {
                    = if 0 {
                      c_local fvwrapon fvwrapon(`fvwrapon')
                      }
                      ───────────────────────────────────────────
>  ──────────────────────────────  end _get_diopts.Wrapon  ──────────
                    – if "`fvwrap'" != "" {
                    = if "" != "" {
                      FVWrap, `fvwrap'
                      }
                    – c_local `c_diopts' `levelopt' `vsquish' `allbaselevels' `b
> aselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `co
> eflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `compar
> e' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `abb
> rev'
                    = c_local DEFAULT
                    – if `K' == 2 {
                    = if 1 == 2 {
                      c_local `c_opts' `"`options'"'
                      }
                    – sreturn local coding `coding'
                    = sreturn local coding
                    – sreturn local versus `versus'
                    = sreturn local versus
                    – sreturn local compare `compare'
                    = sreturn local compare
                    – sreturn local level `level'
                    = sreturn local level 95
                      ───────────────────────────────────────────
>  ──────────────────────────────  end _get_diopts.GetDiopts  ────────
                    – if `"`name2'"' == "" {
                    = if `""' == "" {
                    – GetDiopts DUPS, `options'
                    = GetDiopts DUPS,
                      ───────────────────────────────────────────
>  ──────────────────────────────  begin _get_diopts.GetDiopts  ──────
                    – local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLBAS
> Elevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMPTY
> cells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(stri
> ng) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru) F
```

```
> VWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru) N
> OABBREV ABBREV
                 – syntax namelist(max=2) [, `DIOPTS' *]
                 = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBASE
> levels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMP
> TYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND
>  cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRA
> P(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYP
> E(passthru) NOABBREV ABBREV *]
                 – opts_exclusive "`allbaselevels' `noallbaselevels'"
                 = opts_exclusive " "
                   ─────────────────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ─────────────────
                 – version 8.2
                 – args opts optname errcode optslab
                 – local opts `opts'
                 = local opts
                 – local n 0
                 – while `"`opts'"' != "" {
                 = while `""' != "" {
                   local ++n
                   gettoken item`n' opts : opts, bind
                   }
                 – if `n' < 2 {
                 = if 0 < 2 {
                 – exit
                   ─────────────────────────────────────────────────────
> ───────────────────────────────── end opts_exclusive ──────────────────
                 – opts_exclusive "`allbaselevels' `nobaselevels'"
                 = opts_exclusive " "
                   ─────────────────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ─────────────────
                 – version 8.2
                 – args opts optname errcode optslab
                 – local opts `opts'
                 = local opts
                 – local n 0
                 – while `"`opts'"' != "" {
                 = while `""' != "" {
                   local ++n
                   gettoken item`n' opts : opts, bind
                   }
                 – if `n' < 2 {
                 = if 0 < 2 {
                 – exit
                   ─────────────────────────────────────────────────────
```

```
> ─────────────────────────────── end opts_exclusive ───────────────
          – opts_exclusive "`baselevels' `nobaselevels'"
          = opts_exclusive " "
          ────────────────────────────────────────────────────

> ─────────────────────────────── begin opts_exclusive ─────────────
          – version 8.2
          – args opts optname errcode optslab
          – local opts `opts'
          = local opts
          – local n 0
          – while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          – if `n' < 2 {
          = if 0 < 2 {
          – exit
          ────────────────────────────────────────────────────

> ─────────────────────────────── end opts_exclusive ───────────────
          – opts_exclusive "`emptycells' `noemptycells'"
          = opts_exclusive " "
          ────────────────────────────────────────────────────

> ─────────────────────────────── begin opts_exclusive ─────────────
          – version 8.2
          – args opts optname errcode optslab
          – local opts `opts'
          = local opts
          – local n 0
          – while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          – if `n' < 2 {
          = if 0 < 2 {
          – exit
          ────────────────────────────────────────────────────

> ─────────────────────────────── end opts_exclusive ───────────────
          – opts_exclusive "`fvlabel' `nofvlabel'"
          = opts_exclusive " "
          ────────────────────────────────────────────────────

> ─────────────────────────────── begin opts_exclusive ─────────────
          – version 8.2
          – args opts optname errcode optslab
          – local opts `opts'
```

```
                      = local opts
                      – local n 0
                      – while `"`opts'"' != "" {
                      = while `""' != "" {
                        local ++n
                        gettoken item`n' opts : opts, bind
                        }
                      – if `n' < 2 {
                      = if 0 < 2 {
                      – exit
                      ──────────────────────────────────────────────
>   ─────────────────────────────── end opts_exclusive ──────────────
                  – opts_exclusive "`omitted' `noomitted'"
                  = opts_exclusive " "
                      ──────────────────────────────────────────────
>   ─────────────────────────────── begin opts_exclusive ────────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                      ──────────────────────────────────────────────
>   ─────────────────────────────── end opts_exclusive ──────────────
                  – opts_exclusive "`lstretch' `nolstretch'"
                  = opts_exclusive " "
                      ──────────────────────────────────────────────
>   ─────────────────────────────── begin opts_exclusive ────────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
```

```
                       = if 0 < 2 {
                       – exit
                       _____
>  ─────────────────────────────────────── end opts_exclusive ───────────
                   – opts_exclusive "`cnsreport' `fullcnsreport'"
                   = opts_exclusive " "
                       _____
>  ─────────────────────────────────────── begin opts_exclusive ─────────
                   – version 8.2
                   – args opts optname errcode optslab
                   – local opts `opts'
                   = local opts
                   – local n 0
                   – while `"`opts'"' != "" {
                   = while `""' != "" {
                     local ++n
                     gettoken item`n' opts : opts, bind
                     }
                   – if `n' < 2 {
                   = if 0 < 2 {
                   – exit
                       _____
>  ─────────────────────────────────────── end opts_exclusive ───────────
                   – opts_exclusive "`coeflegend' `selegend'"
                   = opts_exclusive " "
                       _____
>  ─────────────────────────────────────── begin opts_exclusive ─────────
                   – version 8.2
                   – args opts optname errcode optslab
                   – local opts `opts'
                   = local opts
                   – local n 0
                   – while `"`opts'"' != "" {
                   = while `""' != "" {
                     local ++n
                     gettoken item`n' opts : opts, bind
                     }
                   – if `n' < 2 {
                   = if 0 < 2 {
                   – exit
                       _____
>  ─────────────────────────────────────── end opts_exclusive ───────────
                   – opts_exclusive "`noci' `nopvalues'"
                   = opts_exclusive " "
                       _____
>  ─────────────────────────────────────── begin opts_exclusive ─────────
```

```
                    − version 8.2
                    − args opts optname errcode optslab
                    − local opts `opts'
                    = local opts
                    − local n 0
                    − while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    − if `n' < 2 {
                    = if 0 < 2 {
                    − exit
                    ─────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ──────────────
                  − local K : list sizeof namelist
                  − gettoken c_diopts c_opts : namelist
                  − opts_exclusive "`coding' `compare'"
                  = opts_exclusive " "
                    ─────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ──────────────
                  − version 8.2
                  − args opts optname errcode optslab
                  − local opts `opts'
                  = local opts
                  − local n 0
                  − while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  − if `n' < 2 {
                  = if 0 < 2 {
                  − exit
                    ─────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ──────────────
                  − opts_exclusive "`versus' `compare'"
                  = opts_exclusive " "
                    ─────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ──────────────
                  − version 8.2
                  − args opts optname errcode optslab
                  − local opts `opts'
                  = local opts
                  − local n 0
                  − while `"`opts'"' != "" {
```

```
                          = while `""' != "" {
                            local ++n
                            gettoken item`n' opts : opts, bind
                            }
                          − if `n' < 2 {
                          = if 0 < 2 {
                          − exit
                          ────────────────────────────────────────
>  ──────────────────────────── end opts_exclusive ───────────────
                  − opts_exclusive "`abbrev' `noabbrev'"
                  = opts_exclusive " "
                          ────────────────────────────────────────
>  ──────────────────────────── begin opts_exclusive ─────────────
                  − version 8.2
                  − args opts optname errcode optslab
                  − local opts `opts'
                  = local opts
                  − local n 0
                  − while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  − if `n' < 2 {
                  = if 0 < 2 {
                  − exit
                          ────────────────────────────────────────
>  ──────────────────────────── end opts_exclusive ───────────────
                  − local allbaselevels `allbaselevels' `noallbaselevels'
                  = local allbaselevels
                  − local baselevels `baselevels' `nobaselevels'
                  = local baselevels
                  − local emptycells `emptycells' `noemptycells'
                  = local emptycells
                  − local omitted `omitted' `noomitted'
                  = local omitted
                  − local lstretch `lstretch' `nolstretch'
                  = local lstretch
                  − local fvlabel `fvlabel' `nofvlabel'
                  = local fvlabel
                  − local abbrev `abbrev' `noabbrev'
                  = local abbrev
                  − if "`allbaselevels'`baselevels'" == "" {
                  = if "" == "" {
                  − if c(showbaselevels) == "all" {
                    local allbaselevels allbaselevels
```

```
      }
-  else if c(showbaselevels) == "on" {
   local baselevels baselevels
   }
-  }
-  if "`emptycells'" == "" {
=  if "" == "" {
-  if c(showemptycells) == "off" {
   local emptycells noemptycells
   }
-  }
-  if "`omitted'" == "" {
=  if "" == "" {
-  if c(showomitted) == "off" {
   local omitted noomitted
   }
-  }
-  if "`lstretch'" == "" {
=  if "" == "" {
-  if c(lstretch) == "off" {
   local lstretch nolstretch
   }
-  }
-  if `:length local cformat' {
=  if 0 {
   confirm numeric format `cformat'
   if fmtwidth(`"`cformat'"') > 9 {
   local cformat "%9.0g"
   di "{txt}note: invalid cformat(), using default"
   }
   sreturn local cformat `"`cformat'"'
   local cformat `"cformat(`cformat')"'
   }
-  if `:length local sformat' {
=  if 0 {
   confirm numeric format `sformat'
   if fmtwidth(`"`sformat'"') > 8 {
   local sformat "%8.2f"
   di "{txt}note: invalid sformat(), using default"
   }
   sreturn local sformat `"`sformat'"'
   local sformat `"sformat(`sformat')"'
   }
-  if `:length local pformat' {
=  if 0 {
   confirm numeric format `pformat'
```

```
                   if fmtwidth(`"`pformat'"') > 5 {
                   local pformat "%5.3f"
                   di "{txt}note: invalid pformat(), using default"
                   }
                   sreturn local pformat `"`pformat'"'
                   local pformat `"pformat(`pformat')"'
                   }
        − if `K' == 1 & `:length local options' {
        = if 1 == 1 & 0 {
                   syntax namelist(max=2) [, `DIOPTS']
                   }
        − if reldif(`level', c(level)) > 1e−3 {
        = if reldif(95, c(level)) > 1e−3 {
                   local levelopt level(`level')
                   }
        − Wrapon , `fvwrapon'
        = Wrapon ,
                   ───────────────────────────────────────────────
   > ────────────────────────── begin _get_diopts.Wrapon ──────────
              − capture syntax [, WOrd WIdth]
              − if c(rc) {
                 di as err "invalid fvwrapon() option;"
                 syntax [, WOrd WIdth]
                 exit 198
                 }
              − opts_exclusive "`word' `width'" fvwrapon
              = opts_exclusive " " fvwrapon
                 ───────────────────────────────────────────────
   > ─────────────────────────── begin opts_exclusive ─────────────
              − version 8.2
              − args opts optname errcode optslab
              − local opts `opts'
              = local opts
              − local n 0
              − while `"`opts'"' != "" {
              = while `""' != "" {
                 local ++n
                 gettoken item`n' opts : opts, bind
                 }
              − if `n' < 2 {
              = if 0 < 2 {
              − exit
                 ───────────────────────────────────────────────
   > ─────────────────────────── end opts_exclusive ──────────────
              − local fvwrapon `word' `width'
              = local fvwrapon
```

```
                        – if `:length local fvwrapon' {
                        = if 0 {
                          c_local fvwrapon fvwrapon(`fvwrapon')
                          }
                        ─────────────────────────────────────────
> ─────────────────────────────── end _get_diopts.Wrapon ───────────────
                  – if "`fvwrap'" != "" {
                  = if "" != "" {
                    FVWrap, `fvwrap'
                    }
                  – c_local `c_diopts' `levelopt' `vsquish' `allbaselevels' `b
> aselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `co
> eflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `compar
> e' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `abb
> rev'
                  = c_local DUPS
                  – if `K' == 2 {
                  = if 1 == 2 {
                    c_local `c_opts' `"`options'"'
                    }
                  – sreturn local coding `coding'
                  = sreturn local coding
                  – sreturn local versus `versus'
                  = sreturn local versus
                  – sreturn local compare `compare'
                  = sreturn local compare
                  – sreturn local level `level'
                  = sreturn local level 95
                  ─────────────────────────────────────────────
> ─────────────────────────────── end _get_diopts.GetDiopts ───────────────
                – }
                – else {
                  GetDiopts DUPS options, `options'
                  c_local `name2' `"`options'"'
                  }
                – local DUPS : list DUPS – DEFAULT
                – gettoken DUPS : DUPS
                – if `"`DUPS'"' != "" {
                = if `""' != "" {
                  if (strpos(`"`DUPS'"', "(")) {
                  gettoken DUPS : DUPS, parse("(")
                  local DUPS `"`DUPS'()"'
                  }
                  di as err "duplicate {bf:`DUPS'} option not allowed"
                  exit 198
                  }
```

```
               - sreturn clear
               - foreach sname of local snames {
               - sreturn local `sname' = `"`S_`sname''"'
               = sreturn local level = `"95"'
               - }
               - sreturn local `sname' = `"`S_`sname''"'
               = sreturn local method = `"noadjust"'
               - }
               - sreturn local `sname' = `"`S_`sname''"'
               = sreturn local options = `"level(95.00) fvwrap(1)"'
               - }
               ─────────────────────────────────────────────
> ──────────────────────────────────────── end _get_diopts ───────────────
               - if !`:length local first' {
               = if !0 {
               - local first showeqns
               - }
               - if `neq' < 1 {
               = if -1 < 1 {
               - _ms_eq_info
               - local neqopt neq(`r(k_eq)')
               = local neqopt neq(1)
               - }
               - else {
                 local neqopt neq(`neq')
                 }
               - _coef_table, nodiparm nocnsreport noeqcheck eformall `eform' `
> first' `neqopt' `plus' `beta' `mcopt' `diopts'
               = _coef_table, nodiparm nocnsreport noeqcheck eformall  showeqns
>  neq(1)   mcompare(noadjust ) fvwrap(1)
               ─────────────────────────────────────────────
> ─────────────────────────────────────── begin _coef_table ──────────────
               - version 11
               - local vv : di "version " string(max(11,_caller())) ", missin
> g:"
               - if (!c(noisily) & c(coeftabresults) == "off") {
                 exit
                 }
               - _check_eclass
               - syntax [, BMATrix(passthru) VMATrix(passthru) * ]
               - if "`e(b)'" == "" & "`e(V)'" == "" & "`bmatrix'`vmatrix'"=="
> " {
               = if "matrix" == "" & "matrix" == "" & ""=="" {
                 exit
                 }
               - local mc_cmds contrast margins pwcompare pwmean
```

```
            - local cmd "`e(cmd)'"
            = local cmd "regress"
            - local keepmc : list cmd in mc_cmds
            - if inlist("`cmd'", "pwcompare", "pwmean") {
            = if inlist("regress", "pwcompare", "pwmean") {
              local groups GROUPS
              }
            - if "`cmd'" == "regress" {
            = if "regress" == "regress" {
            - local beta Beta
            - }
            - if "`cmd'" == "gsem" {
            = if "regress" == "gsem" {
              local fvignore fvignore(int 0)
              local flignore flignore
              }
            - if "`cmd'" == "sem" {
            = if "regress" == "sem" {
              local standardized STANDARDIZED
              local showginvariant SHOWGINVariant
              local nolabel NOLABel LABel NOFVLABel FVLABel
              local nofootnote NOFOOTnote
              local wrap wrap(numlist max=1) fvwrap(passthru)
              }
            - if "`e(mi)'"=="mi" {
            = if ""=="mi" {
              local dftable DFTable
              local dfonly DFONLY
              local noclustreport NOCLUSTReport
              local pisematrix PISEMATrix(string)
              }
            - syntax [, cmdextras BMATrix(string) VMATrix(string) EMATrix(
 > string) DFMATrix(string) EQMATrix(string) ROWMATrix(string) CIMATrix(string)
 >  ROWCFormat(string) ROWPFormat(string) ROWSFormat(string) NOROWCI MMATrix(st
 > ring) MVMATrix(string) MEMATrix(string) BSTDMATrix(string) CNSMATrix(string)
 >  PCLASSMATrix(string) Level(cilevel) prefix(name) suffix(name) OFFSETlist(st
 > ring asis) `beta' `standardized' NOCI NOPValues `dftable' `dfonly' dfci DFPV
 > alues dfmissing `groups' COEFLegend selegend `fvignore' `flignore' `showginv
 > ariant' `nolabel' `nofootnote' `wrap' sort `pisematrix' depname(string) COEF
 > Title(string) coeftitle2(string) ptitle(string) cititle(string) NOMCLEGend n
 > oCNSReport FULLCNSReport `noclustreport' cformat(passthru) sformat(passthru)
 >  pformat(passthru) NOFirst First SHOWEQns neq(integer -1) NODIPARM NOTEST SE
 > Parator(integer 0) NOSKIP OFFSETONLY1 PLus NOEQCHECK EFORMALL CITYPE(string)
 >  eqselect(string) noEFORMNOTE * ]
            = syntax [, cmdextras BMATrix(string) VMATrix(string) EMATrix(
 > string) DFMATrix(string) EQMATrix(string) ROWMATrix(string) CIMATrix(string)
```

```
>   ROWCFormat(string) ROWPFormat(string) ROWSFormat(string) NOROWCI MMATrix(st
> ring) MVMATrix(string) MEMATrix(string) BSTDMATrix(string) CNSMATrix(string)
>   PCLASSMATrix(string) Level(cilevel) prefix(name) suffix(name) OFFSETlist(st
> ring asis) Beta  NOCI NOPValues   dfci DFPValues dfmissing  COEFLegend seleg
> end        sort  depname(string) COEFTitle(string) coeftitle2(string) ptitle(
> string) cititle(string) NOMCLEGend noCNSReport FULLCNSReport  cformat(passth
> ru) sformat(passthru) pformat(passthru) NOFirst First SHOWEQns neq(integer −
> 1) NODIPARM NOTEST SEParator(integer 0) NOSKIP OFFSETONLY1 PLus NOEQCHECK EF
> ORMALL CITYPE(string) eqselect(string) noEFORMNOTE * ]
                  − if "`wrap'" != "" {
                  = if "" != "" {
                    opts_exclusive `"wrap(`wrap') `fvwrap'"'
                    local fvwrap fvwrap(`wrap')
                    }
                  − if "`nolabel'`label'" != "" {
                  = if "" != "" {
                    opts_exclusive "`nolabel' `label'"
                    opts_exclusive "`nofvlabel' `fvlabel'"
                    opts_exclusive "`nolabel' `fvlabel'"
                    opts_exclusive "`nofvlabel' `label'"
                    if "`nolabel'" != "" {
                    local fvlabel nofvlabel
                    }
                    else {
                    local fvlabel fvlabel
                    }
                    }
                  − else local fvlabel `nofvlabel' `fvlabel'
                  = else local fvlabel
                  − local type `coeflegend' `selegend'
                  = local type
                  − opts_exclusive "`type' `standardized'"
                  = opts_exclusive " "
                    ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━
>  ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ begin opts_exclusive ━━━━━━━━━━━━━━
                  − version 8.2
                  − args opts optname errcode optslab
                  − local opts `opts'
                  = local opts
                  − local n 0
                  − while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  − if `n' < 2 {
```

```
                = if 0 < 2 {
                – exit
                ───────────────────────────────────────────────
>  ─────────────────────────────────── end opts_exclusive ───────────────
            – if (`"'`rowmatrix'"''=="" & "'`norowci'"!="") {
            = if (`""'=="" & ""!="") {
              di as err "{bf:norowci} requires {bf:rowmatrix()}"
              exit 198
              }
            – if ("`dftable'"!="" & "`norowci'"!="") {
            = if (""!="" & ""!="") {
              di as err "{bf:norowci} is not allowed with {bf:`dftable'}"
              exit 198
              }
            – if ("`dfonly'"!="" & "`norowci'"!="") {
            = if (""!="" & ""!="") {
              di as err "{bf:norowci} is not allowed with {bf:`dfonly'}"
              exit 198
              }
            – if ("`noci'"!="" & "`norowci'"!="") {
            = if (""!="" & ""!="") {
              di as err "{bf:norowci} is not allowed with {bf:`noci'}"
              exit 198
              }
            – if "`standardized'" != "" & "`bstdmatrix'" != "" {
            = if "" != "" & "" != "" {
              local beta beta
              local standardized
              }
            – if `:length local type' == 0 {
            = if 0 == 0 {
            – local type `beta' `noci' `nopvalues' `dftable' `dfonly' `gro
> ups' `dfci' `dfpvalues'
            = local type
            – }
            – opts_exclusive "`type'"
            = opts_exclusive ""
                ───────────────────────────────────────────────
>  ─────────────────────────────────── begin opts_exclusive ───────────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
```

```
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    ─ if `n' < 2 {
                    = if 0 < 2 {
                    ─ exit
                    ────────────────────────────────────────────
  > ──────────────────────────────────── end opts_exclusive ─────────────
                    ─ opts_exclusive "`first' `nofirst'"
                    = opts_exclusive " "
                    ────────────────────────────────────────────
  > ──────────────────────────────────── begin opts_exclusive ───────────
                    ─ version 8.2
                    ─ args opts optname errcode optslab
                    ─ local opts `opts'
                    = local opts
                    ─ local n 0
                    ─ while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    ─ if `n' < 2 {
                    = if 0 < 2 {
                    ─ exit
                    ────────────────────────────────────────────
  > ──────────────────────────────────── end opts_exclusive ─────────────
                    ─ opts_exclusive "`first' `showeqns'"
                    = opts_exclusive " showeqns"
                    ────────────────────────────────────────────
  > ──────────────────────────────────── begin opts_exclusive ───────────
                    ─ version 8.2
                    ─ args opts optname errcode optslab
                    ─ local opts `opts'
                    = local opts  showeqns
                    ─ local n 0
                    ─ while `"`opts'"' != "" {
                    = while `"showeqns"' != "" {
                    ─ local ++n
                    ─ gettoken item`n' opts : opts, bind
                    = gettoken item1 opts : opts, bind
                    ─ }
                    ─ while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
```

```
                    }
                  – if `n' < 2 {
                  = if 1 < 2 {
                  – exit
                  ──────────────────────────────────────────────
  > ───────────────────────────── end opts_exclusive ─────────────
              – local cnsreport `cnsreport' `fullcnsreport'
              = local cnsreport nocnsreport
              – opts_exclusive "`cnsreport'"
              = opts_exclusive "nocnsreport"
              ──────────────────────────────────────────────────
  > ───────────────────────────── begin opts_exclusive ───────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts nocnsreport
              – local n 0
              – while `"`opts'"' != "" {
              = while `"nocnsreport"' != "" {
              – local ++n
              – gettoken item`n' opts : opts, bind
              = gettoken item1 opts : opts, bind
              – }
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 1 < 2 {
              – exit
              ──────────────────────────────────────────────────
  > ───────────────────────────── end opts_exclusive ─────────────
              – if `"`showeqns'"' != "" {
              = if `"showeqns"' != "" {
              – local nofirst nofirst
              – }
              – if `"`ematrix'`noeqcheck'"' == "" {
              = if `"noeqcheck"' == "" {
                if `"`e(error)'"' == "matrix" {
                local ematrix e(error)
                }
                }
              – _get_mcompare, `options'
              = _get_mcompare, mcompare(noadjust ) fvwrap(1)
              ──────────────────────────────────────────────────
```

```
> ───────────────────────────────── begin _get_mcompare ─────────────────
                      - version 11
                      - local cmd `"`e(cmd)'"'
                      = local cmd `"regress"'
                      - syntax [name(name=caller)] [, *]
                      - local is_pwc = inlist("pwcompare", "`cmd'", "`caller'") |
> inlist("pwmean", "`cmd'", "`caller'")
                      = local is_pwc = inlist("pwcompare", "regress", "") | inlist
> ("pwmean", "regress", "")
                      - local is_marg = inlist("margins", "`cmd'", "`e(cmd2)'", "`
> caller'")
                      = local is_marg = inlist("margins", "regress", "", "")
                      - local OPTIONS NOADJust BONferroni DUNCan DUNNett SCHeffe S
> IDak SNK TUKey ADJustall
                      - if `is_pwc' {
                      = if 0 {
                        syntax [name] [, `OPTIONS' MCOMPare(string) *]
                        }
                      - else {
                      - syntax [name] [, MCOMPare(string) *]
                      - local suboption mcompare()
                      - }
                      - sreturn clear
                      - sreturn local options `"`options'"'
                      = sreturn local options `"fvwrap(1)"'
                      - if `is_pwc' {
                      = if 0 {
                        local METHOD `noadjust' `bonferroni' `duncan' `dunnett' `s
> cheffe' `sidak' `snk' `tukey'
                        local METHOD : list uniq METHOD
                        opts_exclusive "`METHOD'"
                        local ALL `adjustall'
                        opts_exclusive "`noadjust' `ALL'"
                        }
                      - local 0 `", `mcompare'"'
                      = local 0 `", noadjust"'
                      - capture syntax [, `OPTIONS']
                      = capture syntax [, NOADJust BONferroni DUNCan DUNNett SCHef
> fe SIDak SNK TUKey ADJustall]
                      - if c(rc) {
                        di as err "invalid mcompare() option;"
                        di as err "method '`mcompare'' not allowed"
                        error 198
                        }
                      - local METHOD `METHOD' `noadjust' `bonferroni' `duncan' `du
> nnett' `scheffe' `sidak' `snk' `tukey'
```

```
              = local METHOD  noadjust
              - local METHOD : list uniq METHOD
              - local ALL `ALL' `adjustall'
              = local ALL
              - local ALL : list uniq ALL
              - opts_exclusive "`METHOD'" `suboption'
              = opts_exclusive "noadjust" mcompare()
                ─────────────────────────────────────────────────
  > ────────────────────────────── begin opts_exclusive ─────────────
              - version 8.2
              - args opts optname errcode optslab
              - local opts `opts'
              = local opts noadjust
              - local n 0
              - while `"`opts'"' != "" {
              = while `"noadjust"' != "" {
              - local ++n
              - gettoken item`n' opts : opts, bind
              = gettoken item1 opts : opts, bind
              - }
              - while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              - if `n' < 2 {
              = if 1 < 2 {
              - exit
                ─────────────────────────────────────────────────
  > ────────────────────────────── end opts_exclusive ─────────────
              - if "`METHOD'" == "" {
              = if "noadjust" == "" {
                if "`ALL'" != "" {
                di as err "multiple comparison method required with the ad
  > justall option"
                exit 198
                }
                local METHOD noadjust
                local noadjust noadjust
                }
              - opts_exclusive "`ALL' `noadjust'" `suboption'
              = opts_exclusive " noadjust" mcompare()
                ─────────────────────────────────────────────────
  > ────────────────────────────── begin opts_exclusive ─────────────
              - version 8.2
              - args opts optname errcode optslab
```

```
                    - local opts `opts'
                    = local opts  noadjust
                    - local n 0
                    - while `"`opts'"' != "" {
                    = while `"noadjust"' != "" {
                    - local ++n
                    - gettoken item`n' opts : opts, bind
                    = gettoken item1 opts : opts, bind
                    - }
                    - while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    - if `n' < 2 {
                    = if 1 < 2 {
                    - exit
                    _____

>  _____ end opts_exclusive _____
                - local EXCLUDE duncan dunnett snk tukey
                - if `:list METHOD in EXCLUDE' {
                = if 0 {
                  if `is_pwc' {
                  local opt : copy local METHOD
                  }
                  else {
                  local opt "mcompare(`METHOD')"
                  }
                  local cmdlist anova manova regress mvreg pwmean
                  if "`cmd'" == "pwcompare" {
                  local cmd `"`e(cmd_est)'"'
                  }
                  if `is_marg' {
                  local cmd margins
                  }
                  if !`:list cmd in cmdlist' | !`is_pwc' {
                  di as err `"method `opt' is not allowed with results from
>  `cmd'"'
                  exit 322
                  }
                  if `"`e(prefix)'"' == "svy" {
                  di as err `"method `opt' is not allowed with results using
>   the svy prefix"'
                  exit 322
                  }
                  local vce `"`e(vce)'"'
```

```
                               if !inlist("`vce'", "", "ols") {
                               di as err `"method `opt' is not allowed with results using
>  vce(`vce')"'

                               exit 322
                               }
                               }
                    - local EXCLUDE duncan dunnett snk tukey scheffe
                    - if `:list METHOD in EXCLUDE' {
                    = if 0 {
                      if "`ALL'" != "" {
                      di as err `"option adjustall is not allowed with method `M
> ETHOD'"'

                      exit 198
                      }
                      }
                    - sreturn local method `"`METHOD'"'
                    = sreturn local method `"noadjust"'
                    - sreturn local adjustall `"`ALL'"'
                    = sreturn local adjustall `""'
                  ─────────────────────────────────────────────
> ──────────────────────────── end _get_mcompare ─────────────
                    - local method `"`s(method)'"'
                    = local method `"noadjust"'
                    - local all `"`s(adjustall)'"'
                    = local all `""'
                    - local options `"`s(options)'"'
                    = local options `"fvwrap(1)"'
                    - if "`method'" != "noadjust" {
                    = if "noadjust" != "noadjust" {
                      local keepmc 1
                      }
                    - opts_exclusive "`all' `groups'"
                    = opts_exclusive " "
                  ─────────────────────────────────────────────
> ──────────────────────────── begin opts_exclusive ──────────
                    - version 8.2
                    - args opts optname errcode optslab
                    - local opts `opts'
                    = local opts
                    - local n 0
                    - while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    - if `n' < 2 {
```

```
                         = if 0 < 2 {
                         - exit
                        ─────────────────────────────────────────────
>  ──────────────────────────── end opts_exclusive ────────────────
                  - if "`method'" == "dunnett" {
                  = if "noadjust" == "dunnett" {
                    opts_exclusive "`method' `groups'"
                    }
                  - _get_diopts diopts options, `options' `fvwrap' `fvlabel'
                  = _get_diopts diopts options, fvwrap(1)
                        ─────────────────────────────────────────────
>  ──────────────────────────── begin _get_diopts ─────────────────
                  - version 11
                  - syntax namelist(max=2) [, *]
                  - gettoken name1 namelist : namelist
                  - gettoken name2 namelist : namelist
                  - GetDiopts diopts options, `options'
                  = GetDiopts diopts options, fvwrap(1)
                        ─────────────────────────────────────────────
>  ─────────────────────────── begin _get_diopts.GetDiopts ────────
                    - local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLB
>  ASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMP
>  TYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(st
>  ring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru)
>   FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru)
>   NOABBREV ABBREV
                    - syntax namelist(max=2) [, `DIOPTS' *]
                    = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBA
>  SElevels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOE
>  MPTYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGE
>  ND cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVW
>  RAP(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CIT
>  YPE(passthru) NOABBREV ABBREV *]
                    - opts_exclusive "`allbaselevels' `noallbaselevels'"
                    = opts_exclusive " "
                        ─────────────────────────────────────────────
>  ──────────────────────────── begin opts_exclusive ──────────────
                  - version 8.2
                  - args opts optname errcode optslab
                  - local opts `opts'
                  = local opts
                  - local n 0
                  - while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
```

```
                                    }
                                  – if `n' < 2 {
                                  = if 0 < 2 {
                                  – exit
                               ─────────────────────────────────────────
  > ────────────────────────────── end opts_exclusive ──────────────
                     – opts_exclusive "`allbaselevels' `nobaselevels'"
                     = opts_exclusive " "
                               ─────────────────────────────────────────
  > ────────────────────────────── begin opts_exclusive ──────────────
                     – version 8.2
                     – args opts optname errcode optslab
                     – local opts `opts'
                     = local opts
                     – local n 0
                     – while `"`opts'"' != "" {
                     = while `""' != "" {
                       local ++n
                       gettoken item`n' opts : opts, bind
                       }
                     – if `n' < 2 {
                     = if 0 < 2 {
                     – exit
                               ─────────────────────────────────────────
  > ────────────────────────────── end opts_exclusive ──────────────
                     – opts_exclusive "`baselevels' `nobaselevels'"
                     = opts_exclusive " "
                               ─────────────────────────────────────────
  > ────────────────────────────── begin opts_exclusive ──────────────
                     – version 8.2
                     – args opts optname errcode optslab
                     – local opts `opts'
                     = local opts
                     – local n 0
                     – while `"`opts'"' != "" {
                     = while `""' != "" {
                       local ++n
                       gettoken item`n' opts : opts, bind
                       }
                     – if `n' < 2 {
                     = if 0 < 2 {
                     – exit
                               ─────────────────────────────────────────
  > ────────────────────────────── end opts_exclusive ──────────────
                     – opts_exclusive "`emptycells' `noemptycells'"
                     = opts_exclusive " "
```

```
> ─────────────────────────────────────────────────────────
> ─────────────────────────── begin opts_exclusive ───────────────
  − version 8.2
  − args opts optname errcode optslab
  − local opts `opts'
  = local opts
  − local n 0
  − while `"`opts'"' != "" {
  = while `""' != "" {
    local ++n
    gettoken item`n' opts : opts, bind
    }
  − if `n' < 2 {
  = if 0 < 2 {
  − exit
  ─────────────────────────────────────────────────────────
> ─────────────────────────── end opts_exclusive ─────────────────
    − opts_exclusive "`fvlabel' `nofvlabel'"
    = opts_exclusive " "
  ─────────────────────────────────────────────────────────
> ─────────────────────────── begin opts_exclusive ───────────────
  − version 8.2
  − args opts optname errcode optslab
  − local opts `opts'
  = local opts
  − local n 0
  − while `"`opts'"' != "" {
  = while `""' != "" {
    local ++n
    gettoken item`n' opts : opts, bind
    }
  − if `n' < 2 {
  = if 0 < 2 {
  − exit
  ─────────────────────────────────────────────────────────
> ─────────────────────────── end opts_exclusive ─────────────────
    − opts_exclusive "`omitted' `noomitted'"
    = opts_exclusive " "
  ─────────────────────────────────────────────────────────
> ─────────────────────────── begin opts_exclusive ───────────────
  − version 8.2
  − args opts optname errcode optslab
  − local opts `opts'
  = local opts
  − local n 0
  − while `"`opts'"' != "" {
```

```
                      = while `""' != "" {
                        local ++n
                        gettoken item`n' opts : opts, bind
                        }
                      – if `n' < 2 {
                      = if 0 < 2 {
                      – exit
                        ─────────────────────────────────────────────
> ──────────────────────────── end opts_exclusive ────────────────
                 – opts_exclusive "`lstretch' `nolstretch'"
                 = opts_exclusive " "
                        ─────────────────────────────────────────────
> ──────────────────────────── begin opts_exclusive ──────────────
                      – version 8.2
                      – args opts optname errcode optslab
                      – local opts `opts'
                      = local opts
                      – local n 0
                      – while `"`opts'"' != "" {
                      = while `""' != "" {
                        local ++n
                        gettoken item`n' opts : opts, bind
                        }
                      – if `n' < 2 {
                      = if 0 < 2 {
                      – exit
                        ─────────────────────────────────────────────
> ──────────────────────────── end opts_exclusive ────────────────
                 – opts_exclusive "`cnsreport' `fullcnsreport'"
                 = opts_exclusive " "
                        ─────────────────────────────────────────────
> ──────────────────────────── begin opts_exclusive ──────────────
                      – version 8.2
                      – args opts optname errcode optslab
                      – local opts `opts'
                      = local opts
                      – local n 0
                      – while `"`opts'"' != "" {
                      = while `""' != "" {
                        local ++n
                        gettoken item`n' opts : opts, bind
                        }
                      – if `n' < 2 {
                      = if 0 < 2 {
                      – exit
                        ─────────────────────────────────────────────
```

```
> ───────────────────────────────── end opts_exclusive ─────────────
          – opts_exclusive "`coeflegend' `selegend'"
          = opts_exclusive " "
          ────────────────────────────────────────────────────────
> ───────────────────────────────── begin opts_exclusive ───────────
          – version 8.2
          – args opts optname errcode optslab
          – local opts `opts'
          = local opts
          – local n 0
          – while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          – if `n' < 2 {
          = if 0 < 2 {
          – exit
          ────────────────────────────────────────────────────────
> ───────────────────────────────── end opts_exclusive ─────────────
          – opts_exclusive "`noci' `nopvalues'"
          = opts_exclusive " "
          ────────────────────────────────────────────────────────
> ───────────────────────────────── begin opts_exclusive ───────────
          – version 8.2
          – args opts optname errcode optslab
          – local opts `opts'
          = local opts
          – local n 0
          – while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          – if `n' < 2 {
          = if 0 < 2 {
          – exit
          ────────────────────────────────────────────────────────
> ───────────────────────────────── end opts_exclusive ─────────────
          – local K : list sizeof namelist
          – gettoken c_diopts c_opts : namelist
          – opts_exclusive "`coding' `compare'"
          = opts_exclusive " "
          ────────────────────────────────────────────────────────
> ───────────────────────────────── begin opts_exclusive ───────────
          – version 8.2
```

```
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ───────────────────────────────────────
 >  ───────────────────────────────── end opts_exclusive ─────────────
                  – opts_exclusive "`versus' `compare'"
                  = opts_exclusive " "
                    ───────────────────────────────────────
 >  ───────────────────────────────── begin opts_exclusive ───────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                    ───────────────────────────────────────
 >  ───────────────────────────────── end opts_exclusive ─────────────
                  – opts_exclusive "`abbrev' `noabbrev'"
                  = opts_exclusive " "
                    ───────────────────────────────────────
 >  ───────────────────────────────── begin opts_exclusive ───────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
```

```
        }
      – if `n' < 2 {
      = if 0 < 2 {
      – exit
      ─────────────────────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ──────────────
      – local allbaselevels `allbaselevels' `noallbaselevels'
      = local allbaselevels
      – local baselevels `baselevels' `nobaselevels'
      = local baselevels
      – local emptycells `emptycells' `noemptycells'
      = local emptycells
      – local omitted `omitted' `noomitted'
      = local omitted
      – local lstretch `lstretch' `nolstretch'
      = local lstretch
      – local fvlabel `fvlabel' `nofvlabel'
      = local fvlabel
      – local abbrev `abbrev' `noabbrev'
      = local abbrev
      – if "`allbaselevels'`baselevels'" == "" {
      = if "" == "" {
      – if c(showbaselevels) == "all" {
        local allbaselevels allbaselevels
        }
      – else if c(showbaselevels) == "on" {
        local baselevels baselevels
        }
      – }
      – if "`emptycells'" == "" {
      = if "" == "" {
      – if c(showemptycells) == "off" {
        local emptycells noemptycells
        }
      – }
      – if "`omitted'" == "" {
      = if "" == "" {
      – if c(showomitted) == "off" {
        local omitted noomitted
        }
      – }
      – if "`lstretch'" == "" {
      = if "" == "" {
      – if c(lstretch) == "off" {
        local lstretch nolstretch
        }
```

```
- }
- if `:length local cformat' {
= if 0 {
  confirm numeric format `cformat'
  if fmtwidth(`"`cformat'"') > 9 {
  local cformat "%9.0g"
  di "{txt}note: invalid cformat(), using default"
  }
  sreturn local cformat `"`cformat'"'
  local cformat `"cformat(`cformat')"'
  }
- if `:length local sformat' {
= if 0 {
  confirm numeric format `sformat'
  if fmtwidth(`"`sformat'"') > 8 {
  local sformat "%8.2f"
  di "{txt}note: invalid sformat(), using default"
  }
  sreturn local sformat `"`sformat'"'
  local sformat `"sformat(`sformat')"'
  }
- if `:length local pformat' {
= if 0 {
  confirm numeric format `pformat'
  if fmtwidth(`"`pformat'"') > 5 {
  local pformat "%5.3f"
  di "{txt}note: invalid pformat(), using default"
  }
  sreturn local pformat `"`pformat'"'
  local pformat `"pformat(`pformat')"'
  }
- if `K' == 1 & `:length local options' {
= if 2 == 1 & 0 {
  syntax namelist(max=2) [, `DIOPTS']
  }
- if reldif(`level', c(level)) > 1e-3 {
= if reldif(95, c(level)) > 1e-3 {
  local levelopt level(`level')
  }
- Wrapon , `fvwrapon'
= Wrapon ,
```

```
> ──────────────────────── begin _get_diopts.Wrapon ─────────────
- capture syntax [, WOrd WIdth]
- if c(rc) {
  di as err "invalid fvwrapon() option;"
```

```
                        syntax [, WOrd WIdth]
                        exit 198
                        }
                      ─ opts_exclusive "`word' `width'" fvwrapon
                      = opts_exclusive " " fvwrapon
                      ───────────────────────────────────────────
>  ──────────────────────────────── begin opts_exclusive ──────────────
                      ─ version 8.2
                      ─ args opts optname errcode optslab
                      ─ local opts `opts'
                      = local opts
                      ─ local n 0
                      ─ while `"`opts'"' != "" {
                      = while `""' != "" {
                        local ++n
                        gettoken item`n' opts : opts, bind
                        }
                      ─ if `n' < 2 {
                      = if 0 < 2 {
                      ─ exit
                      ───────────────────────────────────────────
>  ──────────────────────────────── end opts_exclusive ──────────────
                      ─ local fvwrapon `word' `width'
                      = local fvwrapon
                      ─ if `:length local fvwrapon' {
                      = if 0 {
                        c_local fvwrapon fvwrapon(`fvwrapon')
                        }
                      ───────────────────────────────────────────
>  ──────────────────────────────── end _get_diopts.Wrapon ──────────────
                    ─ if "`fvwrap'" != "" {
                    = if "fvwrap(1)" != "" {
                    ─ FVWrap, `fvwrap'
                    = FVWrap, fvwrap(1)
                      ───────────────────────────────────────────
>  ──────────────────────────────── begin _get_diopts.FVWrap ──────────────
                    ─ syntax, fvwrap(integer)
                    ─ if `fvwrap' < 0 {
                    = if 1 < 0 {
                      di as err "{p}invalid option {bf:fvwrap(`fvwrap')}; "
>  "nonnegative integer required{p_end}"
                        exit 198
                        }
                      ───────────────────────────────────────────
>  ──────────────────────────────── end _get_diopts.FVWrap ──────────────
                    ─ }
```

```
                         – c_local `c_diopts' `levelopt' `vsquish' `allbaselevels'
> `baselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `
> coeflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `comp
> are' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `a
> bbrev'
                         = c_local diopts                    fvwrap(1)
                         – if `K' == 2 {
                         = if 2 == 2 {
                         – c_local `c_opts' `"`options'"'
                         = c_local  options `""'
                         – }
                         – sreturn local coding `coding'
                         = sreturn local coding
                         – sreturn local versus `versus'
                         = sreturn local versus
                         – sreturn local compare `compare'
                         = sreturn local compare
                         – sreturn local level `level'
                         = sreturn local level 95
                         ─────────────────────────────────────────────────
>  ───────────────────────────────── end _get_diopts.GetDiopts ──────────────
                         – c_local `name1' `"`diopts'"'
                         = c_local diopts `"fvwrap(1)"'
                         – local snames : s(macros)
                         – foreach sname of local snames {
                         – local S_`sname' = s(`sname')
                         = local S_level = s(level)
                         – }
                         – local S_`sname' = s(`sname')
                         = local S_method = s(method)
                         – }
                         – local S_`sname' = s(`sname')
                         = local S_options = s(options)
                         – }
                         – sreturn clear
                         – GetDiopts DEFAULT
                         ─────────────────────────────────────────────────
>  ──────────────────────────────── begin _get_diopts.GetDiopts ─────────────
                         – local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLB
> ASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMP
> TYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(st
> ring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru)
>  FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru)
>  NOABBREV ABBREV
                         – syntax namelist(max=2) [, `DIOPTS' *]
                         = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBA
```

```
> SElevels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOE
> MPTYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGE
> ND cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVW
> RAP(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CIT
> YPE(passthru) NOABBREV ABBREV *]
                        - opts_exclusive "`allbaselevels' `noallbaselevels'"
                        = opts_exclusive " "
                        ──────────────────────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ──────────────
                        - version 8.2
                        - args opts optname errcode optslab
                        - local opts `opts'
                        = local opts
                        - local n 0
                        - while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        - if `n' < 2 {
                        = if 0 < 2 {
                        - exit
                        ──────────────────────────────────────────────────────
> ─────────────────────────────────── end opts_exclusive ──────────────
                        - opts_exclusive "`allbaselevels' `nobaselevels'"
                        = opts_exclusive " "
                        ──────────────────────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ──────────────
                        - version 8.2
                        - args opts optname errcode optslab
                        - local opts `opts'
                        = local opts
                        - local n 0
                        - while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        - if `n' < 2 {
                        = if 0 < 2 {
                        - exit
                        ──────────────────────────────────────────────────────
> ─────────────────────────────────── end opts_exclusive ──────────────
                        - opts_exclusive "`baselevels' `nobaselevels'"
                        = opts_exclusive " "
                        ──────────────────────────────────────────────────────
```

```
> ───────────────────────────── begin opts_exclusive ─────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────────────
> ────────────────────────────── end opts_exclusive ──────────────
                  – opts_exclusive "`emptycells' `noemptycells'"
                  = opts_exclusive " "
                    ─────────────────────────────────────────────────
> ───────────────────────────── begin opts_exclusive ─────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────────────
> ────────────────────────────── end opts_exclusive ──────────────
                  – opts_exclusive "`fvlabel' `nofvlabel'"
                  = opts_exclusive " "
                    ─────────────────────────────────────────────────
> ───────────────────────────── begin opts_exclusive ─────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
```

```
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    − if `n' < 2 {
                    = if 0 < 2 {
                    − exit
                   ─────────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ──────────────
                 − opts_exclusive "`omitted' `noomitted'"
                 = opts_exclusive " "
                   ─────────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ────────────
                 − version 8.2
                 − args opts optname errcode optslab
                 − local opts `opts'
                 = local opts
                 − local n 0
                 − while `"`opts'"' != "" {
                 = while `""' != "" {
                   local ++n
                   gettoken item`n' opts : opts, bind
                   }
                 − if `n' < 2 {
                 = if 0 < 2 {
                 − exit
                   ─────────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ──────────────
                 − opts_exclusive "`lstretch' `nolstretch'"
                 = opts_exclusive " "
                   ─────────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ────────────
                 − version 8.2
                 − args opts optname errcode optslab
                 − local opts `opts'
                 = local opts
                 − local n 0
                 − while `"`opts'"' != "" {
                 = while `""' != "" {
                   local ++n
                   gettoken item`n' opts : opts, bind
                   }
                 − if `n' < 2 {
                 = if 0 < 2 {
                 − exit
                   ─────────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ──────────────
```

```
                    – opts_exclusive "`cnsreport' `fullcnsreport'"
                    = opts_exclusive " "
                      ─────────────────────────────────────────────
>  ─────────────────────────────────────── begin opts_exclusive ──────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                      ─────────────────────────────────────────────
>  ──────────────────────────────────────── end opts_exclusive ───────────────
                    – opts_exclusive "`coeflegend' `selegend'"
                    = opts_exclusive " "
                      ─────────────────────────────────────────────
>  ─────────────────────────────────────── begin opts_exclusive ──────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                      ─────────────────────────────────────────────
>  ──────────────────────────────────────── end opts_exclusive ───────────────
                    – opts_exclusive "`noci' `nopvalues'"
                    = opts_exclusive " "
                      ─────────────────────────────────────────────
>  ─────────────────────────────────────── begin opts_exclusive ──────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
```

```
                         – local n 0
                         – while `"`opts'"' != "" {
                         = while `""' != "" {
                           local ++n
                           gettoken item`n' opts : opts, bind
                           }
                         – if `n' < 2 {
                         = if 0 < 2 {
                         – exit
                         ─────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ──────────
                  – local K : list sizeof namelist
                  – gettoken c_diopts c_opts : namelist
                  – opts_exclusive "`coding' `compare'"
                  = opts_exclusive " "
                         ─────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ──────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                         ─────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ──────────
                  – opts_exclusive "`versus' `compare'"
                  = opts_exclusive " "
                         ─────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ──────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
```

```
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ───────────────────────────────────────────
>  ───────────────────────────── end opts_exclusive ────────────
         – opts_exclusive "`abbrev' `noabbrev'"
         = opts_exclusive " "
                    ───────────────────────────────────────────
>  ───────────────────────────── begin opts_exclusive ──────────
         – version 8.2
         – args opts optname errcode optslab
         – local opts `opts'
         = local opts
         – local n 0
         – while `"`opts'"' != "" {
         = while `""' != "" {
           local ++n
           gettoken item`n' opts : opts, bind
           }
         – if `n' < 2 {
         = if 0 < 2 {
         – exit
                    ───────────────────────────────────────────
>  ───────────────────────────── end opts_exclusive ────────────
         – local allbaselevels `allbaselevels' `noallbaselevels'
         = local allbaselevels
         – local baselevels `baselevels' `nobaselevels'
         = local baselevels
         – local emptycells `emptycells' `noemptycells'
         = local emptycells
         – local omitted `omitted' `noomitted'
         = local omitted
         – local lstretch `lstretch' `nolstretch'
         = local lstretch
         – local fvlabel `fvlabel' `nofvlabel'
         = local fvlabel
         – local abbrev `abbrev' `noabbrev'
         = local abbrev
         – if "`allbaselevels'`baselevels'" == "" {
         = if "" == "" {
         – if c(showbaselevels) == "all" {
           local allbaselevels allbaselevels
           }
         – else if c(showbaselevels) == "on" {
           local baselevels baselevels
           }
```

```
-   }
-   if "`emptycells'" == "" {
=   if "" == "" {
-   if c(showemptycells) == "off" {
    local emptycells noemptycells
    }
-   }
-   if "`omitted'" == "" {
=   if "" == "" {
-   if c(showomitted) == "off" {
    local omitted noomitted
    }
-   }
-   if "`lstretch'" == "" {
=   if "" == "" {
-   if c(lstretch) == "off" {
    local lstretch nolstretch
    }
-   }
-   if `:length local cformat' {
=   if 0 {
    confirm numeric format `cformat'
    if fmtwidth(`"`cformat'"') > 9 {
    local cformat "%9.0g"
    di "{txt}note: invalid cformat(), using default"
    }
    sreturn local cformat `"`cformat'"'
    local cformat `"cformat(`cformat')"'
    }
-   if `:length local sformat' {
=   if 0 {
    confirm numeric format `sformat'
    if fmtwidth(`"`sformat'"') > 8 {
    local sformat "%8.2f"
    di "{txt}note: invalid sformat(), using default"
    }
    sreturn local sformat `"`sformat'"'
    local sformat `"sformat(`sformat')"'
    }
-   if `:length local pformat' {
=   if 0 {
    confirm numeric format `pformat'
    if fmtwidth(`"`pformat'"') > 5 {
    local pformat "%5.3f"
    di "{txt}note: invalid pformat(), using default"
    }
```

```
                  sreturn local pformat `"'`pformat'"'
                  local pformat `"pformat(`pformat')"'
                  }
          - if `K' == 1 & `:length local options' {
          = if 1 == 1 & 0 {
                  syntax namelist(max=2) [, `DIOPTS']
                  }
          - if reldif(`level', c(level)) > 1e-3 {
          = if reldif(95, c(level)) > 1e-3 {
                  local levelopt level(`level')
                  }
          - Wrapon , `fvwrapon'
          = Wrapon ,
                  ─────────────────────────────────────────

>  ─────────────────────── begin _get_diopts.Wrapon ───────────
                  - capture syntax [, WOrd WIdth]
                  - if c(rc) {
                    di as err "invalid fvwrapon() option;"
                    syntax [, WOrd WIdth]
                    exit 198
                    }
                  - opts_exclusive "`word' `width'" fvwrapon
                  = opts_exclusive " " fvwrapon
                  ─────────────────────────────────────────

>  ─────────────────────── begin opts_exclusive ──────────────
                  - version 8.2
                  - args opts optname errcode optslab
                  - local opts `opts'
                  = local opts
                  - local n 0
                  - while `"'`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  - if `n' < 2 {
                  = if 0 < 2 {
                  - exit
                  ─────────────────────────────────────────

>  ─────────────────────── end opts_exclusive ────────────────
                  - local fvwrapon `word' `width'
                  = local fvwrapon
                  - if `:length local fvwrapon' {
                  = if 0 {
                    c_local fvwrapon fvwrapon(`fvwrapon')
                    }
```

```
> ────────────────────────────────────────────── end _get_diopts.Wrapon ──────────────────
                    – if "`fvwrap'" != "" {
                    = if "" != "" {
                      FVWrap, `fvwrap'
                      }
                    – c_local `c_diopts' `levelopt' `vsquish' `allbaselevels'
> `baselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `
> coeflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `comp
> are' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `a
> bbrev'
                    = c_local DEFAULT
                    – if `K' == 2 {
                    = if 1 == 2 {
                      c_local `c_opts' `"`options'"'
                      }
                    – sreturn local coding `coding'
                    = sreturn local coding
                    – sreturn local versus `versus'
                    = sreturn local versus
                    – sreturn local compare `compare'
                    = sreturn local compare
                    – sreturn local level `level'
                    = sreturn local level 95

                    ──────────────────────────────────────────
> ────────────────────────────────────────────── end _get_diopts.GetDiopts ───────────────
                    – if `"`name2'"' == "" {
                    = if `"options"' == "" {
                      GetDiopts DUPS, `options'
                      }
                    – else {
                    – GetDiopts DUPS options, `options'
                    = GetDiopts DUPS options,

                    ──────────────────────────────────────────
> ────────────────────────────────────────────── begin _get_diopts.GetDiopts ─────────────
                    – local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLB
> ASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMP
> TYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(st
> ring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru)
>  FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru)
>  NOABBREV ABBREV
                    – syntax namelist(max=2) [, `DIOPTS' *]
                    = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBA
> SElevels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOE
> MPTYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGE
> ND cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVW
```

```
> RAP(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CIT
> YPE(passthru) NOABBREV ABBREV *]
                      – opts_exclusive "`allbaselevels' `noallbaselevels'"
                      = opts_exclusive " "
                     ─────────────────────────────────────────────────────
> ────────────────────────────────── begin opts_exclusive ──────────────
                      – version 8.2
                      – args opts optname errcode optslab
                      – local opts `opts'
                      = local opts
                      – local n 0
                      – while `"`opts'"' != "" {
                      = while `""' != "" {
                        local ++n
                        gettoken item`n' opts : opts, bind
                        }
                      – if `n' < 2 {
                      = if 0 < 2 {
                      – exit
                     ─────────────────────────────────────────────────────
> ────────────────────────────────── end opts_exclusive ────────────────
                    – opts_exclusive "`allbaselevels' `nobaselevels'"
                    = opts_exclusive " "
                     ─────────────────────────────────────────────────────
> ────────────────────────────────── begin opts_exclusive ──────────────
                      – version 8.2
                      – args opts optname errcode optslab
                      – local opts `opts'
                      = local opts
                      – local n 0
                      – while `"`opts'"' != "" {
                      = while `""' != "" {
                        local ++n
                        gettoken item`n' opts : opts, bind
                        }
                      – if `n' < 2 {
                      = if 0 < 2 {
                      – exit
                     ─────────────────────────────────────────────────────
> ────────────────────────────────── end opts_exclusive ────────────────
                    – opts_exclusive "`baselevels' `nobaselevels'"
                    = opts_exclusive " "
                     ─────────────────────────────────────────────────────
> ────────────────────────────────── begin opts_exclusive ──────────────
                      – version 8.2
                      – args opts optname errcode optslab
```

```
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
```

> ───────────────────────────────── end opts_exclusive ─────────────

```
            – opts_exclusive "`emptycells' `noemptycells'"
            = opts_exclusive " "
```

> ───────────────────────────────── begin opts_exclusive ───────────

```
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
```

> ───────────────────────────────── end opts_exclusive ─────────────

```
            – opts_exclusive "`fvlabel' `nofvlabel'"
            = opts_exclusive " "
```

> ───────────────────────────────── begin opts_exclusive ───────────

```
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
```

```
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ────────────────────────────────────────
> ──────────────────────────── end opts_exclusive ──────────────
              – opts_exclusive "`omitted' `noomitted'"
              = opts_exclusive " "
                    ────────────────────────────────────────
> ──────────────────────────── begin opts_exclusive ──────────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
                    ────────────────────────────────────────
> ──────────────────────────── end opts_exclusive ──────────────
              – opts_exclusive "`lstretch' `nolstretch'"
              = opts_exclusive " "
                    ────────────────────────────────────────
> ──────────────────────────── begin opts_exclusive ──────────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
                    ────────────────────────────────────────
> ──────────────────────────── end opts_exclusive ──────────────
              – opts_exclusive "`cnsreport' `fullcnsreport'"
              = opts_exclusive " "
                    ────────────────────────────────────────
```

```
> ─────────────────────────────── begin opts_exclusive ───────────────
                    ─ version 8.2
                    ─ args opts optname errcode optslab
                    ─ local opts `opts'
                    = local opts
                    ─ local n 0
                    ─ while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    ─ if `n' < 2 {
                    = if 0 < 2 {
                    ─ exit
                    ───────────────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ─────────────────
                  ─ opts_exclusive "`coeflegend' `selegend'"
                  = opts_exclusive " "
                    ───────────────────────────────────────────────────
> ─────────────────────────────── begin opts_exclusive ───────────────
                    ─ version 8.2
                    ─ args opts optname errcode optslab
                    ─ local opts `opts'
                    = local opts
                    ─ local n 0
                    ─ while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    ─ if `n' < 2 {
                    = if 0 < 2 {
                    ─ exit
                    ───────────────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ─────────────────
                  ─ opts_exclusive "`noci' `nopvalues'"
                  = opts_exclusive " "
                    ───────────────────────────────────────────────────
> ─────────────────────────────── begin opts_exclusive ───────────────
                    ─ version 8.2
                    ─ args opts optname errcode optslab
                    ─ local opts `opts'
                    = local opts
                    ─ local n 0
                    ─ while `"`opts'"' != "" {
                    = while `""' != "" {
```

```
                 local ++n
                 gettoken item`n' opts : opts, bind
                 }
               - if `n' < 2 {
               = if 0 < 2 {
               - exit
              _____
> ─────────────────────────────── end opts_exclusive ──────────────
            - local K : list sizeof namelist
            - gettoken c_diopts c_opts : namelist
            - opts_exclusive "`coding' `compare'"
            = opts_exclusive " "
              _____
> ─────────────────────────────── begin opts_exclusive ────────────
            - version 8.2
            - args opts optname errcode optslab
            - local opts `opts'
            = local opts
            - local n 0
            - while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            - if `n' < 2 {
            = if 0 < 2 {
            - exit
              _____
> ─────────────────────────────── end opts_exclusive ──────────────
            - opts_exclusive "`versus' `compare'"
            = opts_exclusive " "
              _____
> ─────────────────────────────── begin opts_exclusive ────────────
            - version 8.2
            - args opts optname errcode optslab
            - local opts `opts'
            = local opts
            - local n 0
            - while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            - if `n' < 2 {
            = if 0 < 2 {
            - exit
```

```
                           ─────────────────────────────────
> ───────────────────────────────────────── end opts_exclusive ─────────────
            − opts_exclusive "`abbrev' `noabbrev'"
            = opts_exclusive " "
                           ─────────────────────────────────
> ───────────────────────────────────────── begin opts_exclusive ───────────
            − version 8.2
            − args opts optname errcode optslab
            − local opts `opts'
            = local opts
            − local n 0
            − while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            − if `n' < 2 {
            = if 0 < 2 {
            − exit
                           ─────────────────────────────────
> ───────────────────────────────────────── end opts_exclusive ─────────────
            − local allbaselevels `allbaselevels' `noallbaselevels'
            = local allbaselevels
            − local baselevels `baselevels' `nobaselevels'
            = local baselevels
            − local emptycells `emptycells' `noemptycells'
            = local emptycells
            − local omitted `omitted' `noomitted'
            = local omitted
            − local lstretch `lstretch' `nolstretch'
            = local lstretch
            − local fvlabel `fvlabel' `nofvlabel'
            = local fvlabel
            − local abbrev `abbrev' `noabbrev'
            = local abbrev
            − if "`allbaselevels'`baselevels'" == "" {
            = if "" == "" {
            − if c(showbaselevels) == "all" {
              local allbaselevels allbaselevels
              }
            − else if c(showbaselevels) == "on" {
              local baselevels baselevels
              }
            − }
            − if "`emptycells'" == "" {
            = if "" == "" {
```

```
-   if c(showemptycells) == "off" {
    local emptycells noemptycells
    }
-   }
-   if "`omitted'" == "" {
=   if "" == "" {
-   if c(showomitted) == "off" {
    local omitted noomitted
    }
-   }
-   if "`lstretch'" == "" {
=   if "" == "" {
-   if c(lstretch) == "off" {
    local lstretch nolstretch
    }
-   }
-   if `:length local cformat' {
=   if 0 {
    confirm numeric format `cformat'
    if fmtwidth(`"`cformat'"') > 9 {
    local cformat "%9.0g"
    di "{txt}note: invalid cformat(), using default"
    }
    sreturn local cformat `"`cformat'"'
    local cformat `"cformat(`cformat')"'
    }
-   if `:length local sformat' {
=   if 0 {
    confirm numeric format `sformat'
    if fmtwidth(`"`sformat'"') > 8 {
    local sformat "%8.2f"
    di "{txt}note: invalid sformat(), using default"
    }
    sreturn local sformat `"`sformat'"'
    local sformat `"sformat(`sformat')"'
    }
-   if `:length local pformat' {
=   if 0 {
    confirm numeric format `pformat'
    if fmtwidth(`"`pformat'"') > 5 {
    local pformat "%5.3f"
    di "{txt}note: invalid pformat(), using default"
    }
    sreturn local pformat `"`pformat'"'
    local pformat `"pformat(`pformat')"'
    }
```

```
                  - if `K' == 1 & `:length local options' {
                  = if 2 == 1 & 0 {
                    syntax namelist(max=2) [, `DIOPTS']
                    }
                  - if reldif(`level', c(level)) > 1e-3 {
                  = if reldif(95, c(level)) > 1e-3 {
                    local levelopt level(`level')
                    }
                  - Wrapon , `fvwrapon'
                  = Wrapon ,
                  ────────────────────────────────────────────
 >  ───────────────────────── begin _get_diopts.Wrapon ─────────────
                  - capture syntax [, WOrd WIdth]
                  - if c(rc) {
                    di as err "invalid fvwrapon() option;"
                    syntax [, WOrd WIdth]
                    exit 198
                    }
                  - opts_exclusive "`word' `width'" fvwrapon
                  = opts_exclusive " " fvwrapon
                  ────────────────────────────────────────────
 >  ───────────────────────── begin opts_exclusive ─────────────────
                  - version 8.2
                  - args opts optname errcode optslab
                  - local opts `opts'
                  = local opts
                  - local n 0
                  - while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  - if `n' < 2 {
                  = if 0 < 2 {
                  - exit
                  ────────────────────────────────────────────
 >  ───────────────────────── end opts_exclusive ───────────────────
                  - local fvwrapon `word' `width'
                  = local fvwrapon
                  - if `:length local fvwrapon' {
                  = if 0 {
                    c_local fvwrapon fvwrapon(`fvwrapon')
                    }
                  ────────────────────────────────────────────
 >  ───────────────────────── end _get_diopts.Wrapon ───────────────
                  - if "`fvwrap'" != "" {
```

```
                        = if "" != "" {
                          FVWrap, `fvwrap'
                          }
                        – c_local `c_diopts' `levelopt' `vsquish' `allbaselevels'
> `baselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `
> coeflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `comp
> are' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `a
> bbrev'
                        = c_local DUPS
                        – if `K' == 2 {
                        = if 2 == 2 {
                        – c_local `c_opts' `"`options'"'
                        = c_local  options `""'
                        – }
                        – sreturn local coding `coding'
                        = sreturn local coding
                        – sreturn local versus `versus'
                        = sreturn local versus
                        – sreturn local compare `compare'
                        = sreturn local compare
                        – sreturn local level `level'
                        = sreturn local level 95
                        ──────────────────────────────────────────────
> ────────────────────────────── end _get_diopts.GetDiopts ──────────────
                    – c_local `name2' `"`options'"'
                    = c_local options `""'
                    – }
                    – local DUPS : list DUPS – DEFAULT
                    – gettoken DUPS : DUPS
                    – if `"`DUPS'"' != "" {
                    = if `""' != "" {
                      if (strpos(`"`DUPS'"', "(")) {
                      gettoken DUPS : DUPS, parse("(")
                      local DUPS `"`DUPS'()"'
                      }
                      di as err "duplicate {bf:`DUPS'} option not allowed"
                      exit 198
                      }
                    – sreturn clear
                    – foreach sname of local snames {
                    – sreturn local `sname' = `"`S_`sname''"'
                    = sreturn local level = `"95"'
                    – }
                    – sreturn local `sname' = `"`S_`sname''"'
                    = sreturn local method = `"noadjust"'
                    – }
```

```
                        – sreturn local `sname' = `"`S_`sname''"'
                        = sreturn local options = `"fvwrap(1)"'
                        – }
                      ─────────────────────────────────────────
> ──────────────────────────────────── end _get_diopts ─────────────
             – local legend coeflegend selegend
             – local legend : list legend & diopts
             – local diopts : list diopts – legend
             – local lstretch lstretch nolstretch
             – local lstretch : list lstretch & diopts
             – local diopts : list diopts – lstretch
             – local markdown markdown
             – local markdown : list markdown & diopts
             – local diopts : list diopts – markdown
             – _get_diopts ignore, `diopts' `cformat' `sformat' `pformat'
             = _get_diopts ignore, fvwrap(1)
                      ─────────────────────────────────────────
> ─────────────────────────────────── begin _get_diopts ────────────
             – version 11
             – syntax namelist(max=2) [, *]
             – gettoken name1 namelist : namelist
             – gettoken name2 namelist : namelist
             – GetDiopts diopts options, `options'
             = GetDiopts diopts options, fvwrap(1)
                      ─────────────────────────────────────────
> ────────────────────────────── begin _get_diopts.GetDiopts ───────────
                   – local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLB
> ASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMP
> TYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(st
> ring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru)
>  FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru)
>  NOABBREV ABBREV
                   – syntax namelist(max=2) [, `DIOPTS' *]
                   = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBA
> SElevels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOE
> MPTYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGE
> ND cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVW
> RAP(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CIT
> YPE(passthru) NOABBREV ABBREV *]
                   – opts_exclusive "`allbaselevels' `noallbaselevels'"
                   = opts_exclusive " "
                      ─────────────────────────────────────────
> ───────────────────────────────── begin opts_exclusive ───────────
             – version 8.2
             – args opts optname errcode optslab
             – local opts `opts'
```

```
= local opts
– local n 0
– while `"`opts'"' != "" {
= while `""' != "" {
  local ++n
  gettoken item`n' opts : opts, bind
  }
– if `n' < 2 {
= if 0 < 2 {
– exit
```
———————————————————————————————————————
> ——————————————————————— end opts_exclusive ———————————
```
– opts_exclusive "`allbaselevels' `nobaselevels'"
= opts_exclusive " "
```
———————————————————————————————————————
> ——————————————————————— begin opts_exclusive ——————————
```
– version 8.2
– args opts optname errcode optslab
– local opts `opts'
= local opts
– local n 0
– while `"`opts'"' != "" {
= while `""' != "" {
  local ++n
  gettoken item`n' opts : opts, bind
  }
– if `n' < 2 {
= if 0 < 2 {
– exit
```
———————————————————————————————————————
> ——————————————————————— end opts_exclusive ———————————
```
– opts_exclusive "`baselevels' `nobaselevels'"
= opts_exclusive " "
```
———————————————————————————————————————
> ——————————————————————— begin opts_exclusive ——————————
```
– version 8.2
– args opts optname errcode optslab
– local opts `opts'
= local opts
– local n 0
– while `"`opts'"' != "" {
= while `""' != "" {
  local ++n
  gettoken item`n' opts : opts, bind
  }
– if `n' < 2 {
```

```
                        = if 0 < 2 {
                        – exit
                        ──────────────────────────────────
>  ────────────────────────────── end opts_exclusive ──────────────
                   – opts_exclusive "`emptycells' `noemptycells'"
                   = opts_exclusive " "
                        ──────────────────────────────────
>  ────────────────────────────── begin opts_exclusive ──────────────
                   – version 8.2
                   – args opts optname errcode optslab
                   – local opts `opts'
                   = local opts
                   – local n 0
                   – while `"`opts'"' != "" {
                   = while `""' != "" {
                     local ++n
                     gettoken item`n' opts : opts, bind
                     }
                   – if `n' < 2 {
                   = if 0 < 2 {
                   – exit
                        ──────────────────────────────────
>  ────────────────────────────── end opts_exclusive ──────────────
                   – opts_exclusive "`fvlabel' `nofvlabel'"
                   = opts_exclusive " "
                        ──────────────────────────────────
>  ────────────────────────────── begin opts_exclusive ──────────────
                   – version 8.2
                   – args opts optname errcode optslab
                   – local opts `opts'
                   = local opts
                   – local n 0
                   – while `"`opts'"' != "" {
                   = while `""' != "" {
                     local ++n
                     gettoken item`n' opts : opts, bind
                     }
                   – if `n' < 2 {
                   = if 0 < 2 {
                   – exit
                        ──────────────────────────────────
>  ────────────────────────────── end opts_exclusive ──────────────
                   – opts_exclusive "`omitted' `noomitted'"
                   = opts_exclusive " "
                        ──────────────────────────────────
>  ────────────────────────────── begin opts_exclusive ──────────────
```

```
                        – version 8.2
                        – args opts optname errcode optslab
                        – local opts `opts'
                        = local opts
                        – local n 0
                        – while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        – if `n' < 2 {
                        = if 0 < 2 {
                        – exit
                     ─────────────────────────────────────────
>  ──────────────────────────────── end opts_exclusive ───────────
                   – opts_exclusive "`lstretch' `nolstretch'"
                   = opts_exclusive " "
                     ─────────────────────────────────────────
>  ──────────────────────────────── begin opts_exclusive ─────────
                        – version 8.2
                        – args opts optname errcode optslab
                        – local opts `opts'
                        = local opts
                        – local n 0
                        – while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        – if `n' < 2 {
                        = if 0 < 2 {
                        – exit
                     ─────────────────────────────────────────
>  ──────────────────────────────── end opts_exclusive ───────────
                   – opts_exclusive "`cnsreport' `fullcnsreport'"
                   = opts_exclusive " "
                     ─────────────────────────────────────────
>  ──────────────────────────────── begin opts_exclusive ─────────
                        – version 8.2
                        – args opts optname errcode optslab
                        – local opts `opts'
                        = local opts
                        – local n 0
                        – while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
```

```
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
```

> ─────────────────────────── end opts_exclusive ────────────
```
          – opts_exclusive "`coeflegend' `selegend'"
          = opts_exclusive " "
```

> ─────────────────────────── begin opts_exclusive ────────────
```
          – version 8.2
          – args opts optname errcode optslab
          – local opts `opts'
          = local opts
          – local n 0
          – while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          – if `n' < 2 {
          = if 0 < 2 {
          – exit
```

> ─────────────────────────── end opts_exclusive ────────────
```
          – opts_exclusive "`noci' `nopvalues'"
          = opts_exclusive " "
```

> ─────────────────────────── begin opts_exclusive ────────────
```
          – version 8.2
          – args opts optname errcode optslab
          – local opts `opts'
          = local opts
          – local n 0
          – while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          – if `n' < 2 {
          = if 0 < 2 {
          – exit
```

> ─────────────────────────── end opts_exclusive ────────────
```
          – local K : list sizeof namelist
```

```
                    – gettoken c_diopts c_opts : namelist
                    – opts_exclusive "`coding' `compare'"
                    = opts_exclusive " "
                     ───────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ─────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                     ───────────────────────────────────────
> ─────────────────────────────────── end opts_exclusive ───────────────
                    – opts_exclusive "`versus' `compare'"
                    = opts_exclusive " "
                     ───────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ─────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                     ───────────────────────────────────────
> ─────────────────────────────────── end opts_exclusive ───────────────
                    – opts_exclusive "`abbrev' `noabbrev'"
                    = opts_exclusive " "
                     ───────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ─────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
```

```
                        = local opts
                        – local n 0
                        – while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        – if `n' < 2 {
                        = if 0 < 2 {
                        – exit
                        ───────────────────────────────────────────────
```

```
                     – local allbaselevels `allbaselevels' `noallbaselevels'
                     = local allbaselevels
                     – local baselevels `baselevels' `nobaselevels'
                     = local baselevels
                     – local emptycells `emptycells' `noemptycells'
                     = local emptycells
                     – local omitted `omitted' `noomitted'
                     = local omitted
                     – local lstretch `lstretch' `nolstretch'
                     = local lstretch
                     – local fvlabel `fvlabel' `nofvlabel'
                     = local fvlabel
                     – local abbrev `abbrev' `noabbrev'
                     = local abbrev
                     – if "`allbaselevels'`baselevels'" == "" {
                     = if "" == "" {
                     – if c(showbaselevels) == "all" {
                       local allbaselevels allbaselevels
                       }
                     – else if c(showbaselevels) == "on" {
                       local baselevels baselevels
                       }
                     – }
                     – if "`emptycells'" == "" {
                     = if "" == "" {
                     – if c(showemptycells) == "off" {
                       local emptycells noemptycells
                       }
                     – }
                     – if "`omitted'" == "" {
                     = if "" == "" {
                     – if c(showomitted) == "off" {
                       local omitted noomitted
                       }
```

```
- }
- if "`lstretch'" == "" {
= if "" == "" {
- if c(lstretch) == "off" {
  local lstretch nolstretch
  }
- }
- if `:length local cformat' {
= if 0 {
  confirm numeric format `cformat'
  if fmtwidth(`"`cformat'"') > 9 {
  local cformat "%9.0g"
  di "{txt}note: invalid cformat(), using default"
  }
  sreturn local cformat `"`cformat'"'
  local cformat `"cformat(`cformat')"'
  }
- if `:length local sformat' {
= if 0 {
  confirm numeric format `sformat'
  if fmtwidth(`"`sformat'"') > 8 {
  local sformat "%8.2f"
  di "{txt}note: invalid sformat(), using default"
  }
  sreturn local sformat `"`sformat'"'
  local sformat `"sformat(`sformat')"'
  }
- if `:length local pformat' {
= if 0 {
  confirm numeric format `pformat'
  if fmtwidth(`"`pformat'"') > 5 {
  local pformat "%5.3f"
  di "{txt}note: invalid pformat(), using default"
  }
  sreturn local pformat `"`pformat'"'
  local pformat `"pformat(`pformat')"'
  }
- if `K' == 1 & `:length local options' {
= if 2 == 1 & 0 {
  syntax namelist(max=2) [, `DIOPTS']
  }
- if reldif(`level', c(level)) > 1e-3 {
= if reldif(95, c(level)) > 1e-3 {
  local levelopt level(`level')
  }
- Wrapon , `fvwrapon'
```

```
                       = Wrapon ,
                       ─────────────────────────────────────────────────────────
  > ───────────────────────────── begin _get_diopts.Wrapon ────────────────
                       – capture syntax [, WOrd WIdth]
                       – if c(rc) {
                         di as err "invalid fvwrapon() option;"
                         syntax [, WOrd WIdth]
                         exit 198
                         }
                       – opts_exclusive "`word' `width'" fvwrapon
                       = opts_exclusive " " fvwrapon
                       ─────────────────────────────────────────────────────────
  > ─────────────────────────────── begin opts_exclusive ──────────────────
                       – version 8.2
                       – args opts optname errcode optslab
                       – local opts `opts'
                       = local opts
                       – local n 0
                       – while `"`opts'"' != "" {
                       = while `""' != "" {
                         local ++n
                         gettoken item`n' opts : opts, bind
                         }
                       – if `n' < 2 {
                       = if 0 < 2 {
                       – exit
                       ─────────────────────────────────────────────────────────
  > ──────────────────────────────── end opts_exclusive ───────────────────
                       – local fvwrapon `word' `width'
                       = local fvwrapon
                       – if `:length local fvwrapon' {
                       = if 0 {
                         c_local fvwrapon fvwrapon(`fvwrapon')
                         }
                       ─────────────────────────────────────────────────────────
  > ───────────────────────────── end _get_diopts.Wrapon ──────────────────
                     – if "`fvwrap'" != "" {
                     = if "fvwrap(1)" != "" {
                     – FVWrap, `fvwrap'
                     = FVWrap, fvwrap(1)
                       ─────────────────────────────────────────────────────────
  > ───────────────────────────── begin _get_diopts.FVWrap ────────────────
                       – syntax, fvwrap(integer)
                       – if `fvwrap' < 0 {
                       = if 1 < 0 {
                         di as err "{p}invalid option {bf:fvwrap(`fvwrap')}; "
```

```
> "nonnegative integer required{p_end}"
                          exit 198
                          }
                ─────────────────────────────────────────────
> ───────────────────────────────── end _get_diopts.FVWrap ─────────────────
                    – }
                    – c_local `c_diopts' `levelopt' `vsquish' `allbaselevels'
> `baselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `
> coeflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `comp
> are' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `a
> bbrev'
                    = c_local diopts                    fvwrap(1)
                    – if `K' == 2 {
                    = if 2 == 2 {
                    – c_local `c_opts' `"`options'"'
                    = c_local  options `""'
                    – }
                    – sreturn local coding `coding'
                    = sreturn local coding
                    – sreturn local versus `versus'
                    = sreturn local versus
                    – sreturn local compare `compare'
                    = sreturn local compare
                    – sreturn local level `level'
                    = sreturn local level 95
                ─────────────────────────────────────────────
> ──────────────────────────────── end _get_diopts.GetDiopts ───────────────
                – c_local `name1' `"`diopts'"'
                = c_local ignore `"fvwrap(1)"'
                – local snames : s(macros)
                – foreach sname of local snames {
                – local S_`sname' = s(`sname')
                = local S_level = s(level)
                – }
                – local S_`sname' = s(`sname')
                = local S_options = s(options)
                – }
                – local S_`sname' = s(`sname')
                = local S_method = s(method)
                – }
                – sreturn clear
                – GetDiopts DEFAULT
                ─────────────────────────────────────────────
> ──────────────────────────────── begin _get_diopts.GetDiopts ─────────────
                    – local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLB
> ASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMP
```

```
> TYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(st
> ring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru)
>  FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru)
>  NOABBREV ABBREV
                    - syntax namelist(max=2) [, `DIOPTS' *]
                    = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBA
> SElevels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOE
> MPTYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGE
> ND cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVW
> RAP(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CIT
> YPE(passthru) NOABBREV ABBREV *]
                    - opts_exclusive "`allbaselevels' `noallbaselevels'"
                    = opts_exclusive " "
                    ───────────────────────────────────────────────────
> ─────────────────────────────── begin opts_exclusive ───────────────
                    - version 8.2
                    - args opts optname errcode optslab
                    - local opts `opts'
                    = local opts
                    - local n 0
                    - while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    - if `n' < 2 {
                    = if 0 < 2 {
                    - exit
                    ───────────────────────────────────────────────────
> ─────────────────────────────── end opts_exclusive ─────────────────
                    - opts_exclusive "`allbaselevels' `nobaselevels'"
                    = opts_exclusive " "
                    ───────────────────────────────────────────────────
> ─────────────────────────────── begin opts_exclusive ───────────────
                    - version 8.2
                    - args opts optname errcode optslab
                    - local opts `opts'
                    = local opts
                    - local n 0
                    - while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    - if `n' < 2 {
                    = if 0 < 2 {
```

```
                              – exit
                    ─────────────────────────────────────────────────
>   ─────────────────────────────────── end opts_exclusive ───────────
                – opts_exclusive "`baselevels' `nobaselevels'"
                = opts_exclusive " "
                    ─────────────────────────────────────────────────
>   ─────────────────────────────────── begin opts_exclusive ─────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
                    ─────────────────────────────────────────────────
>   ─────────────────────────────────── end opts_exclusive ───────────
                – opts_exclusive "`emptycells' `noemptycells'"
                = opts_exclusive " "
                    ─────────────────────────────────────────────────
>   ─────────────────────────────────── begin opts_exclusive ─────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
                    ─────────────────────────────────────────────────
>   ─────────────────────────────────── end opts_exclusive ───────────
                – opts_exclusive "`fvlabel' `nofvlabel'"
                = opts_exclusive " "
                    ─────────────────────────────────────────────────
>   ─────────────────────────────────── begin opts_exclusive ─────────
                – version 8.2
```

```
                     – args opts optname errcode optslab
                     – local opts `opts'
                     = local opts
                     – local n 0
                     – while `"`opts'"' != "" {
                     = while `""' != "" {
                       local ++n
                       gettoken item`n' opts : opts, bind
                       }
                     – if `n' < 2 {
                     = if 0 < 2 {
                     – exit
                     ───────────────────────────────────────
>  ──────────────────────────────────── end opts_exclusive ─────────────
                   – opts_exclusive "`omitted' `noomitted'"
                   = opts_exclusive " "
                     ───────────────────────────────────────
>  ──────────────────────────────────── begin opts_exclusive ───────────
                     – version 8.2
                     – args opts optname errcode optslab
                     – local opts `opts'
                     = local opts
                     – local n 0
                     – while `"`opts'"' != "" {
                     = while `""' != "" {
                       local ++n
                       gettoken item`n' opts : opts, bind
                       }
                     – if `n' < 2 {
                     = if 0 < 2 {
                     – exit
                     ───────────────────────────────────────
>  ──────────────────────────────────── end opts_exclusive ─────────────
                   – opts_exclusive "`lstretch' `nolstretch'"
                   = opts_exclusive " "
                     ───────────────────────────────────────
>  ──────────────────────────────────── begin opts_exclusive ───────────
                     – version 8.2
                     – args opts optname errcode optslab
                     – local opts `opts'
                     = local opts
                     – local n 0
                     – while `"`opts'"' != "" {
                     = while `""' != "" {
                       local ++n
                       gettoken item`n' opts : opts, bind
```

```
                                  }
                                − if `n' < 2 {
                                = if 0 < 2 {
                                − exit
                          ─────────────────────────────────────────
>   ──────────────────────────────── end opts_exclusive ──────────────
                    − opts_exclusive "`cnsreport' `fullcnsreport'"
                    = opts_exclusive " "
                          ─────────────────────────────────────────
>   ──────────────────────────────── begin opts_exclusive ────────────
                    − version 8.2
                    − args opts optname errcode optslab
                    − local opts `opts'
                    = local opts
                    − local n 0
                    − while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    − if `n' < 2 {
                    = if 0 < 2 {
                    − exit
                          ─────────────────────────────────────────
>   ──────────────────────────────── end opts_exclusive ──────────────
                    − opts_exclusive "`coeflegend' `selegend'"
                    = opts_exclusive " "
                          ─────────────────────────────────────────
>   ──────────────────────────────── begin opts_exclusive ────────────
                    − version 8.2
                    − args opts optname errcode optslab
                    − local opts `opts'
                    = local opts
                    − local n 0
                    − while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    − if `n' < 2 {
                    = if 0 < 2 {
                    − exit
                          ─────────────────────────────────────────
>   ──────────────────────────────── end opts_exclusive ──────────────
                    − opts_exclusive "`noci' `nopvalues'"
                    = opts_exclusive " "
```

```
> ──────────────────────────────────────── begin opts_exclusive ────────────────
                 – version 8.2
                 – args opts optname errcode optslab
                 – local opts `opts'
                 = local opts
                 – local n 0
                 – while `"`opts'"' != "" {
                 = while `""' != "" {
                   local ++n
                   gettoken item`n' opts : opts, bind
                   }
                 – if `n' < 2 {
                 = if 0 < 2 {
                 – exit
                 ──────────────────────────────────────────────────────────────
> ──────────────────────────────────────── end opts_exclusive ──────────────────
                 – local K : list sizeof namelist
                 – gettoken c_diopts c_opts : namelist
                 – opts_exclusive "`coding' `compare'"
                 = opts_exclusive " "
                 ──────────────────────────────────────────────────────────────
> ──────────────────────────────────────── begin opts_exclusive ────────────────
                 – version 8.2
                 – args opts optname errcode optslab
                 – local opts `opts'
                 = local opts
                 – local n 0
                 – while `"`opts'"' != "" {
                 = while `""' != "" {
                   local ++n
                   gettoken item`n' opts : opts, bind
                   }
                 – if `n' < 2 {
                 = if 0 < 2 {
                 – exit
                 ──────────────────────────────────────────────────────────────
> ──────────────────────────────────────── end opts_exclusive ──────────────────
                 – opts_exclusive "`versus' `compare'"
                 = opts_exclusive " "
                 ──────────────────────────────────────────────────────────────
> ──────────────────────────────────────── begin opts_exclusive ────────────────
                 – version 8.2
                 – args opts optname errcode optslab
                 – local opts `opts'
                 = local opts
```

```
                        – local n 0
                        – while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        – if `n' < 2 {
                        = if 0 < 2 {
                        – exit
                        ─────────────────────────────────────────
>  ─────────────────────────────── end opts_exclusive ──────────
                    – opts_exclusive "`abbrev' `noabbrev'"
                    = opts_exclusive " "
                        ─────────────────────────────────────────
>  ─────────────────────────────── begin opts_exclusive ────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                        ─────────────────────────────────────────
>  ─────────────────────────────── end opts_exclusive ──────────
                – local allbaselevels `allbaselevels' `noallbaselevels'
                = local allbaselevels
                – local baselevels `baselevels' `nobaselevels'
                = local baselevels
                – local emptycells `emptycells' `noemptycells'
                = local emptycells
                – local omitted `omitted' `noomitted'
                = local omitted
                – local lstretch `lstretch' `nolstretch'
                = local lstretch
                – local fvlabel `fvlabel' `nofvlabel'
                = local fvlabel
                – local abbrev `abbrev' `noabbrev'
                = local abbrev
                – if "`allbaselevels'`baselevels'" == "" {
                = if "" == "" {
```

```
-  if c(showbaselevels) == "all" {
   local allbaselevels allbaselevels
   }
-  else if c(showbaselevels) == "on" {
   local baselevels baselevels
   }
-  }
-  if "`emptycells'" == "" {
=  if "" == "" {
-  if c(showemptycells) == "off" {
   local emptycells noemptycells
   }
-  }
-  if "`omitted'" == "" {
=  if "" == "" {
-  if c(showomitted) == "off" {
   local omitted noomitted
   }
-  }
-  if "`lstretch'" == "" {
=  if "" == "" {
-  if c(lstretch) == "off" {
   local lstretch nolstretch
   }
-  }
-  if `:length local cformat' {
=  if 0 {
   confirm numeric format `cformat'
   if fmtwidth(`"`cformat'"') > 9 {
   local cformat "%9.0g"
   di "{txt}note: invalid cformat(), using default"
   }
   sreturn local cformat `"`cformat'"'
   local cformat `"cformat(`cformat')"'
   }
-  if `:length local sformat' {
=  if 0 {
   confirm numeric format `sformat'
   if fmtwidth(`"`sformat'"') > 8 {
   local sformat "%8.2f"
   di "{txt}note: invalid sformat(), using default"
   }
   sreturn local sformat `"`sformat'"'
   local sformat `"sformat(`sformat')"'
   }
-  if `:length local pformat' {
```

```
                        = if 0 {
                          confirm numeric format `pformat'
                          if fmtwidth(`"`pformat'"') > 5 {
                          local pformat "%5.3f"
                          di "{txt}note: invalid pformat(), using default"
                          }
                          sreturn local pformat `"`pformat'"'
                          local pformat `"pformat(`pformat')"'
                          }
                        - if `K' == 1 & `:length local options' {
                        = if 1 == 1 & 0 {
                          syntax namelist(max=2) [, `DIOPTS']
                          }
                        - if reldif(`level', c(level)) > 1e-3 {
                        = if reldif(95, c(level)) > 1e-3 {
                          local levelopt level(`level')
                          }
                        - Wrapon , `fvwrapon'
                        = Wrapon ,
                          ─────────────────────────────────────────────
```

```
                        - capture syntax [, WOrd WIdth]
                        - if c(rc) {
                          di as err "invalid fvwrapon() option;"
                          syntax [, WOrd WIdth]
                          exit 198
                          }
                        - opts_exclusive "`word' `width'" fvwrapon
                        = opts_exclusive " " fvwrapon
                          ─────────────────────────────────────────────
```

```
                        - version 8.2
                        - args opts optname errcode optslab
                        - local opts `opts'
                        = local opts
                        - local n 0
                        - while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        - if `n' < 2 {
                        = if 0 < 2 {
                        - exit
                          ─────────────────────────────────────────────
```

```
                    - local fvwrapon `word' `width'
                    = local fvwrapon
                    - if `:length local fvwrapon' {
                    = if 0 {
                      c_local fvwrapon fvwrapon(`fvwrapon')
                      }
                    ─────────────────────────────────────────
> ───────────────────────────── end _get_diopts.Wrapon ─────────────
                  - if "`fvwrap'" != "" {
                  = if "" != "" {
                    FVWrap, `fvwrap'
                    }
                  - c_local `c_diopts' `levelopt' `vsquish' `allbaselevels'
> `baselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `
> coeflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `comp
> are' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `a
> bbrev'
                  = c_local DEFAULT
                  - if `K' == 2 {
                  = if 1 == 2 {
                    c_local `c_opts' `"`options'"'
                    }
                  - sreturn local coding `coding'
                  = sreturn local coding
                  - sreturn local versus `versus'
                  = sreturn local versus
                  - sreturn local compare `compare'
                  = sreturn local compare
                  - sreturn local level `level'
                  = sreturn local level 95
                    ─────────────────────────────────────────
> ───────────────────────────── end _get_diopts.GetDiopts ─────────────
                - if `"`name2'"' == "" {
                = if `""' == "" {
                - GetDiopts DUPS, `options'
                = GetDiopts DUPS,
                    ─────────────────────────────────────────
> ───────────────────────────── begin _get_diopts.GetDiopts ─────────────
                - local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLB
> ASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMP
> TYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(st
> ring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru)
>  FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru)
>  NOABBREV ABBREV
                - syntax namelist(max=2) [, `DIOPTS' *]
                = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBA
```

```
> SElevels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOE
> MPTYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGE
> ND cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVW
> RAP(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CIT
> YPE(passthru) NOABBREV ABBREV *]
                         - opts_exclusive "`allbaselevels' `noallbaselevels'"
                         = opts_exclusive " "
                         ─────────────────────────────────────────────────────
> ───────────────────────────────── begin opts_exclusive ───────────────
                         - version 8.2
                         - args opts optname errcode optslab
                         - local opts `opts'
                         = local opts
                         - local n 0
                         - while `"`opts'"' != "" {
                         = while `""' != "" {
                           local ++n
                           gettoken item`n' opts : opts, bind
                           }
                         - if `n' < 2 {
                         = if 0 < 2 {
                         - exit
                         ─────────────────────────────────────────────────────
> ───────────────────────────────── end opts_exclusive ───────────────
                         - opts_exclusive "`allbaselevels' `nobaselevels'"
                         = opts_exclusive " "
                         ─────────────────────────────────────────────────────
> ───────────────────────────────── begin opts_exclusive ───────────────
                         - version 8.2
                         - args opts optname errcode optslab
                         - local opts `opts'
                         = local opts
                         - local n 0
                         - while `"`opts'"' != "" {
                         = while `""' != "" {
                           local ++n
                           gettoken item`n' opts : opts, bind
                           }
                         - if `n' < 2 {
                         = if 0 < 2 {
                         - exit
                         ─────────────────────────────────────────────────────
> ───────────────────────────────── end opts_exclusive ───────────────
                         - opts_exclusive "`baselevels' `nobaselevels'"
                         = opts_exclusive " "
                         ─────────────────────────────────────────────────────
```

```
> ─────────────────────────── begin opts_exclusive ─────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────────
> ─────────────────────────── end opts_exclusive ───────────────
                  – opts_exclusive "`emptycells' `noemptycells'"
                  = opts_exclusive " "
                    ─────────────────────────────────────────────
> ─────────────────────────── begin opts_exclusive ─────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────────
> ─────────────────────────── end opts_exclusive ───────────────
                  – opts_exclusive "`fvlabel' `nofvlabel'"
                  = opts_exclusive " "
                    ─────────────────────────────────────────────
> ─────────────────────────── begin opts_exclusive ─────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
```

```
                        local ++n
                        gettoken item`n' opts : opts, bind
                        }
                      – if `n' < 2 {
                      = if 0 < 2 {
                      – exit
                      ─────────────────────────────────────────
> ───────────────────────────────── end opts_exclusive ──────────
              – opts_exclusive "`omitted' `noomitted'"
              = opts_exclusive " "
                      ─────────────────────────────────────────
> ───────────────────────────────── begin opts_exclusive ────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                        local ++n
                        gettoken item`n' opts : opts, bind
                        }
                      – if `n' < 2 {
                      = if 0 < 2 {
                      – exit
                      ─────────────────────────────────────────
> ───────────────────────────────── end opts_exclusive ──────────
              – opts_exclusive "`lstretch' `nolstretch'"
              = opts_exclusive " "
                      ─────────────────────────────────────────
> ───────────────────────────────── begin opts_exclusive ────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                        local ++n
                        gettoken item`n' opts : opts, bind
                        }
                      – if `n' < 2 {
                      = if 0 < 2 {
                      – exit
                      ─────────────────────────────────────────
> ───────────────────────────────── end opts_exclusive ──────────
```

```
                    ─ opts_exclusive "`cnsreport' `fullcnsreport'"
                    = opts_exclusive " "
                    ─────────────────────────────────────────────────
  > ───────────────────────────────── begin opts_exclusive ─────────────
                    ─ version 8.2
                    ─ args opts optname errcode optslab
                    ─ local opts `opts'
                    = local opts
                    ─ local n 0
                    ─ while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    ─ if `n' < 2 {
                    = if 0 < 2 {
                    ─ exit
                    ─────────────────────────────────────────────────
  > ───────────────────────────────── end opts_exclusive ───────────────
                    ─ opts_exclusive "`coeflegend' `selegend'"
                    = opts_exclusive " "
                    ─────────────────────────────────────────────────
  > ───────────────────────────────── begin opts_exclusive ─────────────
                    ─ version 8.2
                    ─ args opts optname errcode optslab
                    ─ local opts `opts'
                    = local opts
                    ─ local n 0
                    ─ while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    ─ if `n' < 2 {
                    = if 0 < 2 {
                    ─ exit
                    ─────────────────────────────────────────────────
  > ───────────────────────────────── end opts_exclusive ───────────────
                    ─ opts_exclusive "`noci' `nopvalues'"
                    = opts_exclusive " "
                    ─────────────────────────────────────────────────
  > ───────────────────────────────── begin opts_exclusive ─────────────
                    ─ version 8.2
                    ─ args opts optname errcode optslab
                    ─ local opts `opts'
                    = local opts
```

```
                     – local n 0
                     – while `"`opts'"' != "" {
                     = while `""' != "" {
                       local ++n
                       gettoken item`n' opts : opts, bind
                       }
                     – if `n' < 2 {
                     = if 0 < 2 {
                     – exit
                       ────────────────────────────────────────
>  ──────────────────────────────────── end opts_exclusive ────────────
              – local K : list sizeof namelist
              – gettoken c_diopts c_opts : namelist
              – opts_exclusive "`coding' `compare'"
              = opts_exclusive " "
                       ────────────────────────────────────────
>  ──────────────────────────────────── begin opts_exclusive ──────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
                       ────────────────────────────────────────
>  ──────────────────────────────────── end opts_exclusive ────────────
              – opts_exclusive "`versus' `compare'"
              = opts_exclusive " "
                       ────────────────────────────────────────
>  ──────────────────────────────────── begin opts_exclusive ──────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
```

```
                                    – if `n' < 2 {
                                    = if 0 < 2 {
                                    – exit
                                    ─────────────────────────────────────────────
> ────────────────────────────────── end opts_exclusive ──────────────
                      – opts_exclusive "`abbrev' `noabbrev'"
                      = opts_exclusive " "
                                    ─────────────────────────────────────────────
> ────────────────────────────────── begin opts_exclusive ──────────────
                      – version 8.2
                      – args opts optname errcode optslab
                      – local opts `opts'
                      = local opts
                      – local n 0
                      – while `"`opts'"' != "" {
                      = while `""' != "" {
                        local ++n
                        gettoken item`n' opts : opts, bind
                        }
                      – if `n' < 2 {
                      = if 0 < 2 {
                      – exit
                                    ─────────────────────────────────────────────
> ────────────────────────────────── end opts_exclusive ──────────────
                      – local allbaselevels `allbaselevels' `noallbaselevels'
                      = local allbaselevels
                      – local baselevels `baselevels' `nobaselevels'
                      = local baselevels
                      – local emptycells `emptycells' `noemptycells'
                      = local emptycells
                      – local omitted `omitted' `noomitted'
                      = local omitted
                      – local lstretch `lstretch' `nolstretch'
                      = local lstretch
                      – local fvlabel `fvlabel' `nofvlabel'
                      = local fvlabel
                      – local abbrev `abbrev' `noabbrev'
                      = local abbrev
                      – if "`allbaselevels'`baselevels'" == "" {
                      = if "" == "" {
                      – if c(showbaselevels) == "all" {
                        local allbaselevels allbaselevels
                        }
                      – else if c(showbaselevels) == "on" {
                        local baselevels baselevels
                        }
```

```
- }
- if "`emptycells'" == "" {
= if "" == "" {
- if c(showemptycells) == "off" {
  local emptycells noemptycells
  }
- }
- if "`omitted'" == "" {
= if "" == "" {
- if c(showomitted) == "off" {
  local omitted noomitted
  }
- }
- if "`lstretch'" == "" {
= if "" == "" {
- if c(lstretch) == "off" {
  local lstretch nolstretch
  }
- }
- if `:length local cformat' {
= if 0 {
  confirm numeric format `cformat'
  if fmtwidth(`"`cformat'"') > 9 {
  local cformat "%9.0g"
  di "{txt}note: invalid cformat(), using default"
  }
  sreturn local cformat `"`cformat'"'
  local cformat `"cformat(`cformat')"'
  }
- if `:length local sformat' {
= if 0 {
  confirm numeric format `sformat'
  if fmtwidth(`"`sformat'"') > 8 {
  local sformat "%8.2f"
  di "{txt}note: invalid sformat(), using default"
  }
  sreturn local sformat `"`sformat'"'
  local sformat `"sformat(`sformat')"'
  }
- if `:length local pformat' {
= if 0 {
  confirm numeric format `pformat'
  if fmtwidth(`"`pformat'"') > 5 {
  local pformat "%5.3f"
  di "{txt}note: invalid pformat(), using default"
  }
```

```
                          sreturn local pformat `"'`pformat'"'
                          local pformat `"pformat(`pformat')"'
                          }
                     - if `K' == 1 & `:length local options' {
                     = if 1 == 1 & 0 {
                          syntax namelist(max=2) [, `DIOPTS']
                          }
                     - if reldif(`level', c(level)) > 1e-3 {
                     = if reldif(95, c(level)) > 1e-3 {
                          local levelopt level(`level')
                          }
                     - Wrapon , `fvwrapon'
                     = Wrapon ,
                          ─────────────────────────────────────────────
> ──────────────────────────── begin _get_diopts.Wrapon ───────────────
                     - capture syntax [, WOrd WIdth]
                     - if c(rc) {
                          di as err "invalid fvwrapon() option;"
                          syntax [, WOrd WIdth]
                          exit 198
                          }
                     - opts_exclusive "`word' `width'" fvwrapon
                     = opts_exclusive " " fvwrapon
                          ─────────────────────────────────────────────
> ──────────────────────────── begin opts_exclusive ───────────────────
                     - version 8.2
                     - args opts optname errcode optslab
                     - local opts `opts'
                     = local opts
                     - local n 0
                     - while `"'`opts'"' != "" {
                     = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                     - if `n' < 2 {
                     = if 0 < 2 {
                     - exit
                          ─────────────────────────────────────────────
> ──────────────────────────── end opts_exclusive ─────────────────────
                     - local fvwrapon `word' `width'
                     = local fvwrapon
                     - if `:length local fvwrapon' {
                     = if 0 {
                          c_local fvwrapon fvwrapon(`fvwrapon')
                          }
```

```
                                ───────────────────────────────────────────
> ─────────────────────────────── end _get_diopts.Wrapon ───────────────
                    - if "`fvwrap'" != "" {
                    = if "" != "" {
                      FVWrap, `fvwrap'
                      }
                    - c_local `c_diopts' `levelopt' `vsquish' `allbaselevels'
> `baselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `
> coeflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `comp
> are' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `a
> bbrev'
                    = c_local DUPS
                    - if `K' == 2 {
                    = if 1 == 2 {
                      c_local `c_opts' `"`options'"'
                      }
                    - sreturn local coding `coding'
                    = sreturn local coding
                    - sreturn local versus `versus'
                    = sreturn local versus
                    - sreturn local compare `compare'
                    = sreturn local compare
                    - sreturn local level `level'
                    = sreturn local level 95
                                ───────────────────────────────────────────
> ─────────────────────────────── end _get_diopts.GetDiopts ────────────
                    - }
                    - else {
                      GetDiopts DUPS options, `options'
                      c_local `name2' `"`options'"'
                      }
                    - local DUPS : list DUPS - DEFAULT
                    - gettoken DUPS : DUPS
                    - if `"`DUPS'"' != "" {
                    = if `""' != "" {
                      if (strpos(`"`DUPS'"', "(")) {
                      gettoken DUPS : DUPS, parse("(")
                      local DUPS `"`DUPS'()"'
                      }
                      di as err "duplicate {bf:`DUPS'} option not allowed"
                      exit 198
                      }
                    - sreturn clear
                    - foreach sname of local snames {
                    - sreturn local `sname' = `"`S_`sname''"'
                    = sreturn local level = `"95"'
```

```
                      - }
                      - sreturn local `sname' = `"'`S_`sname''"'
                      = sreturn local options = `"fvwrap(1)"'
                      - }
                      - sreturn local `sname' = `"'`S_`sname''"'
                      = sreturn local method = `"noadjust"'
                      - }
                      ─────────────────────────────────────────
> ───────────────────────────────── end _get_diopts ─────────────
                  - local cformat `"'`s(cformat)'"'
                  = local cformat `""'
                  - local sformat `"'`s(sformat)'"'
                  = local sformat `""'
                  - local pformat `"'`s(pformat)'"'
                  = local pformat `""'
                  - _get_eformopts , eformopts(`options') allowed(__all__) sopti
> ons
                  = _get_eformopts , eformopts() allowed(__all__) soptions
                      ─────────────────────────────────────────
> ──────────────────────────────── begin _get_eformopts ─────────────
                  - version 8.0
                  - syntax [, eformopts(string asis) soptions ALLOWed(string)
> ]
                  - local 0 , `eformopts'
                  = local 0 ,
                  - local EFALL NOHR hr NOSHR shr or IRr RRr tr TRatio
                  - if "`soptions'" != "" {
                  = if "soptions" != "" {
                  - syntax [, EForm1(passthru) EForm `EFALL' * ]
                  = syntax [, EForm1(passthru) EForm NOHR hr NOSHR shr or IRr
> RRr tr TRatio * ]
                  - local opts `"'`options'"'
                  = local opts `""'
                  - local 0 , `eform1' `eform' `nohr' `hr' `noshr' `shr' `or'
> `irr' `rrr' `tr' `tratio'
                  = local 0 ,
                  - }
                  - if "`allowed'" == "__all__" {
                  = if "__all__" == "__all__" {
                  - local allowed `EFALL'
                  = local allowed NOHR hr NOSHR shr or IRr RRr tr TRatio
                  - }
                  - foreach ef of local allowed {
                  - capture confirm name `ef'
                  = capture confirm name NOHR
                  - if _rc {
```

```
    di as err "`ef' is not a valid name"
    exit 198
    }
- local efopts `efopts' `=lower("`ef'")'
= local efopts  nohr
- }
- capture confirm name `ef'
= capture confirm name hr
- if _rc {
  di as err "`ef' is not a valid name"
  exit 198
  }
- local efopts `efopts' `=lower("`ef'")'
= local efopts nohr hr
- }
- capture confirm name `ef'
= capture confirm name NOSHR
- if _rc {
  di as err "`ef' is not a valid name"
  exit 198
  }
- local efopts `efopts' `=lower("`ef'")'
= local efopts nohr hr noshr
- }
- capture confirm name `ef'
= capture confirm name shr
- if _rc {
  di as err "`ef' is not a valid name"
  exit 198
  }
- local efopts `efopts' `=lower("`ef'")'
= local efopts nohr hr noshr shr
- }
- capture confirm name `ef'
= capture confirm name or
- if _rc {
  di as err "`ef' is not a valid name"
  exit 198
  }
- local efopts `efopts' `=lower("`ef'")'
= local efopts nohr hr noshr shr or
- }
- capture confirm name `ef'
= capture confirm name IRr
- if _rc {
  di as err "`ef' is not a valid name"
```

```
                         exit 198
                         }
                    -  local efopts `efopts' `=lower("`ef'")'
                    =  local efopts nohr hr noshr shr or irr
                    -  }
                    -  capture confirm name `ef'
                    =  capture confirm name RRr
                    -  if _rc {
                       di as err "`ef' is not a valid name"
                       exit 198
                       }
                    -  local efopts `efopts' `=lower("`ef'")'
                    =  local efopts nohr hr noshr shr or irr rrr
                    -  }
                    -  capture confirm name `ef'
                    =  capture confirm name tr
                    -  if _rc {
                       di as err "`ef' is not a valid name"
                       exit 198
                       }
                    -  local efopts `efopts' `=lower("`ef'")'
                    =  local efopts nohr hr noshr shr or irr rrr tr
                    -  }
                    -  capture confirm name `ef'
                    =  capture confirm name TRatio
                    -  if _rc {
                       di as err "`ef' is not a valid name"
                       exit 198
                       }
                    -  local efopts `efopts' `=lower("`ef'")'
                    =  local efopts nohr hr noshr shr or irr rrr tr tratio
                    -  }
                    -  local efopts : list uniq efopts
                    -  syntax [, EForm1(string) EForm `allowed' ]
                    =  syntax [, EForm1(string) EForm NOHR hr NOSHR shr or IRr RR
> r tr TRatio ]
                    -  foreach ef of local efopts {
                    -  local eform `eform' ``ef''
                    =  local eform
                    -  }
                    -  local eform `eform' ``ef''
                    =  local eform
                    -  }
                    -  local eform `eform' ``ef''
                    =  local eform
                    -  }
```

```
- local eform `eform' ``ef''
= local eform
- }
- local eform `eform' ``ef''
= local eform
- }
- local eform `eform' ``ef''
= local eform
- }
- local eform `eform' ``ef''
= local eform
- }
- local eform `eform' ``ef''
= local eform
- }
- local eform `eform' ``ef''
= local eform
- }
- if `"`eform1'"'=="Odds ratio" {
= if `""'=="Odds ratio" {
  local eform_cons_ti = "Odds"
  local eform_cons_note = "odds ratios"
  }
- else if `"`eform1'"'=="Haz. ratio" {
= else if `""'=="Haz. ratio" {
  local eform_cons_ti = "Hazard"
  local eform_cons_note = "hazard ratios"
  }
- else if `"`eform1'"'=="Time ratio" {
= else if `""'=="Time ratio" {
  local eform_cons_ti = "Time"
  local eform_cons_note = "time ratios"
  }
- else if `"`eform1'"'=="IRR" {
= else if `""'=="IRR" {
  local eform_cons_ti = "Inc. rate"
  local eform_cons_note = "incidence-rate ratios"
  local eform_cons_ti2 = "incidence rate"
  }
- else if `"`eform1'"'=="Risk ratio" {
= else if `""'=="Risk ratio" {
  local eform_cons_ti = "Risk"
  local eform_cons_note = "risk ratios"
  }
- else if `"`eform1'"'=="Hlth ratio" {
= else if `""'=="Hlth ratio" {
```

```
                        local eform_cons_ti = "Health"
                        local eform_cons_note = "health ratios"
                        }
        - local k : list sizeof eform
        - if `k' {
        = if 0 {
            opts_exclusive "`eform'"
            if `:length local eform1' {
            opts_exclusive "eform() `eform'"
            }
            }
        - if `k' {
        = if 0 {
            if ("`eform'"=="eform") local eform1 = "exp(b)"
            else if ("`eform'"=="hr") {
            local eform1 = "Haz. ratio"
            local eform_cons_ti = "Hazard"
            local eform_cons_note = "hazard ratios"
            }
            else if ("`eform'"=="shr") {
            local eform1 = "SHR"
            local eform_cons_ti = "Subhazard"
            local eform_cons_note = "subhazard ratios"
            }
            else if ("`eform'"=="tr") {
            local eform1 = "Time ratio"
            local eform_cons_ti = "Time"
            local eform_cons_note = "time ratios"
            }
            else if ("`eform'"=="tratio") {
            local eform1 = "Time ratio"
            local eform_cons_ti = "Time"
            local eform_cons_note = "time ratios"
            }
            else if ("`eform'"=="or") {
            local eform1 = "Odds ratio"
            if ("`e(cmd)'"=="asclogit" | "`e(cmd)'"=="cmclogit" | "`e(
> cmd)'"=="cmmixlogit" | "`e(cmd)'"=="cmxtmixlogit" ) {
            local eform_cons_ti = "Rel. risk"
            local eform_cons_note = "relative-risk ratios"
            local eform_cons_ti2 = "relative risk"
            }
            else {
            local eform_cons_ti = "Odds"
            local eform_cons_note = "odds ratios"
            }
```

```
                }
                else if ("`eform'"=="irr") {
                local eform1 = "IRR"
                local eform_cons_ti = "Inc. rate"
                local eform_cons_note = "incidence-rate ratios"
                local eform_cons_ti2 = "incidence rate"
                }
                else if ("`eform'"=="rrr") {
                local eform1 = "RRR"
                local eform_cons_ti = "Rel. risk"
                local eform_cons_note = "relative-risk ratios"
                local eform_cons_ti2 = "relative risk"
                }
                else if ("`eform'"!="nohr") & ("`eform'"!="noshr") {
                local eform1 = upper("`eform'")
                }
                }
        -  sreturn clear
        -  sreturn local options `"`opts'"'
        =  sreturn local options `""'
        -  sreturn local opt `eform'
        =  sreturn local opt
        -  sreturn local str `eform1'
        =  sreturn local str
        -  if `"`eform1'"' != "" {
        =  if `""' != "" {
           sreturn local eform eform(`"`eform1'"')
           }
        -  else sreturn local eform ""
        -  sreturn local eform_cons_ti `eform_cons_ti'
        =  sreturn local eform_cons_ti
        -  sreturn local eform_cons_note `eform_cons_note'
        =  sreturn local eform_cons_note
        -  sreturn local eform_cons_ti2 `eform_cons_ti2'
        =  sreturn local eform_cons_ti2
        ─────────────────────────────────────────────────────
>  ──────────────────────────────── end _get_eformopts ──────────────
        -  local tr_item = `"`s(eform_cons_note)'"'
        =  local tr_item = `""'
        -  if inlist("`bmatrix'", "", "e(b)") & "`e(k_eform)'" == "0" {
        =  if inlist("", "", "e(b)") & "" == "0" {
           local eform
           }
        -  else local eform `"`s(str)'"'
        =  else local eform `""'
        -  local eform_cons_ti `"`s(eform_cons_ti)'"'
```

```
                = local eform_cons_ti `""'
                - local eform_cons_ti2 `"`s(eform_cons_ti2)'"'
                = local eform_cons_ti2 `""'
                - if ("`e(consonly)'"!="1" | `"`eform_cons_ti'"'=="") {
                = if (""!="1" | `""'=="") {
                - local eformdi `"`s(str)'"'
                = local eformdi `""'
                - }
                - else {
                  local eformdi `"`eform_cons_ti'"'
                  local tr_item = cond(missing("`eform_cons_ti2'"), strlower(`
>  "`eform_cons_ti'"'), `"`eform_cons_ti2'"')
                  }
                - local coefttl = cond(`"`eform'"'==`""', `"`coeftitle'"', `"`
>  eformdi'"')
                = local coefttl = cond(`""'==`""', `""', `""')
                - local options `"`s(options)'"'
                = local options `""'
                - _get_diparmopts, diparmopts(`options') level(`level')
                = _get_diparmopts, diparmopts() level(95)
                  ─────────────────────────────────────────────────────────
>  ──────────────────────────────── begin _get_diparmopts ────────────────
                - if _caller() < 8.2 {
                  _get_diparmopts_8 `0'
                  exit
                  }
                - version 9
                - local version : di "version " string(_caller()) ":"
                - syntax [, diparmopts(string asis) EXECute soptions bottom
>  plus SYNTAXonly * ]
                - local goptions `options'
                = local goptions level(95)
                - SpliceGlobals junk , `goptions'
                = SpliceGlobals junk , level(95)
                  ─────────────────────────────────────────────────────────
>  ─────────────────────── begin _get_diparmopts.SpliceGlobals ───────────
                  - syntax name(id="macro name" name=c_diparm) [, diparm(str
>  ing asis) Level(cilevel) dof(passthru) syntaxonly ]
                  - if `"`dof'"' == "" & `"`e(df_r)'"' != "" {
                  = if `""' == "" & `"137"' != "" {
                  - capture confirm integer number `e(df_r)'
                  = capture confirm integer number 137
                  - if !c(rc) {
                  - local gdof dof(`e(df_r)')
                  = local gdof dof(137)
                  - }
```

```
                        – capture
                        – }
                        – else local gdof `"`dof'"'
                        = else local gdof `""'
                        – local glevel `level'
                        = local glevel 95
                        – local lopt level(`glevel')
                        = local lopt level(95)
                        – if (`"`diparm'"' == "") exit
                        = if (`""' == "") exit
                        ─────────────────────────────────────────────────────
```

> ─────────────────────── end _get_diparmopts.SpliceGlobals ─────────────

```
                   – local 0 `", `diparmopts'"'
                   = local 0 `", "'
                   – local diparmopts
                   – local k 0
                   – syntax [, diparm(string asis) * ]
                   – while `"`diparm'"' != "" {
                   = while `""' != "" {
                      local ++k
                      local single 1
                      local after
                      capture _on_colon_parse `diparm'
                      if !c(rc) {
                      local single 0
                      local diparm `"`s(before)'"'
                      local after `"`s(after)'"'
                      }
                      capture
                      SpliceGlobals diparm , diparm(`diparm') `syntaxonly' `gopt
```

> ions'

```
                      local diparm`k' `"`diparm'"'
                      local diparmopts `"`diparmopts' : `diparm'"'
                      if `single' | `"`:list retok after'"' == "" {
                      local 0 `", `options'"'
                      syntax [, diparm(string asis) * ]
                      }
                      else {
                      local diparm `"`after'"'
                      }
                      }
                   – if `"`soptions'"' == "" {
                   = if `""' == "" {
                   – syntax [, diparm(string asis) ]
                   – }
                   – if ("`execute'" == "") {
```

```
                     = if ("" == "") {
                     — sreturn clear
                     — sreturn local options `"'`options'"'
                     = sreturn local options `""'
                     — sreturn local diparm `"'`diparmopts'"'
                     = sreturn local diparm `""'
                     — forval i = 1/`k' {
                     = forval i = 1/0 {
                       sreturn local diparm`i' `"'`diparm`i''"'
                       }
                     — sreturn local k `k'
                     = sreturn local k 0
                     — exit
                     ────────────────────────────────────────────────
>  ──────────────────────────────────── end _get_diparmopts ─────────────
                     — local NODIPARM : length local nodiparm
                     — if `NODIPARM' {
                     = if 8 {
                     — local options
                     — }
                     — local GTOPTS parse(":") bind quotes
                     — local k 0
                     — if !`NODIPARM' {
                     = if !8 {
                       if `"'`e(diparm)'"' != "" {
                       local i 0
                       local diparm `"'`e(diparm)'"'
                       }
                       else if `"'`e(diparm1)'"' != "" {
                       local i 1
                       local diparm `"'`e(diparm1)'"'
                       }
                       while `:length local diparm' {
                       gettoken diparm rest : diparm, `GTOPTS'
                       while `:length local rest' {
                       local ++k
                       local diparm`k' : copy local diparm
                       gettoken COLON rest : rest, `GTOPTS'
                       gettoken diparm rest : rest, `GTOPTS'
                       }
                       local ++k
                       local diparm`k' : copy local diparm
                       local ++i
                       local diparm `"'`e(diparm`i')'"'
                       }
                       }
```

```
                 - if `:length local options' {
                 = if 0 {
                   local 0 `", `options'"'
                   syntax [, diparm(string asis) *]
                   if `k' & `:length local diparm' {
                   local ++k
                   local diparm`k' __sep__
                   }
                   while `:length local diparm' {
                   gettoken diparm rest : diparm, `GTOPTS'
                   while `:length local rest' {
                   local ++k
                   local diparm`k' : copy local diparm
                   gettoken COLON rest : rest, `GTOPTS'
                   gettoken diparm rest : rest, `GTOPTS'
                   }
                   local ++k
                   local diparm`k' : copy local diparm
                   local 0 `", `options'"'
                   syntax [, diparm(string asis) *]
                   }
                   }
                 - if "`markdown'" != "" {
                 = if "" != "" {
                   local lsize = c(linesize)
                   set linesize 255
                   }
                 - `vv' mata: _coef_table()
                 = version 11, missing: mata: _coef_table()
                   ─────────────────────────────────────────────────
> ─────────────────────────────────────── begin _get_diopts ───────────────
                 - version 11
                 - syntax namelist(max=2) [, *]
                 - gettoken name1 namelist : namelist
                 - gettoken name2 namelist : namelist
                 - GetDiopts diopts options, `options'
                 = GetDiopts diopts options, fvwrap(1)
                   ─────────────────────────────────────────────────
> ──────────────────────────────── begin _get_diopts.GetDiopts ─────────────
                 - local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLB
> ASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMP
> TYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(st
> ring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru)
>  FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru)
>  NOABBREV ABBREV
                 - syntax namelist(max=2) [, `DIOPTS' *]
```

```
                         = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBA
>  SElevels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOE
>  MPTYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGE
>  ND cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVW
>  RAP(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CIT
>  YPE(passthru) NOABBREV ABBREV *]
                         – opts_exclusive "`allbaselevels' `noallbaselevels'"
                         = opts_exclusive " "
                           ─────────────────────────────────────────────────
>  ──────────────────────────────── begin opts_exclusive ───────────────
                         – version 8.2
                         – args opts optname errcode optslab
                         – local opts `opts'
                         = local opts
                         – local n 0
                         – while `"`opts'"' != "" {
                         = while `""' != "" {
                           local ++n
                           gettoken item`n' opts : opts, bind
                           }
                         – if `n' < 2 {
                         = if 0 < 2 {
                         – exit
                           ─────────────────────────────────────────────────
>  ──────────────────────────────── end opts_exclusive ────────────────
                         – opts_exclusive "`allbaselevels' `nobaselevels'"
                         = opts_exclusive " "
                           ─────────────────────────────────────────────────
>  ──────────────────────────────── begin opts_exclusive ───────────────
                         – version 8.2
                         – args opts optname errcode optslab
                         – local opts `opts'
                         = local opts
                         – local n 0
                         – while `"`opts'"' != "" {
                         = while `""' != "" {
                           local ++n
                           gettoken item`n' opts : opts, bind
                           }
                         – if `n' < 2 {
                         = if 0 < 2 {
                         – exit
                           ─────────────────────────────────────────────────
>  ──────────────────────────────── end opts_exclusive ────────────────
                         – opts_exclusive "`baselevels' `nobaselevels'"
                         = opts_exclusive " "
```

```
> ─────────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ──────────────
    ─ version 8.2
    ─ args opts optname errcode optslab
    ─ local opts `opts'
    = local opts
    ─ local n 0
    ─ while `"`opts'"' != "" {
    = while `""' != "" {
      local ++n
      gettoken item`n' opts : opts, bind
      }
    ─ if `n' < 2 {
    = if 0 < 2 {
    ─ exit
    ─────────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ──────────────
  ─ opts_exclusive "`emptycells' `noemptycells'"
  = opts_exclusive " "
    ─────────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ──────────────
    ─ version 8.2
    ─ args opts optname errcode optslab
    ─ local opts `opts'
    = local opts
    ─ local n 0
    ─ while `"`opts'"' != "" {
    = while `""' != "" {
      local ++n
      gettoken item`n' opts : opts, bind
      }
    ─ if `n' < 2 {
    = if 0 < 2 {
    ─ exit
    ─────────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ──────────────
  ─ opts_exclusive "`fvlabel' `nofvlabel'"
  = opts_exclusive " "
    ─────────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ──────────────
    ─ version 8.2
    ─ args opts optname errcode optslab
    ─ local opts `opts'
    = local opts
    ─ local n 0
    ─ while `"`opts'"' != "" {
```

```
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        − if `n' < 2 {
                        = if 0 < 2 {
                        − exit
                        ─────────────────────────────────────────────
  >  ──────────────────────────── end opts_exclusive ────────────
              − opts_exclusive "`omitted' `noomitted'"
              = opts_exclusive " "
                        ─────────────────────────────────────────────
  >  ──────────────────────────── begin opts_exclusive ──────────
              − version 8.2
              − args opts optname errcode optslab
              − local opts `opts'
              = local opts
              − local n 0
              − while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              − if `n' < 2 {
              = if 0 < 2 {
              − exit
                        ─────────────────────────────────────────────
  >  ──────────────────────────── end opts_exclusive ────────────
              − opts_exclusive "`lstretch' `nolstretch'"
              = opts_exclusive " "
                        ─────────────────────────────────────────────
  >  ──────────────────────────── begin opts_exclusive ──────────
              − version 8.2
              − args opts optname errcode optslab
              − local opts `opts'
              = local opts
              − local n 0
              − while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              − if `n' < 2 {
              = if 0 < 2 {
              − exit
                        ─────────────────────────────────────────────
```

> ───────────────────────────── end opts_exclusive ─────────────
    − opts_exclusive "`cnsreport' `fullcnsreport'"
    = opts_exclusive " "
                    ───
> ───────────────────────────── begin opts_exclusive ────────────
      − version 8.2
      − args opts optname errcode optslab
      − local opts `opts'
      = local opts
      − local n 0
      − while `"`opts'"' != "" {
      = while `""' != "" {
        local ++n
        gettoken item`n' opts : opts, bind
        }
      − if `n' < 2 {
      = if 0 < 2 {
      − exit
                    ───
> ───────────────────────────── end opts_exclusive ─────────────
    − opts_exclusive "`coeflegend' `selegend'"
    = opts_exclusive " "
                    ───
> ───────────────────────────── begin opts_exclusive ────────────
      − version 8.2
      − args opts optname errcode optslab
      − local opts `opts'
      = local opts
      − local n 0
      − while `"`opts'"' != "" {
      = while `""' != "" {
        local ++n
        gettoken item`n' opts : opts, bind
        }
      − if `n' < 2 {
      = if 0 < 2 {
      − exit
                    ───
> ───────────────────────────── end opts_exclusive ─────────────
    − opts_exclusive "`noci' `nopvalues'"
    = opts_exclusive " "
                    ───
> ───────────────────────────── begin opts_exclusive ────────────
      − version 8.2
      − args opts optname errcode optslab
      − local opts `opts'

```
= local opts
– local n 0
– while `"`opts'"' != "" {
= while `""' != "" {
  local ++n
  gettoken item`n' opts : opts, bind
  }
– if `n' < 2 {
= if 0 < 2 {
– exit
```
──
> ─────────────────────────── end opts_exclusive ───────────
```
– local K : list sizeof namelist
– gettoken c_diopts c_opts : namelist
– opts_exclusive "`coding' `compare'"
= opts_exclusive " "
```
──
> ─────────────────────────── begin opts_exclusive ───────────
```
– version 8.2
– args opts optname errcode optslab
– local opts `opts'
= local opts
– local n 0
– while `"`opts'"' != "" {
= while `""' != "" {
  local ++n
  gettoken item`n' opts : opts, bind
  }
– if `n' < 2 {
= if 0 < 2 {
– exit
```
──
> ─────────────────────────── end opts_exclusive ───────────
```
– opts_exclusive "`versus' `compare'"
= opts_exclusive " "
```
──
> ─────────────────────────── begin opts_exclusive ───────────
```
– version 8.2
– args opts optname errcode optslab
– local opts `opts'
= local opts
– local n 0
– while `"`opts'"' != "" {
= while `""' != "" {
  local ++n
  gettoken item`n' opts : opts, bind
```

```
        }
      – if `n' < 2 {
      = if 0 < 2 {
      – exit
      ─────────────────────────────────────────────
>  ──────────────────────────── end opts_exclusive ─────────────
      – opts_exclusive "`abbrev' `noabbrev'"
      = opts_exclusive " "
      ─────────────────────────────────────────────
>  ──────────────────────────── begin opts_exclusive ─────────────
      – version 8.2
      – args opts optname errcode optslab
      – local opts `opts'
      = local opts
      – local n 0
      – while `"`opts'"' != "" {
      = while `""' != "" {
        local ++n
        gettoken item`n' opts : opts, bind
        }
      – if `n' < 2 {
      = if 0 < 2 {
      – exit
      ─────────────────────────────────────────────
>  ──────────────────────────── end opts_exclusive ─────────────
      – local allbaselevels `allbaselevels' `noallbaselevels'
      = local allbaselevels
      – local baselevels `baselevels' `nobaselevels'
      = local baselevels
      – local emptycells `emptycells' `noemptycells'
      = local emptycells
      – local omitted `omitted' `noomitted'
      = local omitted
      – local lstretch `lstretch' `nolstretch'
      = local lstretch
      – local fvlabel `fvlabel' `nofvlabel'
      = local fvlabel
      – local abbrev `abbrev' `noabbrev'
      = local abbrev
      – if "`allbaselevels'`baselevels'" == "" {
      = if "" == "" {
      – if c(showbaselevels) == "all" {
        local allbaselevels allbaselevels
        }
      – else if c(showbaselevels) == "on" {
        local baselevels baselevels
```

```
      }
  - }
  - if "`emptycells'" == "" {
  = if "" == "" {
  - if c(showemptycells) == "off" {
      local emptycells noemptycells
      }
  - }
  - if "`omitted'" == "" {
  = if "" == "" {
  - if c(showomitted) == "off" {
      local omitted noomitted
      }
  - }
  - if "`lstretch'" == "" {
  = if "" == "" {
  - if c(lstretch) == "off" {
      local lstretch nolstretch
      }
  - }
  - if `:length local cformat' {
  = if 0 {
      confirm numeric format `cformat'
      if fmtwidth(`"`cformat'"') > 9 {
      local cformat "%9.0g"
      di "{txt}note: invalid cformat(), using default"
      }
      sreturn local cformat `"`cformat'"'
      local cformat `"cformat(`cformat')"'
      }
  - if `:length local sformat' {
  = if 0 {
      confirm numeric format `sformat'
      if fmtwidth(`"`sformat'"') > 8 {
      local sformat "%8.2f"
      di "{txt}note: invalid sformat(), using default"
      }
      sreturn local sformat `"`sformat'"'
      local sformat `"sformat(`sformat')"'
      }
  - if `:length local pformat' {
  = if 0 {
      confirm numeric format `pformat'
      if fmtwidth(`"`pformat'"') > 5 {
      local pformat "%5.3f"
      di "{txt}note: invalid pformat(), using default"
```

```
                          }
                          sreturn local pformat `"'`pformat'"'
                          local pformat `"pformat(`pformat')"'
                          }
                 - if `K' == 1 & `:length local options' {
                 = if 2 == 1 & 0 {
                          syntax namelist(max=2) [, `DIOPTS']
                          }
                 - if reldif(`level', c(level)) > 1e-3 {
                 = if reldif(95, c(level)) > 1e-3 {
                          local levelopt level(`level')
                          }
                 - Wrapon , `fvwrapon'
                 = Wrapon ,
                        ─────────────────────────────────────────
  > ──────────────────────────── begin _get_diopts.Wrapon ─────────────
                 - capture syntax [, WOrd WIdth]
                 - if c(rc) {
                     di as err "invalid fvwrapon() option;"
                     syntax [, WOrd WIdth]
                     exit 198
                     }
                 - opts_exclusive "`word' `width'" fvwrapon
                 = opts_exclusive " " fvwrapon
                        ─────────────────────────────────────────
  > ──────────────────────────── begin opts_exclusive ────────────────
                 - version 8.2
                 - args opts optname errcode optslab
                 - local opts `opts'
                 = local opts
                 - local n 0
                 - while `"`opts'"' != "" {
                 = while `""' != "" {
                     local ++n
                     gettoken item`n' opts : opts, bind
                     }
                 - if `n' < 2 {
                 = if 0 < 2 {
                 - exit
                        ─────────────────────────────────────────
  > ──────────────────────────── end opts_exclusive ──────────────────
                 - local fvwrapon `word' `width'
                 = local fvwrapon
                 - if `:length local fvwrapon' {
                 = if 0 {
                     c_local fvwrapon fvwrapon(`fvwrapon')
```

```
                                  }
        ────────────────────────────────────────────────────────────
> ───────────────────────────── end _get_diopts.Wrapon ──────────────
                    – if "`fvwrap'" != "" {
                    = if "fvwrap(1)" != "" {
                    – FVWrap, `fvwrap'
                    = FVWrap, fvwrap(1)
                                  ────────────────────────────────────
> ───────────────────────────── begin _get_diopts.FVWrap ────────────
                    – syntax, fvwrap(integer)
                    – if `fvwrap' < 0 {
                    = if 1 < 0 {
                      di as err "{p}invalid option {bf:fvwrap(`fvwrap')}; "
> "nonnegative integer required{p_end}"
                      exit 198
                      }
                                  ────────────────────────────────────
> ───────────────────────────── end _get_diopts.FVWrap ──────────────
                    – }
                    – c_local `c_diopts' `levelopt' `vsquish' `allbaselevels'
> `baselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `
> coeflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `comp
> are' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `a
> bbrev'
                    = c_local diopts                      fvwrap(1)
                    – if `K' == 2 {
                    = if 2 == 2 {
                    – c_local `c_opts' `"`options'"'
                    = c_local  options `""'
                    – }
                    – sreturn local coding `coding'
                    = sreturn local coding
                    – sreturn local versus `versus'
                    = sreturn local versus
                    – sreturn local compare `compare'
                    = sreturn local compare
                    – sreturn local level `level'
                    = sreturn local level 95
                                  ────────────────────────────────────
> ───────────────────────────── end _get_diopts.GetDiopts ───────────
                  – c_local `name1' `"`diopts'"'
                  = c_local __00000B `"fvwrap(1)"'
                  – local snames : s(macros)
                  – foreach sname of local snames {
                  – local S_`sname' = s(`sname')
                  = local S_level = s(level)
```

```
                        - }
                        - local S_`sname' = s(`sname')
                        = local S_k = s(k)
                        - }
                        - sreturn clear
                        - GetDiopts DEFAULT
                          ─────────────────────────────────────────
>  ───────────────────────────────── begin _get_diopts.GetDiopts ──────────────
                        - local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLB
>  ASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMP
>  TYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(st
>  ring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru)
>   FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru)
>   NOABBREV ABBREV
                        - syntax namelist(max=2) [, `DIOPTS' *]
                        = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBA
>  SElevels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOE
>  MPTYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGE
>  ND cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVW
>  RAP(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CIT
>  YPE(passthru) NOABBREV ABBREV *]
                        - opts_exclusive "`allbaselevels' `noallbaselevels'"
                        = opts_exclusive " "
                          ─────────────────────────────────────────
>  ───────────────────────────────── begin opts_exclusive ──────────────────────
                        - version 8.2
                        - args opts optname errcode optslab
                        - local opts `opts'
                        = local opts
                        - local n 0
                        - while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        - if `n' < 2 {
                        = if 0 < 2 {
                        - exit
                          ─────────────────────────────────────────
>  ───────────────────────────────── end opts_exclusive ────────────────────────
                        - opts_exclusive "`allbaselevels' `nobaselevels'"
                        = opts_exclusive " "
                          ─────────────────────────────────────────
>  ───────────────────────────────── begin opts_exclusive ──────────────────────
                        - version 8.2
                        - args opts optname errcode optslab
```

```
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────
```

```
                – opts_exclusive "`baselevels' `nobaselevels'"
                = opts_exclusive " "
                    ─────────────────────────────────────────
```

```
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────
```

```
                – opts_exclusive "`emptycells' `noemptycells'"
                = opts_exclusive " "
                    ─────────────────────────────────────────
```

```
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
```

```
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
            ────────────────────────────────────────
> ───────────────────────── end opts_exclusive ──────────
         – opts_exclusive "`fvlabel' `nofvlabel'"
         = opts_exclusive " "
            ────────────────────────────────────────
> ───────────────────────── begin opts_exclusive ────────
         – version 8.2
         – args opts optname errcode optslab
         – local opts `opts'
         = local opts
         – local n 0
         – while `"`opts'"' != "" {
         = while `""' != "" {
           local ++n
           gettoken item`n' opts : opts, bind
           }
         – if `n' < 2 {
         = if 0 < 2 {
         – exit
            ────────────────────────────────────────
> ───────────────────────── end opts_exclusive ──────────
         – opts_exclusive "`omitted' `noomitted'"
         = opts_exclusive " "
            ────────────────────────────────────────
> ───────────────────────── begin opts_exclusive ────────
         – version 8.2
         – args opts optname errcode optslab
         – local opts `opts'
         = local opts
         – local n 0
         – while `"`opts'"' != "" {
         = while `""' != "" {
           local ++n
           gettoken item`n' opts : opts, bind
           }
         – if `n' < 2 {
         = if 0 < 2 {
         – exit
            ────────────────────────────────────────
> ───────────────────────── end opts_exclusive ──────────
         – opts_exclusive "`lstretch' `nolstretch'"
         = opts_exclusive " "
            ────────────────────────────────────────
```

```
> ─────────────────────────── begin opts_exclusive ─────────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  ───────────────────────────────────────────────
> ──────────────────────────── end opts_exclusive ──────────────
                – opts_exclusive "`cnsreport' `fullcnsreport'"
                = opts_exclusive " "
                  ───────────────────────────────────────────────
> ─────────────────────────── begin opts_exclusive ─────────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  ───────────────────────────────────────────────
> ──────────────────────────── end opts_exclusive ──────────────
                – opts_exclusive "`coeflegend' `selegend'"
                = opts_exclusive " "
                  ───────────────────────────────────────────────
> ─────────────────────────── begin opts_exclusive ─────────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
```

```
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                − if `n' < 2 {
                = if 0 < 2 {
                − exit
                ───────────────────────────────────────────
> ─────────────────────────────── end opts_exclusive ──────────
            − opts_exclusive "`noci' `nopvalues'"
            = opts_exclusive " "
                ───────────────────────────────────────────
> ─────────────────────────────── begin opts_exclusive ────────
            − version 8.2
            − args opts optname errcode optslab
            − local opts `opts'
            = local opts
            − local n 0
            − while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            − if `n' < 2 {
            = if 0 < 2 {
            − exit
                ───────────────────────────────────────────
> ─────────────────────────────── end opts_exclusive ──────────
            − local K : list sizeof namelist
            − gettoken c_diopts c_opts : namelist
            − opts_exclusive "`coding' `compare'"
            = opts_exclusive " "
                ───────────────────────────────────────────
> ─────────────────────────────── begin opts_exclusive ────────
            − version 8.2
            − args opts optname errcode optslab
            − local opts `opts'
            = local opts
            − local n 0
            − while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            − if `n' < 2 {
            = if 0 < 2 {
            − exit
```

```
> ──────────────────────────────────────────────────────────────
  ─────────────────────────── end opts_exclusive ───────────────
        − opts_exclusive "`versus' `compare'"
        = opts_exclusive " "
                      ────────────────────────────────────────────
> ─────────────────────────── begin opts_exclusive ─────────────
        − version 8.2
        − args opts optname errcode optslab
        − local opts `opts'
        = local opts
        − local n 0
        − while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
        − if `n' < 2 {
        = if 0 < 2 {
        − exit
                      ────────────────────────────────────────────
> ─────────────────────────── end opts_exclusive ───────────────
        − opts_exclusive "`abbrev' `noabbrev'"
        = opts_exclusive " "
                      ────────────────────────────────────────────
> ─────────────────────────── begin opts_exclusive ─────────────
        − version 8.2
        − args opts optname errcode optslab
        − local opts `opts'
        = local opts
        − local n 0
        − while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
        − if `n' < 2 {
        = if 0 < 2 {
        − exit
                      ────────────────────────────────────────────
> ─────────────────────────── end opts_exclusive ───────────────
        − local allbaselevels `allbaselevels' `noallbaselevels'
        = local allbaselevels
        − local baselevels `baselevels' `nobaselevels'
        = local baselevels
        − local emptycells `emptycells' `noemptycells'
        = local emptycells
```

```
-  local omitted `omitted' `noomitted'
=  local omitted
-  local lstretch `lstretch' `nolstretch'
=  local lstretch
-  local fvlabel `fvlabel' `nofvlabel'
=  local fvlabel
-  local abbrev `abbrev' `noabbrev'
=  local abbrev
-  if "`allbaselevels'`baselevels'" == "" {
=  if "" == "" {
-     if c(showbaselevels) == "all" {
      local allbaselevels allbaselevels
      }
-     else if c(showbaselevels) == "on" {
      local baselevels baselevels
      }
-  }
-  if "`emptycells'" == "" {
=  if "" == "" {
-     if c(showemptycells) == "off" {
      local emptycells noemptycells
      }
-  }
-  if "`omitted'" == "" {
=  if "" == "" {
-     if c(showomitted) == "off" {
      local omitted noomitted
      }
-  }
-  if "`lstretch'" == "" {
=  if "" == "" {
-     if c(lstretch) == "off" {
      local lstretch nolstretch
      }
-  }
-  if `:length local cformat' {
=  if 0 {
      confirm numeric format `cformat'
      if fmtwidth(`"`cformat'"') > 9 {
      local cformat "%9.0g"
      di "{txt}note: invalid cformat(), using default"
      }
      sreturn local cformat `"`cformat'"'
      local cformat `"cformat(`cformat')"'
      }
-  if `:length local sformat' {
```

```
= if 0 {
  confirm numeric format `sformat'
  if fmtwidth(`"`sformat'"') > 8 {
  local sformat "%8.2f"
  di "{txt}note: invalid sformat(), using default"
  }
  sreturn local sformat `"`sformat'"'
  local sformat `"sformat(`sformat')"'
  }
- if `:length local pformat' {
= if 0 {
  confirm numeric format `pformat'
  if fmtwidth(`"`pformat'"') > 5 {
  local pformat "%5.3f"
  di "{txt}note: invalid pformat(), using default"
  }
  sreturn local pformat `"`pformat'"'
  local pformat `"pformat(`pformat')"'
  }
- if `K' == 1 & `:length local options' {
= if 1 == 1 & 0 {
  syntax namelist(max=2) [, `DIOPTS']
  }
- if reldif(`level', c(level)) > 1e-3 {
= if reldif(95, c(level)) > 1e-3 {
  local levelopt level(`level')
  }
- Wrapon , `fvwrapon'
= Wrapon ,
                  ──────────────────────────────────────────
> ─────────────────────────── begin _get_diopts.Wrapon ───────────
  - capture syntax [, WOrd WIdth]
  - if c(rc) {
    di as err "invalid fvwrapon() option;"
    syntax [, WOrd WIdth]
    exit 198
    }
  - opts_exclusive "`word' `width'" fvwrapon
= opts_exclusive " " fvwrapon
                  ──────────────────────────────────────────
> ──────────────────────────── begin opts_exclusive ──────────────
    - version 8.2
    - args opts optname errcode optslab
    - local opts `opts'
    = local opts
    - local n 0
```

```
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                 _____
```

> ———————————————————————— end opts_exclusive ————————————

```
                  – local fvwrapon `word' `width'
                  = local fvwrapon
                  – if `:length local fvwrapon' {
                  = if 0 {
                    c_local fvwrapon fvwrapon(`fvwrapon')
                    }
                 _____
```

> ———————————————————————— end _get_diopts.Wrapon ———————————

```
                  – if "`fvwrap'" != "" {
                  = if "" != "" {
                    FVWrap, `fvwrap'
                    }
                  – c_local `c_diopts' `levelopt' `vsquish' `allbaselevels'
> `baselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `
> coeflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `comp
> are' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `a
> bbrev'
                  = c_local DEFAULT
                  – if `K' == 2 {
                  = if 1 == 2 {
                    c_local `c_opts' `"`options'"'
                    }
                  – sreturn local coding `coding'
                  = sreturn local coding
                  – sreturn local versus `versus'
                  = sreturn local versus
                  – sreturn local compare `compare'
                  = sreturn local compare
                  – sreturn local level `level'
                  = sreturn local level 95
                 _____
```

> ———————————————————————— end _get_diopts.GetDiopts ————————

```
                  – if `"`name2'"' == "" {
                  = if `""' == "" {
                  – GetDiopts DUPS, `options'
                  = GetDiopts DUPS,
```

```
> ─────────────────────────────── begin _get_diopts.GetDiopts ───────────────
                     ─ local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLB
> ASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMP
> TYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(st
> ring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru)
>  FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru)
>  NOABBREV ABBREV
                     ─ syntax namelist(max=2) [, `DIOPTS' *]
                     = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBA
> SElevels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOE
> MPTYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGE
> ND cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVW
> RAP(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CIT
> YPE(passthru) NOABBREV ABBREV *]
                     ─ opts_exclusive "`allbaselevels' `noallbaselevels'"
                     = opts_exclusive " "
                       ────────────────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ─────────────────
                   ─ version 8.2
                   ─ args opts optname errcode optslab
                   ─ local opts `opts'
                   = local opts
                   ─ local n 0
                   ─ while `"`opts'"' != "" {
                   = while `""' != "" {
                     local ++n
                     gettoken item`n' opts : opts, bind
                     }
                   ─ if `n' < 2 {
                   = if 0 < 2 {
                   ─ exit
                       ────────────────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ──────────────────
                   ─ opts_exclusive "`allbaselevels' `nobaselevels'"
                   = opts_exclusive " "
                       ────────────────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ─────────────────
                   ─ version 8.2
                   ─ args opts optname errcode optslab
                   ─ local opts `opts'
                   = local opts
                   ─ local n 0
                   ─ while `"`opts'"' != "" {
                   = while `""' != "" {
                     local ++n
```

```
                         gettoken item`n' opts : opts, bind
                         }
                       − if `n' < 2 {
                       = if 0 < 2 {
                       − exit
                       ────────────────────────────────────────────
>  ─────────────────────────────────── end opts_exclusive ─────────────
               − opts_exclusive "`baselevels' `nobaselevels'"
               = opts_exclusive " "
                       ────────────────────────────────────────────
>  ─────────────────────────────────── begin opts_exclusive ───────────
                       − version 8.2
                       − args opts optname errcode optslab
                       − local opts `opts'
                       = local opts
                       − local n 0
                       − while `"`opts'"' != "" {
                       = while `""' != "" {
                         local ++n
                         gettoken item`n' opts : opts, bind
                         }
                       − if `n' < 2 {
                       = if 0 < 2 {
                       − exit
                       ────────────────────────────────────────────
>  ─────────────────────────────────── end opts_exclusive ─────────────
               − opts_exclusive "`emptycells' `noemptycells'"
               = opts_exclusive " "
                       ────────────────────────────────────────────
>  ─────────────────────────────────── begin opts_exclusive ───────────
                       − version 8.2
                       − args opts optname errcode optslab
                       − local opts `opts'
                       = local opts
                       − local n 0
                       − while `"`opts'"' != "" {
                       = while `""' != "" {
                         local ++n
                         gettoken item`n' opts : opts, bind
                         }
                       − if `n' < 2 {
                       = if 0 < 2 {
                       − exit
                       ────────────────────────────────────────────
>  ─────────────────────────────────── end opts_exclusive ─────────────
               − opts_exclusive "`fvlabel' `nofvlabel'"
```

```
                   = opts_exclusive " "
                   ───────────────────────────────────────────────
>  ─────────────────────────────────── begin opts_exclusive ──────────────
                   – version 8.2
                   – args opts optname errcode optslab
                   – local opts `opts'
                   = local opts
                   – local n 0
                   – while `"`opts'"' != "" {
                   = while `""' != "" {
                     local ++n
                     gettoken item`n' opts : opts, bind
                     }
                   – if `n' < 2 {
                   = if 0 < 2 {
                   – exit
                   ───────────────────────────────────────────────
>  ─────────────────────────────────── end opts_exclusive ──────────────
                 – opts_exclusive "`omitted' `noomitted'"
                 = opts_exclusive " "
                   ───────────────────────────────────────────────
>  ─────────────────────────────────── begin opts_exclusive ──────────────
                   – version 8.2
                   – args opts optname errcode optslab
                   – local opts `opts'
                   = local opts
                   – local n 0
                   – while `"`opts'"' != "" {
                   = while `""' != "" {
                     local ++n
                     gettoken item`n' opts : opts, bind
                     }
                   – if `n' < 2 {
                   = if 0 < 2 {
                   – exit
                   ───────────────────────────────────────────────
>  ─────────────────────────────────── end opts_exclusive ──────────────
                 – opts_exclusive "`lstretch' `nolstretch'"
                 = opts_exclusive " "
                   ───────────────────────────────────────────────
>  ─────────────────────────────────── begin opts_exclusive ──────────────
                   – version 8.2
                   – args opts optname errcode optslab
                   – local opts `opts'
                   = local opts
                   – local n 0
```

```
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  ─────────────────────────────────────────
> ───────────────────────────── end opts_exclusive ────────────
              – opts_exclusive "`cnsreport' `fullcnsreport'"
              = opts_exclusive " "
                  ─────────────────────────────────────────
> ───────────────────────────── begin opts_exclusive ──────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  ─────────────────────────────────────────
> ───────────────────────────── end opts_exclusive ────────────
              – opts_exclusive "`coeflegend' `selegend'"
              = opts_exclusive " "
                  ─────────────────────────────────────────
> ───────────────────────────── begin opts_exclusive ──────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
```

```
>  ───────────────────────────────────────────── end opts_exclusive ──────────────
              − opts_exclusive "`noci' `nopvalues'"
              = opts_exclusive " "
                ───────────────────────────────────────────────────────────────
>  ───────────────────────────────────────────── begin opts_exclusive ────────────
              − version 8.2
              − args opts optname errcode optslab
              − local opts `opts'
              = local opts
              − local n 0
              − while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              − if `n' < 2 {
              = if 0 < 2 {
              − exit
                ───────────────────────────────────────────────────────────────
>  ───────────────────────────────────────────── end opts_exclusive ──────────────
              − local K : list sizeof namelist
              − gettoken c_diopts c_opts : namelist
              − opts_exclusive "`coding' `compare'"
              = opts_exclusive " "
                ───────────────────────────────────────────────────────────────
>  ───────────────────────────────────────────── begin opts_exclusive ────────────
              − version 8.2
              − args opts optname errcode optslab
              − local opts `opts'
              = local opts
              − local n 0
              − while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              − if `n' < 2 {
              = if 0 < 2 {
              − exit
                ───────────────────────────────────────────────────────────────
>  ───────────────────────────────────────────── end opts_exclusive ──────────────
              − opts_exclusive "`versus' `compare'"
              = opts_exclusive " "
                ───────────────────────────────────────────────────────────────
>  ───────────────────────────────────────────── begin opts_exclusive ────────────
```

```
                       - version 8.2
                       - args opts optname errcode optslab
                       - local opts `opts'
                       = local opts
                       - local n 0
                       - while `"`opts'"' != "" {
                       = while `""' != "" {
                         local ++n
                         gettoken item`n' opts : opts, bind
                         }
                       - if `n' < 2 {
                       = if 0 < 2 {
                       - exit
                       ─────────────────────────────────────────
>  ───────────────────────────── end opts_exclusive ──────────
                   - opts_exclusive "`abbrev' `noabbrev'"
                   = opts_exclusive " "
                       ─────────────────────────────────────────
>  ───────────────────────────── begin opts_exclusive ────────
                   - version 8.2
                   - args opts optname errcode optslab
                   - local opts `opts'
                   = local opts
                   - local n 0
                   - while `"`opts'"' != "" {
                   = while `""' != "" {
                     local ++n
                     gettoken item`n' opts : opts, bind
                     }
                   - if `n' < 2 {
                   = if 0 < 2 {
                   - exit
                   ─────────────────────────────────────────────
>  ───────────────────────────── end opts_exclusive ──────────
                   - local allbaselevels `allbaselevels' `noallbaselevels'
                   = local allbaselevels
                   - local baselevels `baselevels' `nobaselevels'
                   = local baselevels
                   - local emptycells `emptycells' `noemptycells'
                   = local emptycells
                   - local omitted `omitted' `noomitted'
                   = local omitted
                   - local lstretch `lstretch' `nolstretch'
                   = local lstretch
                   - local fvlabel `fvlabel' `nofvlabel'
                   = local fvlabel
```

```
- local abbrev `abbrev' `noabbrev'
= local abbrev
- if "`allbaselevels'`baselevels'" == "" {
= if "" == "" {
-   if c(showbaselevels) == "all" {
    local allbaselevels allbaselevels
    }
-   else if c(showbaselevels) == "on" {
    local baselevels baselevels
    }
- }
- if "`emptycells'" == "" {
= if "" == "" {
-   if c(showemptycells) == "off" {
    local emptycells noemptycells
    }
- }
- if "`omitted'" == "" {
= if "" == "" {
-   if c(showomitted) == "off" {
    local omitted noomitted
    }
- }
- if "`lstretch'" == "" {
= if "" == "" {
-   if c(lstretch) == "off" {
    local lstretch nolstretch
    }
- }
- if `:length local cformat' {
= if 0 {
    confirm numeric format `cformat'
    if fmtwidth(`"`cformat'"') > 9 {
    local cformat "%9.0g"
    di "{txt}note: invalid cformat(), using default"
    }
    sreturn local cformat `"`cformat'"'
    local cformat `"cformat(`cformat')"'
    }
- if `:length local sformat' {
= if 0 {
    confirm numeric format `sformat'
    if fmtwidth(`"`sformat'"') > 8 {
    local sformat "%8.2f"
    di "{txt}note: invalid sformat(), using default"
    }
```

```
                    sreturn local sformat `"'`sformat'"'
                    local sformat `"sformat(`sformat')"'
                    }
          – if `:length local pformat' {
          = if 0 {
                    confirm numeric format `pformat'
                    if fmtwidth(`"'`pformat'"') > 5 {
                    local pformat "%5.3f"
                    di "{txt}note: invalid pformat(), using default"
                    }
                    sreturn local pformat `"'`pformat'"'
                    local pformat `"pformat(`pformat')"'
                    }
          – if `K' == 1 & `:length local options' {
          = if 1 == 1 & 0 {
                    syntax namelist(max=2) [, `DIOPTS']
                    }
          – if reldif(`level', c(level)) > 1e–3 {
          = if reldif(95, c(level)) > 1e–3 {
                    local levelopt level(`level')
                    }
          – Wrapon , `fvwrapon'
          = Wrapon ,
                    ─────────────────────────────────────
```

```
          – capture syntax [, WOrd WIdth]
          – if c(rc) {
            di as err "invalid fvwrapon() option;"
            syntax [, WOrd WIdth]
            exit 198
            }
          – opts_exclusive "`word' `width'" fvwrapon
          = opts_exclusive " " fvwrapon
                    ─────────────────────────────────────
```

```
          – version 8.2
          – args opts optname errcode optslab
          – local opts `opts'
          = local opts
          – local n 0
          – while `"'`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          – if `n' < 2 {
```

```
                          = if 0 < 2 {
                          – exit
                          _____
> ──────────────────────────── end opts_exclusive ─────────────────
                 – local fvwrapon `word' `width'
                 = local fvwrapon
                 – if `:length local fvwrapon' {
                 = if 0 {
                   c_local fvwrapon fvwrapon(`fvwrapon')
                   }
                   _____
> ──────────────────────────── end _get_diopts.Wrapon ─────────────
                 – if "`fvwrap'" != "" {
                 = if "" != "" {
                   FVWrap, `fvwrap'
                   }
                 – c_local `c_diopts' `levelopt' `vsquish' `allbaselevels'
> `baselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `
> coeflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `comp
> are' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `a
> bbrev'
                 = c_local DUPS
                 – if `K' == 2 {
                 = if 1 == 2 {
                   c_local `c_opts' `"`options'"'
                   }
                 – sreturn local coding `coding'
                 = sreturn local coding
                 – sreturn local versus `versus'
                 = sreturn local versus
                 – sreturn local compare `compare'
                 = sreturn local compare
                 – sreturn local level `level'
                 = sreturn local level 95
                 _____
> ──────────────────────────── end _get_diopts.GetDiopts ──────────
             – }
             – else {
               GetDiopts DUPS options, `options'
               c_local `name2' `"`options'"'
               }
             – local DUPS : list DUPS – DEFAULT
             – gettoken DUPS : DUPS
             – if `"`DUPS'"' != "" {
             = if `""' != "" {
               if (strpos(`"`DUPS'"', "(")) {
```

```
                        gettoken DUPS : DUPS, parse("(")
                        local DUPS `"`DUPS'()"'
                        }
                        di as err "duplicate {bf:`DUPS'} option not allowed"
                        exit 198
                        }
                 - sreturn clear
                 - foreach sname of local snames {
                 - sreturn local `sname' = `"`S_`sname''"'
                 = sreturn local level = `"95"'
                 - }
                 - sreturn local `sname' = `"`S_`sname''"'
                 = sreturn local k = `"0"'
                 - }
                 ─────────────────────────────────────────────────────
> ───────────────────────────────────────── end _get_diopts ────────────────
                 - if "`markdown'" != "" {
                 = if "" != "" {
                   set linesize `lsize'
                   }
                 - if "`eqselect'" == "" & "`eformnote'" != "noeformnote" {
                 = if "" == "" & "" != "noeformnote" {
                 - if `"`eformdi'"'!="" & ("`e(cmd)'"!="gnbreg" | "`e(prefix)'"
> =="svy") {
                 = if `""'!="" & ("regress"!="gnbreg" | ""=="svy") {
                   local k_eform `e(k_eform)'
                   if ("`k_eform'"=="") {
                   local k_eform = 1
                   }
                   local k_eq `e(k_eq)'
                   if ("`k_eq'"=="") {
                   local k_eq = 1
                   }
                   if (`k_eform'<`k_eq' & `k_eform') {
                   if ("`e(cmd2)'" == "stintreg" | "`e(cmd2)'" == "streg") & ("
> `e(cmd)'" == "weibull" | "`e(cmd)'" == "gompertz") {
                   }
                   else {
                   _eform_multeq_note efnote : `k_eform' `"`tr_item'"'
                   di as txt "`efnote'"
                   }
                   }
                   }
                 - if (`"`eformdi'"'!="" & "`e(noconstant)'"=="0" & `"`eform_co
> ns_ti'"'!="" & "`e(consonly)'"!="1") {
                 = if (`""'!="" & ""=="0" & `""'!="" & ""!="1") {
```

```
                 if ("`e(cmd)'"=="asclogit" | "`e(cmd)'"=="cmclogit" | "`e(cm
> d)'"=="cmmixlogit" | "`e(cmd)'"=="cmxtmixlogit" ) {
                 local asvar = `"`e(ranvars)'`e(fixvars)'`e(indvars)'"' != ""
                 if `"`e(casevars)'"' != "" & `asvar' {
                 local note1 "Exponentiated coefficients represent odds ratio
> s for "
                 local note2 "alternative-specific variables (first equation)
>  and "
                 local note3 "{help j_cmrisk##|_new:relative-risk ratios} "
                 local note4 "for case-specific variables."
                 di as txt "{p 0 6 2}Note: `note1'`note2'`note3'`note4'{p_end
> }"

                 }
                 }
                 if "`eform_cons_ti'" == "Inc. rate" {
                 local eform_cons_note "incidence rate"
                 }
                 else if "`eform_cons_ti'" == "Rel. risk" {
                 local eform_cons_note "relative risk"
                 }
                 else if "`eform_cons_ti'" == "Health" {
                 local eform_cons_note "health (probability of no disease)"
                 }
                 else {
                 local eform_cons_note = strlower(`"`eform_cons_ti'"')
                 }
                 local eform_cons_note "baseline `eform_cons_note'"
                 if ("`e(cmd2)'"=="") {
                 local cmd `e(cmd)'
                 }
                 else {
                 local cmd `e(cmd2)'
                 }
                 local f2 = udsubstr("`cmd'",1,2)
                 local is_re = ("`f2'"=="xt" | "`f2'"=="me")
                 if `is_re' {
                 local extranote " (conditional on zero random effects)"
                 }
                 di as txt "{p 0 6 2}Note: {bf:_cons} estimates " "`eform_con
> s_note'`extranote'" _c
                 if ("`e(cmd)'"=="mlogit" | "`e(cmd)'"=="asclogit" | "`e(cmd)
> '"=="cmclogit" | "`e(cmd)'"=="cmmixlogit" | "`e(cmd)'"=="cmxtmixlogit" ) {
                 di as txt " for each outcome" _c
                 }
                 di as txt ".{p_end}"
                 }
```

```
                    - }
                    - return add
                    - if !`keepmc' {
                    = if !0 {
                    - return local mcmethod
                    - return local mctitle
                    - }
            ─────────────────────────────────────────────────
>   ───────────────────────────────── end _coef_table ─────────────
            ─────────────────────────────────────────────────
>   ─────────────────────────────── end _ereturn_display ───────────
            - mat `b1' = (1/`mean')*e(b)
            = mat __000008 = (1/__000003)*e(b)
            - mat score double `xb' = `b1' `if'
            = mat score double __000006 = __000008 if __000002
            - LikePois `y' `xb'`poff' [`weight'`exp'] `if', n(`nobs')
            = LikePois piq_timing_max __000006 [] if __000002, n(__000004)
            ─────────────────────────────────────────────────
>   ───────────────────────────────── begin poisson.LikePois ───────────
            - gettoken y 0 : 0
            - gettoken xb 0 : 0
            - syntax [fw aw pw iw] [if] , Nobs(string)
            - if "`weight'"!="" {
            = if ""!="" {
              if "`weight'"=="fweight" {
              local wt `"[fw`exp']"'
              }
              else if "`weight'"=="iweight" {
              local wt `"[iw`exp']"'
              }
              else local wt `"[aw`exp']"'
              }
            - tempvar lnf
            - qui gen double `lnf' = `y'*(`xb')-exp(`xb')-lngamma(`y'+1) `if
> '
            = qui gen double __00000B = piq_timing_max*(__000006)-exp(__0000
> 06)-lngamma(piq_timing_max+1) if __000002
            - summarize `lnf' `wt' `if', meanonly
            = summarize __00000B  if __000002, meanonly
            - if r(N) != `nobs' { exit }
            = if r(N) != __000004 { exit }
            - if "`weight'"=="aweight" {
            = if ""=="aweight" {
              ret scalar lnf = r(N)*r(mean)
              }
            - else ret scalar lnf = r(sum)
```

```
> ────────────────────────────────────────────── end poisson.LikePois ──────────────────
            - scalar `lnf1' = r(lnf)
            = scalar __00000A = r(lnf)
            - }
            - if "`constan'"=="" {
            = if ""=="" {
            - SolveC `y' `xb'`poff' [`weight'`exp'] `if', n(`nobs') mean(`mean
> ')
            = SolveC piq_timing_max __000006 [] if __000002, n(__000004) mean(
> __000003)
                        ────────────────────────────────────────────────────────────
> ──────────────────────────────────────────── begin poisson.SolveC ──────────────────
                - gettoken y 0 : 0
                - gettoken xb 0 : 0
                - syntax [fw aw pw iw] [if] , Nobs(string) Mean(string)
                - if "`weight'"=="pweight" {
                = if ""=="pweight" {
                  local weight "aweight"
                  }
                - capture confirm variable `xb'
                = capture confirm variable __000006
                - if _rc {
                  tempvar xbnew
                  qui gen double `xbnew' = (`xb') `if'
                  local xb `xbnew'
                  }
                - summarize `xb' [`weight'`exp'] `if', meanonly
                = summarize __000006 [] if __000002, meanonly
                - if r(N) != `nobs' { exit }
                = if r(N) != __000004 { exit }
                - if r(max) − r(min) > 2*709 {
                  exit
                  }
                - if r(max) > 709 | r(min) < −709 {
                  tempname shift
                  if r(max) > 709 { scalar `shift' = 709 − r(max) }
                  else scalar `shift' = −709 − r(min)
                  local shift "+`shift'"
                  }
                - tempvar expoff
                - qui gen double `expoff' = exp(`xb'`shift') `if'
                = qui gen double __00000B = exp(__000006) if __000002
                - summarize `expoff' [`weight'`exp'], meanonly
                = summarize __00000B [], meanonly
                - if r(N) != `nobs' { exit }
```

```
              = if r(N) != __000004 { exit }
              - return scalar _cons = ln(`mean')-ln(r(mean))`shift'
              = return scalar _cons = ln(__000003)-ln(r(mean))
              ─────────────────────────────────────────────────────
>  ──────────────────────────────────── end poisson.SolveC ────────────────
              - tempname c
              - scalar `c' = r(_cons)
              = scalar __00000B = r(_cons)
              - if `c'<. {
              = if __00000B<. {
              - local c "+`c'"
              = local c "+__00000B"
              - }
              - else local c
              - LikePois `y' `xb'`poff'`c' [`weight'`exp'] `if', n(`nobs')
              = LikePois piq_timing_max __000006+__00000B [] if __000002, n(__00
>  0004)
              ─────────────────────────────────────────────────────
>  ──────────────────────────────────── begin poisson.LikePois ────────────
              - gettoken y 0 : 0
              - gettoken xb 0 : 0
              - syntax [fw aw pw iw] [if] , Nobs(string)
              - if "`weight'"!="" {
              = if ""!="" {
                if "`weight'"=="fweight" {
                local wt `"[fw`exp']"'
                }
                else if "`weight'"=="iweight" {
                local wt `"[iw`exp']"'
                }
                else local wt `"[aw`exp']"'
                }
              - tempvar lnf
              - qui gen double `lnf' = `y'*(`xb')-exp(`xb')-lngamma(`y'+1) `if
>  '
              = qui gen double __00000C = piq_timing_max*(__000006+__00000B)-e
>  xp(__000006+__00000B)-lngamma(piq_timing_max+1) if __000002
              - summarize `lnf' `wt' `if', meanonly
              = summarize __00000C  if __000002, meanonly
              - if r(N) != `nobs' { exit }
              = if r(N) != __000004 { exit }
              - if "`weight'"=="aweight" {
              = if ""=="aweight" {
                ret scalar lnf = r(N)*r(mean)
                }
              - else ret scalar lnf = r(sum)
```

```
                    ─────────────────────────────────────────────────────
> ──────────────────────────────────────────── end poisson.LikePois ──────────────
              ‒ tempname lnf1c
              ‒ scalar `lnf1c' = r(lnf)
              = scalar __00000C = r(lnf)
              ‒ }
              ‒ else local lnf1c .
              ‒ capture {
              ‒ gen double `z' = `y'*exp(-(`xb'`poff'`c'))-1 +`xb'`c' `if'
              = gen double __000007 = piq_timing_max*exp(-(__000006+__00000B))-1
>  +__000006+__00000B if __000002
              ‒ `vv' _regress `z' `xvars' [aw=`wt'exp(`xb'`poff'`c')] `if', `con
> stan'
              = version 18, missing: _regress __000007  ln_neq cb_authors_ext es
> timated est_late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo [a
> w=exp(__000006+__00000B)] if __000002,
                    ─────────────────────────────────────────────────────
> ──────────────────────────────────────────── begin _ereturn_display ────────────
              ‒ version 11
              ‒ if "`e(b)'" == "" & "`e(V)'" == "" {
              = if "matrix" == "" & "matrix" == "" {
                exit
                }
              ‒ if "`e(cmd)'" == "regress" {
              = if "regress" == "regress" {
              ‒ local ALTOPT Beta
              ‒ }
              ‒ syntax [, eform(passthru) First neq(integer -1) PLus `ALTOPT'
> *]
              = syntax [, eform(passthru) First neq(integer -1) PLus Beta *]
              ‒ _get_mcompare, `options'
              = _get_mcompare, level(95.00) fvwrap(1)
                    ─────────────────────────────────────────────────────
> ──────────────────────────────────────────── begin _get_mcompare ───────────────
              ‒ version 11
              ‒ local cmd `"`e(cmd)'"'
              = local cmd `"regress"'
              ‒ syntax [name(name=caller)] [, *]
              ‒ local is_pwc = inlist("pwcompare", "`cmd'", "`caller'") | in
> list("pwmean", "`cmd'", "`caller'")
              = local is_pwc = inlist("pwcompare", "regress", "") | inlist("
> pwmean", "regress", "")
              ‒ local is_marg = inlist("margins", "`cmd'", "`e(cmd2)'", "`ca
> ller'")
              = local is_marg = inlist("margins", "regress", "", "")
              ‒ local OPTIONS NOADJust BONferroni DUNCan DUNNett SCHeffe SID
```

```
> ak SNK TUKey ADJustall
                - if `is_pwc' {
                = if 0 {
                  syntax [name] [, `OPTIONS' MCOMPare(string) *]
                  }
                - else {
                - syntax [name] [, MCOMPare(string) *]
                - local suboption mcompare()
                - }
                - sreturn clear
                - sreturn local options `"`options'"'
                = sreturn local options `"level(95.00) fvwrap(1)"'
                - if `is_pwc' {
                = if 0 {
                  local METHOD `noadjust' `bonferroni' `duncan' `dunnett' `sch
> effe' `sidak' `snk' `tukey'
                  local METHOD : list uniq METHOD
                  opts_exclusive "`METHOD'"
                  local ALL `adjustall'
                  opts_exclusive "`noadjust' `ALL'"
                  }
                - local 0 `", `mcompare'"'
                = local 0 `", "'
                - capture syntax [, `OPTIONS']
                = capture syntax [, NOADJust BONferroni DUNCan DUNNett SCHeffe
>  SIDak SNK TUKey ADJustall]
                - if c(rc) {
                  di as err "invalid mcompare() option;"
                  di as err "method '`mcompare'' not allowed"
                  error 198
                  }
                - local METHOD `METHOD' `noadjust' `bonferroni' `duncan' `dunn
> ett' `scheffe' `sidak' `snk' `tukey'
                = local METHOD
                - local METHOD : list uniq METHOD
                - local ALL `ALL' `adjustall'
                = local ALL
                - local ALL : list uniq ALL
                - opts_exclusive "`METHOD'" `suboption'
                = opts_exclusive "" mcompare()
                  ───────────────────────────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ───────────────
                - version 8.2
                - args opts optname errcode optslab
                - local opts `opts'
                = local opts
```

```
                  - local n 0
                  - while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  - if `n' < 2 {
                  = if 0 < 2 {
                  - exit
                  ─────────────────────────────────────────────
```

```
                  - if "`METHOD'" == "" {
                  = if "" == "" {
                  - if "`ALL'" != "" {
                  = if "" != "" {
                    di as err "multiple comparison method required with the adju
```
> stall option"
```
                    exit 198
                    }
                  - local METHOD noadjust
                  - local noadjust noadjust
                  - }
                  - opts_exclusive "`ALL' `noadjust'" `suboption'
                  = opts_exclusive " noadjust" mcompare()
                  ─────────────────────────────────────────────
```

```
                  - version 8.2
                  - args opts optname errcode optslab
                  - local opts `opts'
                  = local opts  noadjust
                  - local n 0
                  - while `"`opts'"' != "" {
                  = while `"noadjust"' != "" {
                  - local ++n
                  - gettoken item`n' opts : opts, bind
                  = gettoken item1 opts : opts, bind
                  - }
                  - while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  - if `n' < 2 {
                  = if 1 < 2 {
                  - exit
                  ─────────────────────────────────────────────
```

```
> —————————————————————————— end opts_exclusive ——————————————
                  - local EXCLUDE duncan dunnett snk tukey
                  - if `:list METHOD in EXCLUDE' {
                  = if 0 {
                    if `is_pwc' {
                    local opt : copy local METHOD
                    }
                    else {
                    local opt "mcompare(`METHOD')"
                    }
                    local cmdlist anova manova regress mvreg pwmean
                    if "`cmd'" == "pwcompare" {
                    local cmd `"`e(cmd_est)'"'
                    }
                    if `is_marg' {
                    local cmd margins
                    }
                    if !`:list cmd in cmdlist' | !`is_pwc' {
                    di as err `"method `opt' is not allowed with results from `c
> md'"'
                    exit 322
                    }
                    if `"`e(prefix)'"' == "svy" {
                    di as err `"method `opt' is not allowed with results using t
> he svy prefix"'
                    exit 322
                    }
                    local vce `"`e(vce)'"'
                    if !inlist("`vce'", "", "ols") {
                    di as err `"method `opt' is not allowed with results using v
> ce(`vce')"'
                    exit 322
                    }
                    }
                  - local EXCLUDE duncan dunnett snk tukey scheffe
                  - if `:list METHOD in EXCLUDE' {
                  = if 0 {
                    if "`ALL'" != "" {
                    di as err `"option adjustall is not allowed with method `MET
> HOD'"'
                    exit 198
                    }
                    }
                  - sreturn local method `"`METHOD'"'
                  = sreturn local method `"noadjust"'
                  - sreturn local adjustall `"`ALL'"'
```

Friday, January 10, 2025 at 11:33 AM   Page 232

```
                   = sreturn local adjustall `""'
                 ─────────────────────────────────────────────────────
> ──────────────────────────────────── end _get_mcompare ───────────────────
            – if "`s(method)'" != "" {
            = if "noadjust" != "" {
            – loca mcopt mcompare(`s(method)' `s(adjustall)')
            = loca mcopt mcompare(noadjust )
            – }
            – _get_diopts diopts, `s(options)'
            = _get_diopts diopts, level(95.00) fvwrap(1)
                 ─────────────────────────────────────────────────────
> ──────────────────────────────────── begin _get_diopts ───────────────────
            – version 11
            – syntax namelist(max=2) [, *]
            – gettoken name1 namelist : namelist
            – gettoken name2 namelist : namelist
            – GetDiopts diopts options, `options'
            = GetDiopts diopts options, level(95.00) fvwrap(1)
                 ─────────────────────────────────────────────────────
> ──────────────────────────────── begin _get_diopts.GetDiopts ─────────────
              – local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLBAS
> Elevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMPTY
> cells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(stri
> ng) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru) F
> VWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru) N
> OABBREV ABBREV
              – syntax namelist(max=2) [, `DIOPTS' *]
              = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBASE
> levels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMP
> TYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND
>  cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRA
> P(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYP
> E(passthru) NOABBREV ABBREV *]
              – opts_exclusive "`allbaselevels' `noallbaselevels'"
              = opts_exclusive " "
                 ─────────────────────────────────────────────────────
> ──────────────────────────────────── begin opts_exclusive ────────────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
```

```
                  }
                — if `n' < 2 {
                = if 0 < 2 {
                — exit
                _____
>   ───────────────────────────────── end opts_exclusive ─────────────
                — opts_exclusive "`allbaselevels' `nobaselevels'"
                = opts_exclusive " "
                _____
>   ───────────────────────────────── begin opts_exclusive ─────────────
                — version 8.2
                — args opts optname errcode optslab
                — local opts `opts'
                = local opts
                — local n 0
                — while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                — if `n' < 2 {
                = if 0 < 2 {
                — exit
                _____
>   ───────────────────────────────── end opts_exclusive ─────────────
                — opts_exclusive "`baselevels' `nobaselevels'"
                = opts_exclusive " "
                _____
>   ───────────────────────────────── begin opts_exclusive ─────────────
                — version 8.2
                — args opts optname errcode optslab
                — local opts `opts'
                = local opts
                — local n 0
                — while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                — if `n' < 2 {
                = if 0 < 2 {
                — exit
                _____
>   ───────────────────────────────── end opts_exclusive ─────────────
                — opts_exclusive "`emptycells' `noemptycells'"
                = opts_exclusive " "
```

```
> ──────────────────────────────────────── begin opts_exclusive ──────────────
              − version 8.2
              − args opts optname errcode optslab
              − local opts `opts'
              = local opts
              − local n 0
              − while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              − if `n' < 2 {
              = if 0 < 2 {
              − exit

> ──────────────────────────────────────── end opts_exclusive ────────────────
            − opts_exclusive "`fvlabel' `nofvlabel'"
            = opts_exclusive " "

> ──────────────────────────────────────── begin opts_exclusive ──────────────
              − version 8.2
              − args opts optname errcode optslab
              − local opts `opts'
              = local opts
              − local n 0
              − while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              − if `n' < 2 {
              = if 0 < 2 {
              − exit

> ──────────────────────────────────────── end opts_exclusive ────────────────
            − opts_exclusive "`omitted' `noomitted'"
            = opts_exclusive " "

> ──────────────────────────────────────── begin opts_exclusive ──────────────
              − version 8.2
              − args opts optname errcode optslab
              − local opts `opts'
              = local opts
              − local n 0
              − while `"`opts'"' != "" {
```

```
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                − if `n' < 2 {
                = if 0 < 2 {
                − exit
                _____
>  ──────────────────────────────────── end opts_exclusive ────────────
                − opts_exclusive "`lstretch' `nolstretch'"
                = opts_exclusive " "
                _____
>  ──────────────────────────────────── begin opts_exclusive ────────────
                − version 8.2
                − args opts optname errcode optslab
                − local opts `opts'
                = local opts
                − local n 0
                − while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                − if `n' < 2 {
                = if 0 < 2 {
                − exit
                _____
>  ──────────────────────────────────── end opts_exclusive ────────────
                − opts_exclusive "`cnsreport' `fullcnsreport'"
                = opts_exclusive " "
                _____
>  ──────────────────────────────────── begin opts_exclusive ────────────
                − version 8.2
                − args opts optname errcode optslab
                − local opts `opts'
                = local opts
                − local n 0
                − while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                − if `n' < 2 {
                = if 0 < 2 {
                − exit
                _____
```

```
> ———————————————————————— end opts_exclusive ————————
            – opts_exclusive "`coeflegend' `selegend'"
            = opts_exclusive " "
              ———————————————————————————————————————————
> ——————————————————————— begin opts_exclusive ——————————
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
              ———————————————————————————————————————————
> ——————————————————————— end opts_exclusive ——————————
            – opts_exclusive "`noci' `nopvalues'"
            = opts_exclusive " "
              ———————————————————————————————————————————
> ——————————————————————— begin opts_exclusive ——————————
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
              ———————————————————————————————————————————
> ——————————————————————— end opts_exclusive ——————————
            – local K : list sizeof namelist
            – gettoken c_diopts c_opts : namelist
            – opts_exclusive "`coding' `compare'"
            = opts_exclusive " "
              ———————————————————————————————————————————
> ——————————————————————— begin opts_exclusive ——————————
            – version 8.2
```

```
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────
> ───────────────────────────────── end opts_exclusive ─────────────
                – opts_exclusive "`versus' `compare'"
                = opts_exclusive " "
                    ─────────────────────────────────────────
> ───────────────────────────────── begin opts_exclusive ───────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────
> ───────────────────────────────── end opts_exclusive ─────────────
                – opts_exclusive "`abbrev' `noabbrev'"
                = opts_exclusive " "
                    ─────────────────────────────────────────
> ───────────────────────────────── begin opts_exclusive ───────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
```

```
      }
    – if `n' < 2 {
    = if 0 < 2 {
    – exit
    ─────────────────────────────────────────────────────────────
>   ──────────────────────────────────── end opts_exclusive ──────────────────
    – local allbaselevels `allbaselevels' `noallbaselevels'
    = local allbaselevels
    – local baselevels `baselevels' `nobaselevels'
    = local baselevels
    – local emptycells `emptycells' `noemptycells'
    = local emptycells
    – local omitted `omitted' `noomitted'
    = local omitted
    – local lstretch `lstretch' `nolstretch'
    = local lstretch
    – local fvlabel `fvlabel' `nofvlabel'
    = local fvlabel
    – local abbrev `abbrev' `noabbrev'
    = local abbrev
    – if "`allbaselevels'`baselevels'" == "" {
    = if "" == "" {
    – if c(showbaselevels) == "all" {
      local allbaselevels allbaselevels
      }
    – else if c(showbaselevels) == "on" {
      local baselevels baselevels
      }
    – }
    – if "`emptycells'" == "" {
    = if "" == "" {
    – if c(showemptycells) == "off" {
      local emptycells noemptycells
      }
    – }
    – if "`omitted'" == "" {
    = if "" == "" {
    – if c(showomitted) == "off" {
      local omitted noomitted
      }
    – }
    – if "`lstretch'" == "" {
    = if "" == "" {
    – if c(lstretch) == "off" {
      local lstretch nolstretch
      }
```

```
  - }
  - if `:length local cformat' {
  = if 0 {
    confirm numeric format `cformat'
    if fmtwidth(`"`cformat'"') > 9 {
    local cformat "%9.0g"
    di "{txt}note: invalid cformat(), using default"
    }
    sreturn local cformat `"`cformat'"'
    local cformat `"cformat(`cformat')"'
    }
  - if `:length local sformat' {
  = if 0 {
    confirm numeric format `sformat'
    if fmtwidth(`"`sformat'"') > 8 {
    local sformat "%8.2f"
    di "{txt}note: invalid sformat(), using default"
    }
    sreturn local sformat `"`sformat'"'
    local sformat `"sformat(`sformat')"'
    }
  - if `:length local pformat' {
  = if 0 {
    confirm numeric format `pformat'
    if fmtwidth(`"`pformat'"') > 5 {
    local pformat "%5.3f"
    di "{txt}note: invalid pformat(), using default"
    }
    sreturn local pformat `"`pformat'"'
    local pformat `"pformat(`pformat')"'
    }
  - if `K' == 1 & `:length local options' {
  = if 2 == 1 & 0 {
    syntax namelist(max=2) [, `DIOPTS']
    }
  - if reldif(`level', c(level)) > 1e-3 {
  = if reldif(95, c(level)) > 1e-3 {
    local levelopt level(`level')
    }
  - Wrapon , `fvwrapon'
  = Wrapon ,
  ─────────────────────────────────────────────────────────
> ──────────────────────────────── begin _get_diopts.Wrapon ────────────────
    - capture syntax [, WOrd WIdth]
    - if c(rc) {
      di as err "invalid fvwrapon() option;"
```

```
                    syntax [, WOrd WIdth]
                    exit 198
                    }
                  – opts_exclusive "`word' `width'" fvwrapon
                  = opts_exclusive " " fvwrapon
                  ─────────────────────────────────────────────
> ───────────────────────────────── begin opts_exclusive ───────────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  ─────────────────────────────────────────────
> ───────────────────────────────── end opts_exclusive ───────────────────
                  – local fvwrapon `word' `width'
                  = local fvwrapon
                  – if `:length local fvwrapon' {
                  = if 0 {
                    c_local fvwrapon fvwrapon(`fvwrapon')
                    }
                  ─────────────────────────────────────────────
> ───────────────────────────────── end _get_diopts.Wrapon ──────────────
                – if "`fvwrap'" != "" {
                = if "fvwrap(1)" != "" {
                – FVWrap, `fvwrap'
                = FVWrap, fvwrap(1)
                  ─────────────────────────────────────────────
> ───────────────────────────────── begin _get_diopts.FVWrap ─────────────
                – syntax, fvwrap(integer)
                – if `fvwrap' < 0 {
                = if 1 < 0 {
                    di as err "{p}invalid option {bf:fvwrap(`fvwrap')}; " "n
> onnegative integer required{p_end}"
                    exit 198
                    }
                  ─────────────────────────────────────────────
> ───────────────────────────────── end _get_diopts.FVWrap ───────────────
                  – }
```

```
                    – c_local `c_diopts' `levelopt' `vsquish' `allbaselevels' `b
> aselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `co
> eflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `compar
> e' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `abb
> rev'
                    = c_local diopts                    fvwrap(1)
                    – if `K' == 2 {
                    = if 2 == 2 {
                    – c_local `c_opts' `"`options'"'
                    = c_local  options `""'
                    – }
                    – sreturn local coding `coding'
                    = sreturn local coding
                    – sreturn local versus `versus'
                    = sreturn local versus
                    – sreturn local compare `compare'
                    = sreturn local compare
                    – sreturn local level `level'
                    = sreturn local level 95
                    ────────────────────────────────────────────────────
> ──────────────────────────────── end _get_diopts.GetDiopts ───────────────
                    – c_local `name1' `"`diopts'"'
                    = c_local diopts `"fvwrap(1)"'
                    – local snames : s(macros)
                    – foreach sname of local snames {
                    – local S_`sname' = s(`sname')
                    = local S_level = s(level)
                    – }
                    – local S_`sname' = s(`sname')
                    = local S_method = s(method)
                    – }
                    – local S_`sname' = s(`sname')
                    = local S_options = s(options)
                    – }
                    – sreturn clear
                    – GetDiopts DEFAULT
                    ────────────────────────────────────────────────────
> ──────────────────────────────── begin _get_diopts.GetDiopts ─────────────
                    – local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLBAS
> Elevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMPTY
> cells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(stri
> ng) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru) F
> VWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru) N
> OABBREV ABBREV
                    – syntax namelist(max=2) [, `DIOPTS' *]
                    = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBASE
```

```
> levels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMP
> TYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND
>  cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRA
> P(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYP
> E(passthru) NOABBREV ABBREV *]
                    - opts_exclusive "`allbaselevels' `noallbaselevels'"
                    = opts_exclusive " "
                    ─────────────────────────────────────────────────────
>  ──────────────────────────────────── begin opts_exclusive ────────────
                    - version 8.2
                    - args opts optname errcode optslab
                    - local opts `opts'
                    = local opts
                    - local n 0
                    - while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    - if `n' < 2 {
                    = if 0 < 2 {
                    - exit
                    ─────────────────────────────────────────────────────
>  ──────────────────────────────────── end opts_exclusive ──────────────
                    - opts_exclusive "`allbaselevels' `nobaselevels'"
                    = opts_exclusive " "
                    ─────────────────────────────────────────────────────
>  ──────────────────────────────────── begin opts_exclusive ────────────
                    - version 8.2
                    - args opts optname errcode optslab
                    - local opts `opts'
                    = local opts
                    - local n 0
                    - while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    - if `n' < 2 {
                    = if 0 < 2 {
                    - exit
                    ─────────────────────────────────────────────────────
>  ──────────────────────────────────── end opts_exclusive ──────────────
                    - opts_exclusive "`baselevels' `nobaselevels'"
                    = opts_exclusive " "
                    ─────────────────────────────────────────────────────
```

```
> ─────────────────────────────────── begin opts_exclusive ───────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ────────────────────────────────────────────────────────
> ──────────────────────────────────── end opts_exclusive ─────────────────
                  – opts_exclusive "`emptycells' `noemptycells'"
                  = opts_exclusive " "
                    ────────────────────────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ───────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ────────────────────────────────────────────────────────
> ──────────────────────────────────── end opts_exclusive ─────────────────
                  – opts_exclusive "`fvlabel' `nofvlabel'"
                  = opts_exclusive " "
                    ────────────────────────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ───────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
```

```
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  - if `n' < 2 {
                  = if 0 < 2 {
                  - exit
```

> ─────────────────────────────────── end opts_exclusive ──────────────

```
          - opts_exclusive "`omitted' `noomitted'"
          = opts_exclusive " "
```

> ─────────────────────────────────── begin opts_exclusive ──────────────

```
          - version 8.2
          - args opts optname errcode optslab
          - local opts `opts'
          = local opts
          - local n 0
          - while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          - if `n' < 2 {
          = if 0 < 2 {
          - exit
```

> ─────────────────────────────────── end opts_exclusive ──────────────

```
          - opts_exclusive "`lstretch' `nolstretch'"
          = opts_exclusive " "
```

> ─────────────────────────────────── begin opts_exclusive ──────────────

```
          - version 8.2
          - args opts optname errcode optslab
          - local opts `opts'
          = local opts
          - local n 0
          - while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          - if `n' < 2 {
          = if 0 < 2 {
          - exit
```

> ─────────────────────────────────── end opts_exclusive ──────────────

```
                 − opts_exclusive "`cnsreport' `fullcnsreport'"
             = opts_exclusive " "
             ─────────────────────────────────────────────────────
>  ──────────────────────────────────── begin opts_exclusive ───────────
                 − version 8.2
                 − args opts optname errcode optslab
                 − local opts `opts'
             = local opts
                 − local n 0
                 − while `"`opts'"' != "" {
             = while `""' != "" {
                   local ++n
                   gettoken item`n' opts : opts, bind
                   }
                 − if `n' < 2 {
             = if 0 < 2 {
                 − exit
             ─────────────────────────────────────────────────────
>  ──────────────────────────────────── end opts_exclusive ─────────────
                 − opts_exclusive "`coeflegend' `selegend'"
             = opts_exclusive " "
             ─────────────────────────────────────────────────────
>  ──────────────────────────────────── begin opts_exclusive ───────────
                 − version 8.2
                 − args opts optname errcode optslab
                 − local opts `opts'
             = local opts
                 − local n 0
                 − while `"`opts'"' != "" {
             = while `""' != "" {
                   local ++n
                   gettoken item`n' opts : opts, bind
                   }
                 − if `n' < 2 {
             = if 0 < 2 {
                 − exit
             ─────────────────────────────────────────────────────
>  ──────────────────────────────────── end opts_exclusive ─────────────
                 − opts_exclusive "`noci' `nopvalues'"
             = opts_exclusive " "
             ─────────────────────────────────────────────────────
>  ──────────────────────────────────── begin opts_exclusive ───────────
                 − version 8.2
                 − args opts optname errcode optslab
                 − local opts `opts'
             = local opts
```

```
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                  _____
>  ──────────────────────────────── end opts_exclusive ──────────────
                – local K : list sizeof namelist
                – gettoken c_diopts c_opts : namelist
                – opts_exclusive "`coding' `compare'"
                = opts_exclusive " "
                  _____
>  ──────────────────────────────── begin opts_exclusive ──────────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
                  _____
>  ──────────────────────────────── end opts_exclusive ──────────────
                – opts_exclusive "`versus' `compare'"
                = opts_exclusive " "
                  _____
>  ──────────────────────────────── begin opts_exclusive ──────────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
```

```
                        - if `n' < 2 {
                        = if 0 < 2 {
                        - exit
                        _____
> ──────────────────────────────── end opts_exclusive ────────────────
                - opts_exclusive "`abbrev' `noabbrev'"
                = opts_exclusive " "
                        _____
> ──────────────────────────────── begin opts_exclusive ──────────────
                - version 8.2
                - args opts optname errcode optslab
                - local opts `opts'
                = local opts
                - local n 0
                - while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                - if `n' < 2 {
                = if 0 < 2 {
                - exit
                        _____
> ──────────────────────────────── end opts_exclusive ────────────────
                - local allbaselevels `allbaselevels' `noallbaselevels'
                = local allbaselevels
                - local baselevels `baselevels' `nobaselevels'
                = local baselevels
                - local emptycells `emptycells' `noemptycells'
                = local emptycells
                - local omitted `omitted' `noomitted'
                = local omitted
                - local lstretch `lstretch' `nolstretch'
                = local lstretch
                - local fvlabel `fvlabel' `nofvlabel'
                = local fvlabel
                - local abbrev `abbrev' `noabbrev'
                = local abbrev
                - if "`allbaselevels'`baselevels'" == "" {
                = if "" == "" {
                - if c(showbaselevels) == "all" {
                  local allbaselevels allbaselevels
                  }
                - else if c(showbaselevels) == "on" {
                  local baselevels baselevels
                  }
```

```
-   }
-   if "`emptycells'" == "" {
=   if "" == "" {
-   if c(showemptycells) == "off" {
    local emptycells noemptycells
    }
-   }
-   if "`omitted'" == "" {
=   if "" == "" {
-   if c(showomitted) == "off" {
    local omitted noomitted
    }
-   }
-   if "`lstretch'" == "" {
=   if "" == "" {
-   if c(lstretch) == "off" {
    local lstretch nolstretch
    }
-   }
-   if `:length local cformat' {
=   if 0 {
    confirm numeric format `cformat'
    if fmtwidth(`"`cformat'"') > 9 {
    local cformat "%9.0g"
    di "{txt}note: invalid cformat(), using default"
    }
    sreturn local cformat `"`cformat'"'
    local cformat `"cformat(`cformat')"'
    }
-   if `:length local sformat' {
=   if 0 {
    confirm numeric format `sformat'
    if fmtwidth(`"`sformat'"') > 8 {
    local sformat "%8.2f"
    di "{txt}note: invalid sformat(), using default"
    }
    sreturn local sformat `"`sformat'"'
    local sformat `"sformat(`sformat')"'
    }
-   if `:length local pformat' {
=   if 0 {
    confirm numeric format `pformat'
    if fmtwidth(`"`pformat'"') > 5 {
    local pformat "%5.3f"
    di "{txt}note: invalid pformat(), using default"
    }
```

```
                     sreturn local pformat `"'`pformat'"'
                     local pformat `"pformat(`pformat')"'
                     }
        - if `K' == 1 & `:length local options' {
        = if 1 == 1 & 0 {
          syntax namelist(max=2) [, `DIOPTS']
          }
        - if reldif(`level', c(level)) > 1e-3 {
        = if reldif(95, c(level)) > 1e-3 {
          local levelopt level(`level')
          }
        - Wrapon , `fvwrapon'
        = Wrapon ,
        ──────────────────────────────────────────────
>  ─────────────────────────── begin _get_diopts.Wrapon ────────────────
          - capture syntax [, WOrd WIdth]
          - if c(rc) {
            di as err "invalid fvwrapon() option;"
            syntax [, WOrd WIdth]
            exit 198
            }
          - opts_exclusive "`word' `width'" fvwrapon
          = opts_exclusive " " fvwrapon
          ────────────────────────────────────────────
>  ─────────────────────────────── begin opts_exclusive ──────────────────
          - version 8.2
          - args opts optname errcode optslab
          - local opts `opts'
          = local opts
          - local n 0
          - while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          - if `n' < 2 {
          = if 0 < 2 {
          - exit
          ──────────────────────────────────────────────
>  ───────────────────────────────── end opts_exclusive ──────────────────
          - local fvwrapon `word' `width'
          = local fvwrapon
          - if `:length local fvwrapon' {
          = if 0 {
            c_local fvwrapon fvwrapon(`fvwrapon')
            }
```

> ──
> ────────────────────────── end _get_diopts.Wrapon ──────────────
                    – if "`fvwrap'" != "" {
                    = if "" != "" {
                       FVWrap, `fvwrap'
                       }
                    – c_local `c_diopts' `levelopt' `vsquish' `allbaselevels' `b
> aselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `co
> eflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `compar
> e' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `abb
> rev'
                    = c_local DEFAULT
                    – if `K' == 2 {
                    = if 1 == 2 {
                       c_local `c_opts' `"`options'"'
                       }
                    – sreturn local coding `coding'
                    = sreturn local coding
                    – sreturn local versus `versus'
                    = sreturn local versus
                    – sreturn local compare `compare'
                    = sreturn local compare
                    – sreturn local level `level'
                    = sreturn local level 95
                    ──

> ────────────────────────── end _get_diopts.GetDiopts ─────────────
                    – if `"`name2'"' == "" {
                    = if `""' == "" {
                    – GetDiopts DUPS, `options'
                    = GetDiopts DUPS,
                    ──

> ────────────────────────── begin _get_diopts.GetDiopts ───────────
                    – local DIOPTS Level(cilevel) vsquish NOALLBAS
> Elevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMPTY
> cells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(stri
> ng) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru) F
> VWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru) N
> OABBREV ABBREV
                    – syntax namelist(max=2) [, `DIOPTS' *]
                    = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBASE
> levels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMP
> TYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND
> cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRA
> P(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYP
> E(passthru) NOABBREV ABBREV *]
                    – opts_exclusive "`allbaselevels' `noallbaselevels'"

```
                      = opts_exclusive " "
                     ──────────────────────────────────────────────
> ───────────────────────────────────── begin opts_exclusive ────────────
                     ─ version 8.2
                     ─ args opts optname errcode optslab
                     ─ local opts `opts'
                     = local opts
                     ─ local n 0
                     ─ while `"`opts'"' != "" {
                     = while `""' != "" {
                       local ++n
                       gettoken item`n' opts : opts, bind
                       }
                     ─ if `n' < 2 {
                     = if 0 < 2 {
                     ─ exit
                     ──────────────────────────────────────────────
> ───────────────────────────────────── end opts_exclusive ──────────────
                   ─ opts_exclusive "`allbaselevels' `nobaselevels'"
                   = opts_exclusive " "
                     ──────────────────────────────────────────────
> ───────────────────────────────────── begin opts_exclusive ────────────
                     ─ version 8.2
                     ─ args opts optname errcode optslab
                     ─ local opts `opts'
                     = local opts
                     ─ local n 0
                     ─ while `"`opts'"' != "" {
                     = while `""' != "" {
                       local ++n
                       gettoken item`n' opts : opts, bind
                       }
                     ─ if `n' < 2 {
                     = if 0 < 2 {
                     ─ exit
                     ──────────────────────────────────────────────
> ───────────────────────────────────── end opts_exclusive ──────────────
                   ─ opts_exclusive "`baselevels' `nobaselevels'"
                   = opts_exclusive " "
                     ──────────────────────────────────────────────
> ───────────────────────────────────── begin opts_exclusive ────────────
                     ─ version 8.2
                     ─ args opts optname errcode optslab
                     ─ local opts `opts'
                     = local opts
                     ─ local n 0
```

```
– while `"`opts'"' != "" {
= while `""' != "" {
  local ++n
  gettoken item`n' opts : opts, bind
  }
– if `n' < 2 {
= if 0 < 2 {
– exit
```

> ──────────────────────────────── end opts_exclusive ──────────────

```
– opts_exclusive "`emptycells' `noemptycells'"
= opts_exclusive " "
```

> ──────────────────────────────── begin opts_exclusive ────────────

```
– version 8.2
– args opts optname errcode optslab
– local opts `opts'
= local opts
– local n 0
– while `"`opts'"' != "" {
= while `""' != "" {
  local ++n
  gettoken item`n' opts : opts, bind
  }
– if `n' < 2 {
= if 0 < 2 {
– exit
```

> ──────────────────────────────── end opts_exclusive ──────────────

```
– opts_exclusive "`fvlabel' `nofvlabel'"
= opts_exclusive " "
```

> ──────────────────────────────── begin opts_exclusive ────────────

```
– version 8.2
– args opts optname errcode optslab
– local opts `opts'
= local opts
– local n 0
– while `"`opts'"' != "" {
= while `""' != "" {
  local ++n
  gettoken item`n' opts : opts, bind
  }
– if `n' < 2 {
= if 0 < 2 {
– exit
```

```
> ────────────────────────────────────────────────────────────────
> ───────────────────────────── end opts_exclusive ──────────────
      – opts_exclusive "`omitted' `noomitted'"
      = opts_exclusive " "
                    ────────────────────────────────────────────
> ─────────────────────────────── begin opts_exclusive ──────────
      – version 8.2
      – args opts optname errcode optslab
      – local opts `opts'
      = local opts
      – local n 0
      – while `"`opts'"' != "" {
      = while `""' != "" {
        local ++n
        gettoken item`n' opts : opts, bind
        }
      – if `n' < 2 {
      = if 0 < 2 {
      – exit
                    ────────────────────────────────────────────
> ───────────────────────────── end opts_exclusive ──────────────
      – opts_exclusive "`lstretch' `nolstretch'"
      = opts_exclusive " "
                    ────────────────────────────────────────────
> ─────────────────────────────── begin opts_exclusive ──────────
      – version 8.2
      – args opts optname errcode optslab
      – local opts `opts'
      = local opts
      – local n 0
      – while `"`opts'"' != "" {
      = while `""' != "" {
        local ++n
        gettoken item`n' opts : opts, bind
        }
      – if `n' < 2 {
      = if 0 < 2 {
      – exit
                    ────────────────────────────────────────────
> ───────────────────────────── end opts_exclusive ──────────────
      – opts_exclusive "`cnsreport' `fullcnsreport'"
      = opts_exclusive " "
                    ────────────────────────────────────────────
> ─────────────────────────────── begin opts_exclusive ──────────
      – version 8.2
      – args opts optname errcode optslab
```

```
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
              ─────────────────────────────────────────────
>  ──────────────────────────────────── end opts_exclusive ──────────
              – opts_exclusive "`coeflegend' `selegend'"
              = opts_exclusive " "
              ─────────────────────────────────────────────
>  ──────────────────────────────────── begin opts_exclusive ──────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
              ─────────────────────────────────────────────
>  ──────────────────────────────────── end opts_exclusive ──────────
              – opts_exclusive "`noci' `nopvalues'"
              = opts_exclusive " "
              ─────────────────────────────────────────────
>  ──────────────────────────────────── begin opts_exclusive ──────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
```

```
          - if `n' < 2 {
          = if 0 < 2 {
          - exit
          _____
>  _____ end opts_exclusive _____
          - local K : list sizeof namelist
          - gettoken c_diopts c_opts : namelist
          - opts_exclusive "`coding' `compare'"
          = opts_exclusive " "
          _____
>  _____ begin opts_exclusive _____
          - version 8.2
          - args opts optname errcode optslab
          - local opts `opts'
          = local opts
          - local n 0
          - while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          - if `n' < 2 {
          = if 0 < 2 {
          - exit
          _____
>  _____ end opts_exclusive _____
          - opts_exclusive "`versus' `compare'"
          = opts_exclusive " "
          _____
>  _____ begin opts_exclusive _____
          - version 8.2
          - args opts optname errcode optslab
          - local opts `opts'
          = local opts
          - local n 0
          - while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          - if `n' < 2 {
          = if 0 < 2 {
          - exit
          _____
>  _____ end opts_exclusive _____
          - opts_exclusive "`abbrev' `noabbrev'"
```

```
                 = opts_exclusive " "
                 ─────────────────────────────────────────────────────
>  ─────────────────────────────── begin opts_exclusive ───────────────
                 – version 8.2
                 – args opts optname errcode optslab
                 – local opts `opts'
                 = local opts
                 – local n 0
                 – while `"`opts'"' != "" {
                 = while `""' != "" {
                   local ++n
                   gettoken item`n' opts : opts, bind
                   }
                 – if `n' < 2 {
                 = if 0 < 2 {
                 – exit

                 ─────────────────────────────────────────────────────
>  ─────────────────────────────── end opts_exclusive ─────────────────
                 – local allbaselevels `allbaselevels' `noallbaselevels'
                 = local allbaselevels
                 – local baselevels `baselevels' `nobaselevels'
                 = local baselevels
                 – local emptycells `emptycells' `noemptycells'
                 = local emptycells
                 – local omitted `omitted' `noomitted'
                 = local omitted
                 – local lstretch `lstretch' `nolstretch'
                 = local lstretch
                 – local fvlabel `fvlabel' `nofvlabel'
                 = local fvlabel
                 – local abbrev `abbrev' `noabbrev'
                 = local abbrev
                 – if "`allbaselevels'`baselevels'" == "" {
                 = if "" == "" {
                 – if c(showbaselevels) == "all" {
                   local allbaselevels allbaselevels
                   }
                 – else if c(showbaselevels) == "on" {
                   local baselevels baselevels
                   }
                 – }
                 – if "`emptycells'" == "" {
                 = if "" == "" {
                 – if c(showemptycells) == "off" {
                   local emptycells noemptycells
                   }
```

```
-  }
-  if "`omitted'" == "" {
=  if "" == "" {
-  if c(showomitted) == "off" {
   local omitted noomitted
   }
-  }
-  if "`lstretch'" == "" {
=  if "" == "" {
-  if c(lstretch) == "off" {
   local lstretch nolstretch
   }
-  }
-  if `:length local cformat' {
=  if 0 {
   confirm numeric format `cformat'
   if fmtwidth(`"`cformat'"') > 9 {
   local cformat "%9.0g"
   di "{txt}note: invalid cformat(), using default"
   }
   sreturn local cformat `"`cformat'"'
   local cformat `"cformat(`cformat')"'
   }
-  if `:length local sformat' {
=  if 0 {
   confirm numeric format `sformat'
   if fmtwidth(`"`sformat'"') > 8 {
   local sformat "%8.2f"
   di "{txt}note: invalid sformat(), using default"
   }
   sreturn local sformat `"`sformat'"'
   local sformat `"sformat(`sformat')"'
   }
-  if `:length local pformat' {
=  if 0 {
   confirm numeric format `pformat'
   if fmtwidth(`"`pformat'"') > 5 {
   local pformat "%5.3f"
   di "{txt}note: invalid pformat(), using default"
   }
   sreturn local pformat `"`pformat'"'
   local pformat `"pformat(`pformat')"'
   }
-  if `K' == 1 & `:length local options' {
=  if 1 == 1 & 0 {
   syntax namelist(max=2) [, `DIOPTS']
```

```
                }
            – if reldif(`level', c(level)) > 1e–3 {
            = if reldif(95, c(level)) > 1e–3 {
              local levelopt level(`level')
              }
            – Wrapon , `fvwrapon'
            = Wrapon ,
            ─────────────────────────────────────────
 > ─────────────────────────── begin _get_diopts.Wrapon ───────────
            – capture syntax [, WOrd WIdth]
            – if c(rc) {
              di as err "invalid fvwrapon() option;"
              syntax [, WOrd WIdth]
              exit 198
              }
            – opts_exclusive "`word' `width'" fvwrapon
            = opts_exclusive " " fvwrapon
            ─────────────────────────────────────────
 > ─────────────────────────── begin opts_exclusive ───────────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
            ─────────────────────────────────────────
 > ─────────────────────────── end opts_exclusive ─────────────────
            – local fvwrapon `word' `width'
            = local fvwrapon
            – if `:length local fvwrapon' {
            = if 0 {
              c_local fvwrapon fvwrapon(`fvwrapon')
              }
            ─────────────────────────────────────────
 > ─────────────────────────── end _get_diopts.Wrapon ─────────────
            – if "`fvwrap'" != "" {
            = if "" != "" {
              FVWrap, `fvwrap'
              }
```

```
                        - c_local `c_diopts' `levelopt' `vsquish' `allbaselevels' `b
> aselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `co
> eflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `compar
> e' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `abb
> rev'
                    = c_local DUPS
                    - if `K' == 2 {
                    = if 1 == 2 {
                      c_local `c_opts' `"`options'"'
                      }
                    - sreturn local coding `coding'
                    = sreturn local coding
                    - sreturn local versus `versus'
                    = sreturn local versus
                    - sreturn local compare `compare'
                    = sreturn local compare
                    - sreturn local level `level'
                    = sreturn local level 95
                    ───────────────────────────────────────────────────
> ──────────────────────────── end _get_diopts.GetDiopts ─────────────
                    - }
                    - else {
                      GetDiopts DUPS options, `options'
                      c_local `name2' `"`options'"'
                      }
                    - local DUPS : list DUPS - DEFAULT
                    - gettoken DUPS : DUPS
                    - if `"`DUPS'"' != "" {
                    = if `""' != "" {
                      if (strpos(`"`DUPS'"', "(")) {
                      gettoken DUPS : DUPS, parse("(")
                      local DUPS `"`DUPS'()"'
                      }
                      di as err "duplicate {bf:`DUPS'} option not allowed"
                      exit 198
                      }
                    - sreturn clear
                    - foreach sname of local snames {
                    - sreturn local `sname' = `"`S_`sname''"'
                    = sreturn local level = `"95"'
                    - }
                    - sreturn local `sname' = `"`S_`sname''"'
                    = sreturn local method = `"noadjust"'
                    - }
                    - sreturn local `sname' = `"`S_`sname''"'
                    = sreturn local options = `"level(95.00) fvwrap(1)"'
```

```
                  – }
                  ─────────────────────────────────────────────────────
> ─────────────────────────────────────────── end _get_diopts ──────────────
                  – if !`:length local first' {
                  = if !0 {
                  – local first showeqns
                  – }
                  – if `neq' < 1 {
                  = if –1 < 1 {
                  – _ms_eq_info
                  – local neqopt neq(`r(k_eq)')
                  = local neqopt neq(1)
                  – }
                  – else {
                    local neqopt neq(`neq')
                    }
                  – _coef_table, nodiparm nocnsreport noeqcheck eformall `eform' `
> first' `neqopt' `plus' `beta' `mcopt' `diopts'
                  = _coef_table, nodiparm nocnsreport noeqcheck eformall   showeqns
>  neq(1)    mcompare(noadjust ) fvwrap(1)
                  ─────────────────────────────────────────────────────
> ─────────────────────────────────────────── begin _coef_table ──────────────
                  – version 11
                  – local vv : di "version " string(max(11,_caller())) ", missin
> g:"
                  – if (!c(noisily) & c(coeftabresults) == "off") {
                    exit
                    }
                  – _check_eclass
                  – syntax [, BMATrix(passthru) VMATrix(passthru) ∗ ]
                  – if "`e(b)'" == "" & "`e(V)'" == "" & "`bmatrix'`vmatrix'"=="
> " {
                  = if "matrix" == "" & "matrix" == "" & ""=="" {
                    exit
                    }
                  – local mc_cmds contrast margins pwcompare pwmean
                  – local cmd "`e(cmd)'"
                  = local cmd "regress"
                  – local keepmc : list cmd in mc_cmds
                  – if inlist("`cmd'", "pwcompare", "pwmean") {
                  = if inlist("regress", "pwcompare", "pwmean") {
                    local groups GROUPS
                    }
                  – if "`cmd'" == "regress" {
                  = if "regress" == "regress" {
                  – local beta Beta
```

```
                    - }
                    - if "`cmd'" == "gsem" {
                    = if "regress" == "gsem" {
                      local fvignore fvignore(int 0)
                      local flignore flignore
                      }
                    - if "`cmd'" == "sem" {
                    = if "regress" == "sem" {
                      local standardized STANDARDIZED
                      local showginvariant SHOWGINVariant
                      local nolabel NOLABel LABel NOFVLABel FVLABel
                      local nofootnote NOFOOTnote
                      local wrap wrap(numlist max=1) fvwrap(passthru)
                      }
                    - if "`e(mi)'"=="mi" {
                    = if ""=="mi" {
                      local dftable DFTable
                      local dfonly DFONLY
                      local noclustreport NOCLUSTReport
                      local pisematrix PISEMATrix(string)
                      }
                    - syntax [, cmdextras BMATrix(string) VMATrix(string) EMATrix(
> string) DFMATrix(string) EQMATrix(string) ROWMATrix(string) CIMATrix(string)
>  ROWCFormat(string) ROWPFormat(string) ROWSFormat(string) NOROWCI MMATrix(st
> ring) MVMATrix(string) MEMATrix(string) BSTDMATrix(string) CNSMATrix(string)
>  PCLASSMATrix(string) Level(cilevel) prefix(name) suffix(name) OFFSETlist(st
> ring asis) `beta' `standardized' NOCI NOPValues `dftable' `dfonly' dfci DFPV
> alues dfmissing `groups' COEFLegend selegend `fvignore' `flignore' `showginv
> ariant' `nolabel' `nofootnote' `wrap' sort `pisematrix' depname(string) COEF
> Title(string) coeftitle2(string) ptitle(string) cititle(string) NOMCLEGend n
> oCNSReport FULLCNSReport `noclustreport' cformat(passthru) sformat(passthru)
>  pformat(passthru) NOFirst First SHOWEQns neq(integer -1) NODIPARM NOTEST SE
> Parator(integer 0) NOSKIP OFFSETONLY1 PLus NOEQCHECK EFORMALL CITYPE(string)
>  eqselect(string) noEFORMNOTE * ]
                    = syntax [, cmdextras BMATrix(string) VMATrix(string) EMATrix(
> string) DFMATrix(string) EQMATrix(string) ROWMATrix(string) CIMATrix(string)
>  ROWCFormat(string) ROWPFormat(string) ROWSFormat(string) NOROWCI MMATrix(st
> ring) MVMATrix(string) MEMATrix(string) BSTDMATrix(string) CNSMATrix(string)
>  PCLASSMATrix(string) Level(cilevel) prefix(name) suffix(name) OFFSETlist(st
> ring asis) Beta  NOCI NOPValues  dfci DFPValues dfmissing  COEFLegend seleg
> end      sort  depname(string) COEFTitle(string) coeftitle2(string) ptitle(
> string) cititle(string) NOMCLEGend noCNSReport FULLCNSReport  cformat(passth
> ru) sformat(passthru) pformat(passthru) NOFirst First SHOWEQns neq(integer -
> 1) NODIPARM NOTEST SEParator(integer 0) NOSKIP OFFSETONLY1 PLus NOEQCHECK EF
> ORMALL CITYPE(string) eqselect(string) noEFORMNOTE * ]
                    - if "`wrap'" != "" {
```

```
                = if "" != "" {
                  opts_exclusive `"wrap(`wrap') `fvwrap'"'
                  local fvwrap fvwrap(`wrap')
                  }
                − if "`nolabel'`label'" != "" {
                = if "" != "" {
                  opts_exclusive "`nolabel' `label'"
                  opts_exclusive "`nofvlabel' `fvlabel'"
                  opts_exclusive "`nolabel' `fvlabel'"
                  opts_exclusive "`nofvlabel' `label'"
                  if "`nolabel'" != "" {
                  local fvlabel nofvlabel
                  }
                  else {
                  local fvlabel fvlabel
                  }
                  }
                − else local fvlabel `nofvlabel' `fvlabel'
                = else local fvlabel
                − local type `coeflegend' `selegend'
                = local type
                − opts_exclusive "`type' `standardized'"
                = opts_exclusive " "
               ─────────────────────────────────────────
 > ──────────────────────────────── begin opts_exclusive ──────────────
                  − version 8.2
                  − args opts optname errcode optslab
                  − local opts `opts'
                  = local opts
                  − local n 0
                  − while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  − if `n' < 2 {
                  = if 0 < 2 {
                  − exit
               ─────────────────────────────────────────
 > ──────────────────────────────── end opts_exclusive ──────────────
                − if (`"`rowmatrix'"'=="" & "`norowci'"!="") {
                = if (`""'=="" & ""!="") {
                  di as err "{bf:norowci} requires {bf:rowmatrix()}"
                  exit 198
                  }
                − if ("`dftable'"!="" & "`norowci'"!="") {
```

```
                    = if (""!="" & ""!="") {
                      di as err "{bf:norowci} is not allowed with {bf:`dftable'}"
                      exit 198
                      }
                    - if ("`dfonly'"!="" & "`norowci'"!="") {
                    = if (""!="" & ""!="") {
                      di as err "{bf:norowci} is not allowed with {bf:`dfonly'}"
                      exit 198
                      }
                    - if ("`noci'"!="" & "`norowci'"!="") {
                    = if (""!="" & ""!="") {
                      di as err "{bf:norowci} is not allowed with {bf:`noci'}"
                      exit 198
                      }
                    - if "`standardized'" != "" & "`bstdmatrix'" != "" {
                    = if "" != "" & "" != "" {
                      local beta beta
                      local standardized
                      }
                    - if `:length local type' == 0 {
                    = if 0 == 0 {
                    - local type `beta' `noci' `nopvalues' `dftable' `dfonly' `gro
> ups' `dfci' `dfpvalues'
                    = local type
                    - }
                    - opts_exclusive "`type'"
                    = opts_exclusive ""
                      ────────────────────────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ───────────────
                    - version 8.2
                    - args opts optname errcode optslab
                    - local opts `opts'
                    = local opts
                    - local n 0
                    - while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    - if `n' < 2 {
                    = if 0 < 2 {
                    - exit
                      ────────────────────────────────────────────────────────
> ─────────────────────────────────── end opts_exclusive ─────────────────
                    - opts_exclusive "`first' `nofirst'"
                    = opts_exclusive " "
```

```
> ─────────────────────────────────────────────────
> ─────────────────────────── begin opts_exclusive ───────────────
  – version 8.2
  – args opts optname errcode optslab
  – local opts `opts'
  = local opts
  – local n 0
  – while `"`opts'"' != "" {
  = while `""' != "" {
    local ++n
    gettoken item`n' opts : opts, bind
    }
  – if `n' < 2 {
  = if 0 < 2 {
  – exit
  ─────────────────────────────────────────────────
> ─────────────────────────── end opts_exclusive ─────────────────
  – opts_exclusive "`first' `showeqns'"
  = opts_exclusive " showeqns"
  ─────────────────────────────────────────────────
> ─────────────────────────── begin opts_exclusive ───────────────
  – version 8.2
  – args opts optname errcode optslab
  – local opts `opts'
  = local opts  showeqns
  – local n 0
  – while `"`opts'"' != "" {
  = while `"showeqns"' != "" {
  – local ++n
  – gettoken item`n' opts : opts, bind
  = gettoken item1 opts : opts, bind
  – }
  – while `"`opts'"' != "" {
  = while `""' != "" {
    local ++n
    gettoken item`n' opts : opts, bind
    }
  – if `n' < 2 {
  = if 1 < 2 {
  – exit
  ─────────────────────────────────────────────────
> ─────────────────────────── end opts_exclusive ─────────────────
  – local cnsreport `cnsreport' `fullcnsreport'
  = local cnsreport nocnsreport
  – opts_exclusive "`cnsreport'"
  = opts_exclusive "nocnsreport"
```

```
                    ────────────────────────────────────────
> ───────────────────────────────────── begin opts_exclusive ────────────────
                    - version 8.2
                    - args opts optname errcode optslab
                    - local opts `opts'
                    = local opts nocnsreport
                    - local n 0
                    - while `"`opts'"' != "" {
                    = while `"nocnsreport"' != "" {
                    - local ++n
                    - gettoken item`n' opts : opts, bind
                    = gettoken item1 opts : opts, bind
                    - }
                    - while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    - if `n' < 2 {
                    = if 1 < 2 {
                    - exit
                    ────────────────────────────────────────
> ─────────────────────────────────────── end opts_exclusive ─────────────────
                    - if `"`showeqns'"' != "" {
                    = if `"showeqns"' != "" {
                    - local nofirst nofirst
                    - }
                    - if `"`ematrix'`noeqcheck'"' == "" {
                    = if `"noeqcheck"' == "" {
                      if `"`e(error)'"' == "matrix" {
                      local ematrix e(error)
                      }
                      }
                    - _get_mcompare, `options'
                    = _get_mcompare, mcompare(noadjust ) fvwrap(1)
                    ────────────────────────────────────────
> ──────────────────────────────────────── begin _get_mcompare ───────────────
                    - version 11
                    - local cmd `"`e(cmd)'"'
                    = local cmd `"regress"'
                    - syntax [name(name=caller)] [, *]
                    - local is_pwc = inlist("pwcompare", "`cmd'", "`caller'") |
> inlist("pwmean", "`cmd'", "`caller'")
                    = local is_pwc = inlist("pwcompare", "regress", "") | inlist
> ("pwmean", "regress", "")
                    - local is_marg = inlist("margins", "`cmd'", "`e(cmd2)'", "`
```

```
> caller'")
                   = local is_marg = inlist("margins", "regress", "", "")
                   - local OPTIONS NOADJust BONferroni DUNCan DUNNett SCHeffe S
> IDak SNK TUKey ADJustall
                   - if `is_pwc' {
                   = if 0 {
                     syntax [name] [, `OPTIONS' MCOMPare(string) *]
                     }
                   - else {
                   - syntax [name] [, MCOMPare(string) *]
                   - local suboption mcompare()
                   - }
                   - sreturn clear
                   - sreturn local options `"`options'"'
                   = sreturn local options `"fvwrap(1)"'
                   - if `is_pwc' {
                   = if 0 {
                     local METHOD `noadjust' `bonferroni' `duncan' `dunnett' `s
> cheffe' `sidak' `snk' `tukey'
                     local METHOD : list uniq METHOD
                     opts_exclusive "`METHOD'"
                     local ALL `adjustall'
                     opts_exclusive "`noadjust' `ALL'"
                     }
                   - local 0 `", `mcompare'"'
                   = local 0 `", noadjust"'
                   - capture syntax [, `OPTIONS']
                   = capture syntax [, NOADJust BONferroni DUNCan DUNNett SCHef
> fe SIDak SNK TUKey ADJustall]
                   - if c(rc) {
                     di as err "invalid mcompare() option;"
                     di as err "method '`mcompare'' not allowed"
                     error 198
                     }
                   - local METHOD `METHOD' `noadjust' `bonferroni' `duncan' `du
> nnett' `scheffe' `sidak' `snk' `tukey'
                   = local METHOD  noadjust
                   - local METHOD : list uniq METHOD
                   - local ALL `ALL' `adjustall'
                   = local ALL
                   - local ALL : list uniq ALL
                   - opts_exclusive "`METHOD'" `suboption'
                   = opts_exclusive "noadjust" mcompare()
                   ─────────────────────────────────────────────────────────
> ───────────────────────────────── begin opts_exclusive ──────────────────
                   - version 8.2
```

```
                  - args opts optname errcode optslab
                  - local opts `opts'
                  = local opts noadjust
                  - local n 0
                  - while `"`opts'"' != "" {
                  = while `"noadjust"' != "" {
                  - local ++n
                  - gettoken item`n' opts : opts, bind
                  = gettoken item1 opts : opts, bind
                  - }
                  - while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  - if `n' < 2 {
                  = if 1 < 2 {
                  - exit
                  ─────────────────────────────────────────────
```

> ─────────────────────────────────── end opts_exclusive ──────────────

```
                  - if "`METHOD'" == "" {
                  = if "noadjust" == "" {
                    if "`ALL'" != "" {
                    di as err "multiple comparison method required with the ad
```
> justall option"
```
                    exit 198
                    }
                    local METHOD noadjust
                    local noadjust noadjust
                    }
                  - opts_exclusive "`ALL' `noadjust'" `suboption'
                  = opts_exclusive " noadjust" mcompare()
                  ─────────────────────────────────────────────
```

> ───────────────────────────────── begin opts_exclusive ──────────────

```
                  - version 8.2
                  - args opts optname errcode optslab
                  - local opts `opts'
                  = local opts  noadjust
                  - local n 0
                  - while `"`opts'"' != "" {
                  = while `"noadjust"' != "" {
                  - local ++n
                  - gettoken item`n' opts : opts, bind
                  = gettoken item1 opts : opts, bind
                  - }
                  - while `"`opts'"' != "" {
```

```
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    - if `n' < 2 {
                    = if 1 < 2 {
                    - exit

                    ─────────────────────────────────────────────
>   ───────────────────────────── end opts_exclusive ─────────────
                  - local EXCLUDE duncan dunnett snk tukey
                  - if `:list METHOD in EXCLUDE' {
                  = if 0 {
                    if `is_pwc' {
                    local opt : copy local METHOD
                    }
                    else {
                    local opt "mcompare(`METHOD')"
                    }
                    local cmdlist anova manova regress mvreg pwmean
                    if "`cmd'" == "pwcompare" {
                    local cmd `"`e(cmd_est)'"'
                    }
                    if `is_marg' {
                    local cmd margins
                    }
                    if !`:list cmd in cmdlist' | !`is_pwc' {
                    di as err `"method `opt' is not allowed with results from
>  `cmd'"'
                    exit 322
                    }
                    if `"`e(prefix)'"' == "svy" {
                    di as err `"method `opt' is not allowed with results using
>   the svy prefix"'
                    exit 322
                    }
                    local vce `"`e(vce)'"'
                    if !inlist("`vce'", "", "ols") {
                    di as err `"method `opt' is not allowed with results using
>  vce(`vce')"'
                    exit 322
                    }
                    }
                  - local EXCLUDE duncan dunnett snk tukey scheffe
                  - if `:list METHOD in EXCLUDE' {
                  = if 0 {
                    if "`ALL'" != "" {
```

```
                            di as err `"option adjustall is not allowed with method `M
> ETHOD'"'
                            exit 198
                            }
                            }
                - sreturn local method `"`METHOD'"'
                = sreturn local method `"noadjust"'
                - sreturn local adjustall `"`ALL'"'
                = sreturn local adjustall `""'
                ─────────────────────────────────────────────────────────────
>  ─────────────────────────────────────── end _get_mcompare ────────────────
                - local method `"`s(method)'"'
                = local method `"noadjust"'
                - local all `"`s(adjustall)'"'
                = local all `""'
                - local options `"`s(options)'"'
                = local options `"fvwrap(1)"'
                - if "`method'" != "noadjust" {
                = if "noadjust" != "noadjust" {
                  local keepmc 1
                  }
                - opts_exclusive "`all' `groups'"
                = opts_exclusive " "
                ─────────────────────────────────────────────────────────────
>  ─────────────────────────────────────── begin opts_exclusive ─────────────
                  - version 8.2
                  - args opts optname errcode optslab
                  - local opts `opts'
                  = local opts
                  - local n 0
                  - while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  - if `n' < 2 {
                  = if 0 < 2 {
                  - exit
                  ─────────────────────────────────────────────────────────
>  ─────────────────────────────────────── end opts_exclusive ───────────────
                - if "`method'" == "dunnett" {
                = if "noadjust" == "dunnett" {
                  opts_exclusive "`method' `groups'"
                  }
                - _get_diopts diopts options, `options' `fvwrap' `fvlabel'
                = _get_diopts diopts options, fvwrap(1)
```

```
    ──────────────────────────────────────────────────
>  ──────────────────────────────────────── begin _get_diopts ──────────────
            − version 11
            − syntax namelist(max=2) [, *]
            − gettoken name1 namelist : namelist
            − gettoken name2 namelist : namelist
            − GetDiopts diopts options, `options'
            = GetDiopts diopts options, fvwrap(1)
                                      ──────────────────────────────────────
>  ──────────────────────────────── begin _get_diopts.GetDiopts ──────────────
                    − local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLB
> ASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMP
> TYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(st
> ring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru)
>  FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru)
>  NOABBREV ABBREV
                    − syntax namelist(max=2) [, `DIOPTS' *]
                    = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBA
> SElevels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOE
> MPTYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGE
> ND cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVW
> RAP(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CIT
> YPE(passthru) NOABBREV ABBREV *]
                    − opts_exclusive "`allbaselevels' `noallbaselevels'"
                    = opts_exclusive " "
                                      ──────────────────────────────────────
>  ──────────────────────────────── begin opts_exclusive ──────────────
            − version 8.2
            − args opts optname errcode optslab
            − local opts `opts'
            = local opts
            − local n 0
            − while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            − if `n' < 2 {
            = if 0 < 2 {
            − exit
                                      ──────────────────────────────────────
>  ──────────────────────────────── end opts_exclusive ──────────────
            − opts_exclusive "`allbaselevels' `nobaselevels'"
            = opts_exclusive " "

>  ──────────────────────────────── begin opts_exclusive ──────────────
```

```
– version 8.2
– args opts optname errcode optslab
– local opts `opts'
= local opts
– local n 0
– while `"`opts'"' != "" {
= while `""' != "" {
  local ++n
  gettoken item`n' opts : opts, bind
  }
– if `n' < 2 {
= if 0 < 2 {
– exit
```
> ─────────────────────────── end opts_exclusive ───────────────

```
– opts_exclusive "`baselevels' `nobaselevels'"
= opts_exclusive " "
```
> ─────────────────────────── begin opts_exclusive ─────────────

```
– version 8.2
– args opts optname errcode optslab
– local opts `opts'
= local opts
– local n 0
– while `"`opts'"' != "" {
= while `""' != "" {
  local ++n
  gettoken item`n' opts : opts, bind
  }
– if `n' < 2 {
= if 0 < 2 {
– exit
```
> ─────────────────────────── end opts_exclusive ───────────────

```
– opts_exclusive "`emptycells' `noemptycells'"
= opts_exclusive " "
```
> ─────────────────────────── begin opts_exclusive ─────────────

```
– version 8.2
– args opts optname errcode optslab
– local opts `opts'
= local opts
– local n 0
– while `"`opts'"' != "" {
= while `""' != "" {
  local ++n
```

```
                        gettoken item`n' opts : opts, bind
                        }
                      − if `n' < 2 {
                      = if 0 < 2 {
                      − exit
                      ──────────────────────────────────────────
>  ─────────────────────────────── end opts_exclusive ──────────────
              − opts_exclusive "`fvlabel' `nofvlabel'"
              = opts_exclusive " "
                      ──────────────────────────────────────────
>  ─────────────────────────────── begin opts_exclusive ──────────────
              − version 8.2
              − args opts optname errcode optslab
              − local opts `opts'
              = local opts
              − local n 0
              − while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              − if `n' < 2 {
              = if 0 < 2 {
              − exit
                      ──────────────────────────────────────────
>  ─────────────────────────────── end opts_exclusive ──────────────
              − opts_exclusive "`omitted' `noomitted'"
              = opts_exclusive " "
                      ──────────────────────────────────────────
>  ─────────────────────────────── begin opts_exclusive ──────────────
              − version 8.2
              − args opts optname errcode optslab
              − local opts `opts'
              = local opts
              − local n 0
              − while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              − if `n' < 2 {
              = if 0 < 2 {
              − exit
                      ──────────────────────────────────────────
>  ─────────────────────────────── end opts_exclusive ──────────────
              − opts_exclusive "`lstretch' `nolstretch'"
```

```
                    = opts_exclusive " "
                    ─────────────────────────────────────────────
>  ────────────────────────────────────────  begin opts_exclusive  ──────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────────
>  ────────────────────────────────────────  end opts_exclusive  ──────────
                  – opts_exclusive "`cnsreport' `fullcnsreport'"
                  = opts_exclusive " "
                    ─────────────────────────────────────────────
>  ────────────────────────────────────────  begin opts_exclusive  ──────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────────
>  ────────────────────────────────────────  end opts_exclusive  ──────────
                  – opts_exclusive "`coeflegend' `selegend'"
                  = opts_exclusive " "
                    ─────────────────────────────────────────────
>  ────────────────────────────────────────  begin opts_exclusive  ──────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
```

```
                         – while `"`opts'"' != "" {
                         = while `""' != "" {
                           local ++n
                           gettoken item`n' opts : opts, bind
                           }
                         – if `n' < 2 {
                         = if 0 < 2 {
                         – exit
```

```
                 – opts_exclusive "`noci' `nopvalues'"
                 = opts_exclusive " "
```

```
                 – version 8.2
                 – args opts optname errcode optslab
                 – local opts `opts'
                 = local opts
                 – local n 0
                 – while `"`opts'"' != "" {
                 = while `""' != "" {
                   local ++n
                   gettoken item`n' opts : opts, bind
                   }
                 – if `n' < 2 {
                 = if 0 < 2 {
                 – exit
```

```
                 – local K : list sizeof namelist
                 – gettoken c_diopts c_opts : namelist
                 – opts_exclusive "`coding' `compare'"
                 = opts_exclusive " "
```

```
                 – version 8.2
                 – args opts optname errcode optslab
                 – local opts `opts'
                 = local opts
                 – local n 0
                 – while `"`opts'"' != "" {
                 = while `""' != "" {
                   local ++n
                   gettoken item`n' opts : opts, bind
                   }
                 – if `n' < 2 {
```

```
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────
>  ─────────────────────────── end opts_exclusive ───────────
                    – opts_exclusive "`versus' `compare'"
                    = opts_exclusive " "
                    ─────────────────────────────────────────
>  ─────────────────────────── begin opts_exclusive ──────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────
>  ─────────────────────────── end opts_exclusive ───────────
                    – opts_exclusive "`abbrev' `noabbrev'"
                    = opts_exclusive " "
                    ─────────────────────────────────────────
>  ─────────────────────────── begin opts_exclusive ──────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────
>  ─────────────────────────── end opts_exclusive ───────────
                    – local allbaselevels `allbaselevels' `noallbaselevels'
                    = local allbaselevels
                    – local baselevels `baselevels' `nobaselevels'
                    = local baselevels
```

```
- local emptycells `emptycells' `noemptycells'
= local emptycells
- local omitted `omitted' `noomitted'
= local omitted
- local lstretch `lstretch' `nolstretch'
= local lstretch
- local fvlabel `fvlabel' `nofvlabel'
= local fvlabel
- local abbrev `abbrev' `noabbrev'
= local abbrev
- if "`allbaselevels'`baselevels'" == "" {
= if "" == "" {
- if c(showbaselevels) == "all" {
  local allbaselevels allbaselevels
  }
- else if c(showbaselevels) == "on" {
  local baselevels baselevels
  }
- }
- if "`emptycells'" == "" {
= if "" == "" {
- if c(showemptycells) == "off" {
  local emptycells noemptycells
  }
- }
- if "`omitted'" == "" {
= if "" == "" {
- if c(showomitted) == "off" {
  local omitted noomitted
  }
- }
- if "`lstretch'" == "" {
= if "" == "" {
- if c(lstretch) == "off" {
  local lstretch nolstretch
  }
- }
- if `:length local cformat' {
= if 0 {
  confirm numeric format `cformat'
  if fmtwidth(`"`cformat'"') > 9 {
  local cformat "%9.0g"
  di "{txt}note: invalid cformat(), using default"
  }
  sreturn local cformat `"`cformat'"'
  local cformat `"cformat(`cformat')"'
```

```
                              }
                  - if `:length local sformat' {
                  = if 0 {
                    confirm numeric format `sformat'
                    if fmtwidth(`"`sformat'"') > 8 {
                    local sformat "%8.2f"
                    di "{txt}note: invalid sformat(), using default"
                    }
                    sreturn local sformat `"`sformat'"'
                    local sformat `"sformat(`sformat')"'
                    }
                  - if `:length local pformat' {
                  = if 0 {
                    confirm numeric format `pformat'
                    if fmtwidth(`"`pformat'"') > 5 {
                    local pformat "%5.3f"
                    di "{txt}note: invalid pformat(), using default"
                    }
                    sreturn local pformat `"`pformat'"'
                    local pformat `"pformat(`pformat')"'
                    }
                  - if `K' == 1 & `:length local options' {
                  = if 2 == 1 & 0 {
                    syntax namelist(max=2) [, `DIOPTS']
                    }
                  - if reldif(`level', c(level)) > 1e-3 {
                  = if reldif(95, c(level)) > 1e-3 {
                    local levelopt level(`level')
                    }
                  - Wrapon , `fvwrapon'
                  = Wrapon ,
                  ──────────────────────────────────────────────
  > ──────────────────────────── begin _get_diopts.Wrapon ────────────────
                  - capture syntax [, WOrd WIdth]
                  - if c(rc) {
                    di as err "invalid fvwrapon() option;"
                    syntax [, WOrd WIdth]
                    exit 198
                    }
                  - opts_exclusive "`word' `width'" fvwrapon
                  = opts_exclusive " " fvwrapon
                  ──────────────────────────────────────────────
  > ──────────────────────────── begin opts_exclusive ────────────────
                  - version 8.2
                  - args opts optname errcode optslab
                  - local opts `opts'
```

```
                               = local opts
                               – local n 0
                               – while `"`opts'"' != "" {
                               = while `""' != "" {
                                   local ++n
                                   gettoken item`n' opts : opts, bind
                                   }
                               – if `n' < 2 {
                               = if 0 < 2 {
                               – exit
                               ──────────────────────────────────────────────
 >  ─────────────────────────────────── end opts_exclusive ──────────────────
                            – local fvwrapon `word' `width'
                            = local fvwrapon
                            – if `:length local fvwrapon' {
                            = if 0 {
                                c_local fvwrapon fvwrapon(`fvwrapon')
                                }
                               ──────────────────────────────────────────────
 >  ─────────────────────────────────── end _get_diopts.Wrapon ──────────────
                        – if "`fvwrap'" != "" {
                        = if "fvwrap(1)" != "" {
                        – FVWrap, `fvwrap'
                        = FVWrap, fvwrap(1)
                               ──────────────────────────────────────────────
 >  ─────────────────────────────────── begin _get_diopts.FVWrap ────────────
                        – syntax, fvwrap(integer)
                        – if `fvwrap' < 0 {
                        = if 1 < 0 {
                            di as err "{p}invalid option {bf:fvwrap(`fvwrap')}; "
 >  "nonnegative integer required{p_end}"
                            exit 198
                            }
                               ──────────────────────────────────────────────
 >  ─────────────────────────────────── end _get_diopts.FVWrap ──────────────
                     – }
                     – c_local `c_diopts' `levelopt' `vsquish' `allbaselevels'
 >  `baselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `
 >  coeflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `comp
 >  are' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `a
 >  bbrev'
                        = c_local diopts                        fvwrap(1)
                        – if `K' == 2 {
                        = if 2 == 2 {
                        – c_local `c_opts' `"`options'"'
                        = c_local  options `""'
```

```
                     – }
                     – sreturn local coding `coding'
                     = sreturn local coding
                     – sreturn local versus `versus'
                     = sreturn local versus
                     – sreturn local compare `compare'
                     = sreturn local compare
                     – sreturn local level `level'
                     = sreturn local level 95
                   ─────────────────────────────────────────
> ──────────────────────────────── end _get_diopts.GetDiopts ──────────────
                 – c_local `name1' `"`diopts'"'
                 = c_local diopts `"fvwrap(1)"'
                 – local snames : s(macros)
                 – foreach sname of local snames {
                 – local S_`sname' = s(`sname')
                 = local S_level = s(level)
                 – }
                 – local S_`sname' = s(`sname')
                 = local S_method = s(method)
                 – }
                 – local S_`sname' = s(`sname')
                 = local S_options = s(options)
                 – }
                 – sreturn clear
                 – GetDiopts DEFAULT
                   ─────────────────────────────────────────
> ──────────────────────────────── begin _get_diopts.GetDiopts ────────────
                   – local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLB
> ASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMP
> TYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(st
> ring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru)
>  FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru)
>  NOABBREV ABBREV
                   – syntax namelist(max=2) [, `DIOPTS' *]
                   = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBA
> SElevels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOE
> MPTYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGE
> ND cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVW
> RAP(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CIT
> YPE(passthru) NOABBREV ABBREV *]
                 – opts_exclusive "`allbaselevels' `noallbaselevels'"
                 = opts_exclusive " "
                   ─────────────────────────────────────────
> ──────────────────────────────────── begin opts_exclusive ───────────────
                 – version 8.2
```

Friday, January 10, 2025 at 11:33 AM   Page 280

```
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
```

> ────────────────────────────────── end opts_exclusive ─────────────

```
              – opts_exclusive "`allbaselevels' `nobaselevels'"
              = opts_exclusive " "
```

> ────────────────────────────────── begin opts_exclusive ─────────────

```
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
```

> ────────────────────────────────── end opts_exclusive ─────────────

```
          – opts_exclusive "`baselevels' `nobaselevels'"
          = opts_exclusive " "
```

> ────────────────────────────────── begin opts_exclusive ─────────────

```
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
```

```
        }
      — if `n' < 2 {
      = if 0 < 2 {
      — exit
      _____
> ——————————————————— end opts_exclusive ———————————
      — opts_exclusive "`emptycells' `noemptycells'"
      = opts_exclusive " "
      _____
> ——————————————————— begin opts_exclusive ———————————
      — version 8.2
      — args opts optname errcode optslab
      — local opts `opts'
      = local opts
      — local n 0
      — while `"`opts'"' != "" {
      = while `""' != "" {
        local ++n
        gettoken item`n' opts : opts, bind
        }
      — if `n' < 2 {
      = if 0 < 2 {
      — exit
      _____
> ——————————————————— end opts_exclusive ———————————
      — opts_exclusive "`fvlabel' `nofvlabel'"
      = opts_exclusive " "
      _____
> ——————————————————— begin opts_exclusive ———————————
      — version 8.2
      — args opts optname errcode optslab
      — local opts `opts'
      = local opts
      — local n 0
      — while `"`opts'"' != "" {
      = while `""' != "" {
        local ++n
        gettoken item`n' opts : opts, bind
        }
      — if `n' < 2 {
      = if 0 < 2 {
      — exit
      _____
> ——————————————————— end opts_exclusive ———————————
      — opts_exclusive "`omitted' `noomitted'"
      = opts_exclusive " "
```

```
    ──────────────────────────────────────────────────
>   ──────────────────────────────────── begin opts_exclusive ───────────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  ──────────────────────────────────────────────────
>   ──────────────────────────────────── end opts_exclusive ─────────────────
              – opts_exclusive "`lstretch' `nolstretch'"
              = opts_exclusive " "
                  ──────────────────────────────────────────────────
>   ──────────────────────────────────── begin opts_exclusive ───────────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  ──────────────────────────────────────────────────
>   ──────────────────────────────────── end opts_exclusive ─────────────────
              – opts_exclusive "`cnsreport' `fullcnsreport'"
              = opts_exclusive " "
                  ──────────────────────────────────────────────────
>   ──────────────────────────────────── begin opts_exclusive ───────────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
```

```
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        – if `n' < 2 {
                        = if 0 < 2 {
                        – exit
                        ───────────────────────────────────────────
> ───────────────────────────── end opts_exclusive ─────────────
              – opts_exclusive "`coeflegend' `selegend'"
              = opts_exclusive " "
                        ───────────────────────────────────────────
> ───────────────────────────── begin opts_exclusive ───────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
                        ───────────────────────────────────────────
> ───────────────────────────── end opts_exclusive ─────────────
              – opts_exclusive "`noci' `nopvalues'"
              = opts_exclusive " "
                        ───────────────────────────────────────────
> ───────────────────────────── begin opts_exclusive ───────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
                        ───────────────────────────────────────────
```

```
> ─────────────────────────────── end opts_exclusive ───────────────
                − local K : list sizeof namelist
                − gettoken c_diopts c_opts : namelist
                − opts_exclusive "`coding' `compare'"
                = opts_exclusive " "
                ─────────────────────────────────────────────────────
> ───────────────────────────── begin opts_exclusive ───────────────
                − version 8.2
                − args opts optname errcode optslab
                − local opts `opts'
                = local opts
                − local n 0
                − while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                − if `n' < 2 {
                = if 0 < 2 {
                − exit
                ─────────────────────────────────────────────────────
> ─────────────────────────────── end opts_exclusive ───────────────
                − opts_exclusive "`versus' `compare'"
                = opts_exclusive " "
                ─────────────────────────────────────────────────────
> ───────────────────────────── begin opts_exclusive ───────────────
                − version 8.2
                − args opts optname errcode optslab
                − local opts `opts'
                = local opts
                − local n 0
                − while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                − if `n' < 2 {
                = if 0 < 2 {
                − exit
                ─────────────────────────────────────────────────────
> ─────────────────────────────── end opts_exclusive ───────────────
                − opts_exclusive "`abbrev' `noabbrev'"
                = opts_exclusive " "
                ─────────────────────────────────────────────────────
> ───────────────────────────── begin opts_exclusive ───────────────
                − version 8.2
```

```
                  — args opts optname errcode optslab
                  — local opts `opts'
                  = local opts
                  — local n 0
                  — while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  — if `n' < 2 {
                  = if 0 < 2 {
                  — exit
                 _____

  > ———————————————————————————————————————— end opts_exclusive —————————————————
                — local allbaselevels `allbaselevels' `noallbaselevels'
                = local allbaselevels
                — local baselevels `baselevels' `nobaselevels'
                = local baselevels
                — local emptycells `emptycells' `noemptycells'
                = local emptycells
                — local omitted `omitted' `noomitted'
                = local omitted
                — local lstretch `lstretch' `nolstretch'
                = local lstretch
                — local fvlabel `fvlabel' `nofvlabel'
                = local fvlabel
                — local abbrev `abbrev' `noabbrev'
                = local abbrev
                — if "`allbaselevels'`baselevels'" == "" {
                = if "" == "" {
                — if c(showbaselevels) == "all" {
                  local allbaselevels allbaselevels
                  }
                — else if c(showbaselevels) == "on" {
                  local baselevels baselevels
                  }
                — }
                — if "`emptycells'" == "" {
                = if "" == "" {
                — if c(showemptycells) == "off" {
                  local emptycells noemptycells
                  }
                — }
                — if "`omitted'" == "" {
                = if "" == "" {
                — if c(showomitted) == "off" {
```

```
      local omitted noomitted
      }
-     }
-     if "`lstretch'" == "" {
=     if "" == "" {
-     if c(lstretch) == "off" {
      local lstretch nolstretch
      }
-     }
-     if `:length local cformat' {
=     if 0 {
      confirm numeric format `cformat'
      if fmtwidth(`"`cformat'"') > 9 {
      local cformat "%9.0g"
      di "{txt}note: invalid cformat(), using default"
      }
      sreturn local cformat `"`cformat'"'
      local cformat `"cformat(`cformat')"'
      }
-     if `:length local sformat' {
=     if 0 {
      confirm numeric format `sformat'
      if fmtwidth(`"`sformat'"') > 8 {
      local sformat "%8.2f"
      di "{txt}note: invalid sformat(), using default"
      }
      sreturn local sformat `"`sformat'"'
      local sformat `"sformat(`sformat')"'
      }
-     if `:length local pformat' {
=     if 0 {
      confirm numeric format `pformat'
      if fmtwidth(`"`pformat'"') > 5 {
      local pformat "%5.3f"
      di "{txt}note: invalid pformat(), using default"
      }
      sreturn local pformat `"`pformat'"'
      local pformat `"pformat(`pformat')"'
      }
-     if `K' == 1 & `:length local options' {
=     if 1 == 1 & 0 {
      syntax namelist(max=2) [, `DIOPTS']
      }
-     if reldif(`level', c(level)) > 1e-3 {
=     if reldif(95, c(level)) > 1e-3 {
      local levelopt level(`level')
```

```
                        }
                    – Wrapon , `fvwrapon'
                    = Wrapon ,
                    ─────────────────────────────────────────
> ──────────────────────────── begin _get_diopts.Wrapon ───────────────
                    – capture syntax [, WOrd WIdth]
                    – if c(rc) {
                      di as err "invalid fvwrapon() option;"
                      syntax [, WOrd WIdth]
                      exit 198
                      }
                    – opts_exclusive "`word' `width'" fvwrapon
                    = opts_exclusive " " fvwrapon
                    ─────────────────────────────────────────
> ──────────────────────────── begin opts_exclusive ────────────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────
> ──────────────────────────── end opts_exclusive ─────────────────
                    – local fvwrapon `word' `width'
                    = local fvwrapon
                    – if `:length local fvwrapon' {
                    = if 0 {
                      c_local fvwrapon fvwrapon(`fvwrapon')
                      }
                    ─────────────────────────────────────────
> ──────────────────────────── end _get_diopts.Wrapon ─────────────
                  – if "`fvwrap'" != "" {
                  = if "" != "" {
                    FVWrap, `fvwrap'
                    }
                  – c_local `c_diopts' `levelopt' `vsquish' `allbaselevels'
> `baselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `
> coeflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `comp
> are' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `a
```

```
> bbrev'
                   = c_local DEFAULT
                   - if `K' == 2 {
                   = if 1 == 2 {
                     c_local `c_opts' `"`options'"'
                     }
                   - sreturn local coding `coding'
                   = sreturn local coding
                   - sreturn local versus `versus'
                   = sreturn local versus
                   - sreturn local compare `compare'
                   = sreturn local compare
                   - sreturn local level `level'
                   = sreturn local level 95
                   ──────────────────────────────────────────────
> ──────────────────────────── end _get_diopts.GetDiopts ──────────────
                 - if `"`name2'"' == "" {
                 = if `"options"' == "" {
                   GetDiopts DUPS, `options'
                   }
                 - else {
                 - GetDiopts DUPS options, `options'
                 = GetDiopts DUPS options,
                   ──────────────────────────────────────────────
> ──────────────────────────── begin _get_diopts.GetDiopts ──────────────
                 - local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLB
> ASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMP
> TYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(st
> ring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru)
>  FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru)
>  NOABBREV ABBREV
                 - syntax namelist(max=2) [, `DIOPTS' *]
                 = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBA
> SElevels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOE
> MPTYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGE
> ND cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVW
> RAP(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CIT
> YPE(passthru) NOABBREV ABBREV *]
                 - opts_exclusive "`allbaselevels' `noallbaselevels'"
                 = opts_exclusive " "
                   ──────────────────────────────────────────────
> ──────────────────────────── begin opts_exclusive ──────────────
                 - version 8.2
                 - args opts optname errcode optslab
                 - local opts `opts'
                 = local opts
```

```
                          – local n 0
                          – while `"`opts'"' != "" {
                          = while `""' != "" {
                            local ++n
                            gettoken item`n' opts : opts, bind
                            }
                          – if `n' < 2 {
                          = if 0 < 2 {
                          – exit
                          ─────────────────────────────────────────────
>  ─────────────────────────────────────── end opts_exclusive ───────────────
                    – opts_exclusive "`allbaselevels' `nobaselevels'"
                    = opts_exclusive " "
                          ─────────────────────────────────────────────
>  ─────────────────────────────────────── begin opts_exclusive ─────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                          ─────────────────────────────────────────────
>  ─────────────────────────────────────── end opts_exclusive ───────────────
                    – opts_exclusive "`baselevels' `nobaselevels'"
                    = opts_exclusive " "
                          ─────────────────────────────────────────────
>  ─────────────────────────────────────── begin opts_exclusive ─────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
```

```
                        – exit
                        ────────────────────────────────────────
>  ────────────────────────────────  end opts_exclusive  ────────────
            – opts_exclusive "`emptycells' `noemptycells'"
            = opts_exclusive " "
                        ────────────────────────────────────────
>  ──────────────────────────────  begin opts_exclusive  ──────────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
                        ────────────────────────────────────────
>  ────────────────────────────────  end opts_exclusive  ────────────
            – opts_exclusive "`fvlabel' `nofvlabel'"
            = opts_exclusive " "
                        ────────────────────────────────────────
>  ──────────────────────────────  begin opts_exclusive  ──────────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
                        ────────────────────────────────────────
>  ────────────────────────────────  end opts_exclusive  ────────────
            – opts_exclusive "`omitted' `noomitted'"
            = opts_exclusive " "
                        ────────────────────────────────────────
>  ──────────────────────────────  begin opts_exclusive  ──────────────
            – version 8.2
```

```
                        – args opts optname errcode optslab
                        – local opts `opts'
                        = local opts
                        – local n 0
                        – while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        – if `n' < 2 {
                        = if 0 < 2 {
                        – exit
                        ─────────────────────────────────────
> ───────────────────────────────── end opts_exclusive ──────────
                    – opts_exclusive "`lstretch' `nolstretch'"
                    = opts_exclusive " "
                        ─────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ──────────
                        – version 8.2
                        – args opts optname errcode optslab
                        – local opts `opts'
                        = local opts
                        – local n 0
                        – while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        – if `n' < 2 {
                        = if 0 < 2 {
                        – exit
                        ─────────────────────────────────────
> ───────────────────────────────── end opts_exclusive ──────────
                    – opts_exclusive "`cnsreport' `fullcnsreport'"
                    = opts_exclusive " "
                        ─────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ──────────
                        – version 8.2
                        – args opts optname errcode optslab
                        – local opts `opts'
                        = local opts
                        – local n 0
                        – while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
```

```
                }
              — if `n' < 2 {
              = if 0 < 2 {
              — exit
                              ─────────────────────────────────
>  ─────────────────────────── end opts_exclusive ───────────
              — opts_exclusive "`coeflegend' `selegend'"
              = opts_exclusive " "
                              ─────────────────────────────────
>  ─────────────────────────── begin opts_exclusive ──────────
              — version 8.2
              — args opts optname errcode optslab
              — local opts `opts'
              = local opts
              — local n 0
              — while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              — if `n' < 2 {
              = if 0 < 2 {
              — exit
                              ─────────────────────────────────
>  ─────────────────────────── end opts_exclusive ───────────
              — opts_exclusive "`noci' `nopvalues'"
              = opts_exclusive " "
                              ─────────────────────────────────
>  ─────────────────────────── begin opts_exclusive ──────────
              — version 8.2
              — args opts optname errcode optslab
              — local opts `opts'
              = local opts
              — local n 0
              — while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              — if `n' < 2 {
              = if 0 < 2 {
              — exit
                              ─────────────────────────────────
>  ─────────────────────────── end opts_exclusive ───────────
              — local K : list sizeof namelist
              — gettoken c_diopts c_opts : namelist
```

```
                  – opts_exclusive "`coding' `compare'"
              = opts_exclusive " "
              ─────────────────────────────────────────────────
>  ─────────────────────────────── begin opts_exclusive ──────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
              ─────────────────────────────────────────────────
>  ─────────────────────────────── end opts_exclusive ──────────
              – opts_exclusive "`versus' `compare'"
              = opts_exclusive " "
              ─────────────────────────────────────────────────
>  ─────────────────────────────── begin opts_exclusive ──────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
              ─────────────────────────────────────────────────
>  ─────────────────────────────── end opts_exclusive ──────────
              – opts_exclusive "`abbrev' `noabbrev'"
              = opts_exclusive " "
              ─────────────────────────────────────────────────
>  ─────────────────────────────── begin opts_exclusive ──────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
```

```
                            - local n 0
                            - while `"'`opts'"'` != "" {
                            = while `""'` != "" {
                              local ++n
                              gettoken item`n' opts : opts, bind
                              }
                            - if `n' < 2 {
                            = if 0 < 2 {
                            - exit
                            ─────────────────────────────────────────────────
>  ──────────────────────────────────────────── end opts_exclusive ─────────────
                    - local allbaselevels `allbaselevels' `noallbaselevels'
                    = local allbaselevels
                    - local baselevels `baselevels' `nobaselevels'
                    = local baselevels
                    - local emptycells `emptycells' `noemptycells'
                    = local emptycells
                    - local omitted `omitted' `noomitted'
                    = local omitted
                    - local lstretch `lstretch' `nolstretch'
                    = local lstretch
                    - local fvlabel `fvlabel' `nofvlabel'
                    = local fvlabel
                    - local abbrev `abbrev' `noabbrev'
                    = local abbrev
                    - if "`allbaselevels'`baselevels'" == "" {
                    = if "" == "" {
                    - if c(showbaselevels) == "all" {
                      local allbaselevels allbaselevels
                      }
                    - else if c(showbaselevels) == "on" {
                      local baselevels baselevels
                      }
                    - }
                    - if "`emptycells'" == "" {
                    = if "" == "" {
                    - if c(showemptycells) == "off" {
                      local emptycells noemptycells
                      }
                    - }
                    - if "`omitted'" == "" {
                    = if "" == "" {
                    - if c(showomitted) == "off" {
                      local omitted noomitted
                      }
                    - }
```

```
- if "`lstretch'" == "" {
= if "" == "" {
- if c(lstretch) == "off" {
  local lstretch nolstretch
  }
- }
- if `:length local cformat' {
= if 0 {
  confirm numeric format `cformat'
  if fmtwidth(`"`cformat'"') > 9 {
  local cformat "%9.0g"
  di "{txt}note: invalid cformat(), using default"
  }
  sreturn local cformat `"`cformat'"'
  local cformat `"cformat(`cformat')"'
  }
- if `:length local sformat' {
= if 0 {
  confirm numeric format `sformat'
  if fmtwidth(`"`sformat'"') > 8 {
  local sformat "%8.2f"
  di "{txt}note: invalid sformat(), using default"
  }
  sreturn local sformat `"`sformat'"'
  local sformat `"sformat(`sformat')"'
  }
- if `:length local pformat' {
= if 0 {
  confirm numeric format `pformat'
  if fmtwidth(`"`pformat'"') > 5 {
  local pformat "%5.3f"
  di "{txt}note: invalid pformat(), using default"
  }
  sreturn local pformat `"`pformat'"'
  local pformat `"pformat(`pformat')"'
  }
- if `K' == 1 & `:length local options' {
= if 2 == 1 & 0 {
  syntax namelist(max=2) [, `DIOPTS']
  }
- if reldif(`level', c(level)) > 1e-3 {
= if reldif(95, c(level)) > 1e-3 {
  local levelopt level(`level')
  }
- Wrapon , `fvwrapon'
= Wrapon ,
```

```
 ──────────────────────────────────────────────
> ─────────────────────────── begin _get_diopts.Wrapon ──────────────
                    - capture syntax [, WOrd WIdth]
                    - if c(rc) {
                        di as err "invalid fvwrapon() option;"
                        syntax [, WOrd WIdth]
                        exit 198
                        }
                    - opts_exclusive "`word' `width'" fvwrapon
                    = opts_exclusive " " fvwrapon
                                     ──────────────────────────────────────
> ──────────────────────────── begin opts_exclusive ─────────────
                    - version 8.2
                    - args opts optname errcode optslab
                    - local opts `opts'
                    = local opts
                    - local n 0
                    - while `"`opts'"' != "" {
                    = while `""' != "" {
                        local ++n
                        gettoken item`n' opts : opts, bind
                        }
                    - if `n' < 2 {
                    = if 0 < 2 {
                    - exit
                                     ──────────────────────────────────────
> ──────────────────────────── end opts_exclusive ─────────────
                    - local fvwrapon `word' `width'
                    = local fvwrapon
                    - if `:length local fvwrapon' {
                    = if 0 {
                        c_local fvwrapon fvwrapon(`fvwrapon')
                        }
                                     ──────────────────────────────────────
> ──────────────────────────── end _get_diopts.Wrapon ─────────────
                  - if "`fvwrap'" != "" {
                  = if "" != "" {
                      FVWrap, `fvwrap'
                      }
                  - c_local `c_diopts' `levelopt' `vsquish' `allbaselevels'
> `baselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `
> coeflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `comp
> are' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `a
> bbrev'
                  = c_local DUPS
                  - if `K' == 2 {
```

```
                               = if 2 == 2 {
                               – c_local `c_opts' `"`options'"'
                               = c_local  options `""'
                               – }
                               – sreturn local coding `coding'
                               = sreturn local coding
                               – sreturn local versus `versus'
                               = sreturn local versus
                               – sreturn local compare `compare'
                               = sreturn local compare
                               – sreturn local level `level'
                               = sreturn local level 95
                              ─────────────────────────────────────────
> ────────────────────────────── end _get_diopts.GetDiopts ──────────────
                    – c_local `name2' `"`options'"'
                    = c_local options `""'
                    – }
                    – local DUPS : list DUPS – DEFAULT
                    – gettoken DUPS : DUPS
                    – if `"`DUPS'"' != "" {
                    = if `""' != "" {
                      if (strpos(`"`DUPS'"', "(")) {
                      gettoken DUPS : DUPS, parse("(")
                      local DUPS `"`DUPS'()"'
                      }
                      di as err "duplicate {bf:`DUPS'} option not allowed"
                      exit 198
                      }
                    – sreturn clear
                    – foreach sname of local snames {
                    – sreturn local `sname' = `"`S_`sname''"'
                    = sreturn local level = `"95"'
                    – }
                    – sreturn local `sname' = `"`S_`sname''"'
                    = sreturn local method = `"noadjust"'
                    – }
                    – sreturn local `sname' = `"`S_`sname''"'
                    = sreturn local options = `"fvwrap(1)"'
                    – }
                   ─────────────────────────────────────────
> ──────────────────────────────── end _get_diopts ──────────────
               – local legend coeflegend selegend
               – local legend : list legend & diopts
               – local diopts : list diopts – legend
               – local lstretch lstretch nolstretch
               – local lstretch : list lstretch & diopts
```

```
                    - local diopts : list diopts - lstretch
                    - local markdown markdown
                    - local markdown : list markdown & diopts
                    - local diopts : list diopts - markdown
                    - _get_diopts ignore, `diopts' `cformat' `sformat' `pformat'
                    = _get_diopts ignore, fvwrap(1)
                   ─────────────────────────────────────────────

>  ────────────────────────────────── begin _get_diopts ──────────────
                    - version 11
                    - syntax namelist(max=2) [, *]
                    - gettoken name1 namelist : namelist
                    - gettoken name2 namelist : namelist
                    - GetDiopts diopts options, `options'
                    = GetDiopts diopts options, fvwrap(1)
                   ─────────────────────────────────────────────

>  ──────────────────────────────── begin _get_diopts.GetDiopts ──────────────
                    - local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLB
>  ASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMP
>  TYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(st
>  ring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru)
>   FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru)
>   NOABBREV ABBREV
                    - syntax namelist(max=2) [, `DIOPTS' *]
                    = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBA
>  SElevels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOE
>  MPTYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGE
>  ND cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVW
>  RAP(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CIT
>  YPE(passthru) NOABBREV ABBREV *]
                    - opts_exclusive "`allbaselevels' `noallbaselevels'"
                    = opts_exclusive " "
                   ─────────────────────────────────────────────

>  ──────────────────────────────── begin opts_exclusive ──────────────
                    - version 8.2
                    - args opts optname errcode optslab
                    - local opts `opts'
                    = local opts
                    - local n 0
                    - while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    - if `n' < 2 {
                    = if 0 < 2 {
                    - exit
```

```
> ──────────────────────────────────────────────── end opts_exclusive ───────────────
            – opts_exclusive "`allbaselevels' `nobaselevels'"
            = opts_exclusive " "
                        ──────────────────────────────────────────────────────────
> ──────────────────────────────────── begin opts_exclusive ───────────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
                        ──────────────────────────────────────────────────────────
> ──────────────────────────────────────── end opts_exclusive ───────────────
            – opts_exclusive "`baselevels' `nobaselevels'"
            = opts_exclusive " "
                        ──────────────────────────────────────────────────────────
> ──────────────────────────────────── begin opts_exclusive ───────────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
                        ──────────────────────────────────────────────────────────
> ──────────────────────────────────────── end opts_exclusive ───────────────
            – opts_exclusive "`emptycells' `noemptycells'"
            = opts_exclusive " "
                        ──────────────────────────────────────────────────────────
> ──────────────────────────────────── begin opts_exclusive ───────────────
            – version 8.2
            – args opts optname errcode optslab
```

```
                         – local opts `opts'
                         = local opts
                         – local n 0
                         – while `"`opts'"' != "" {
                         = while `""' != "" {
                           local ++n
                           gettoken item`n' opts : opts, bind
                           }
                         – if `n' < 2 {
                         = if 0 < 2 {
                         – exit
```

```
                  – opts_exclusive "`fvlabel' `nofvlabel'"
                  = opts_exclusive " "
```

```
                         – version 8.2
                         – args opts optname errcode optslab
                         – local opts `opts'
                         = local opts
                         – local n 0
                         – while `"`opts'"' != "" {
                         = while `""' != "" {
                           local ++n
                           gettoken item`n' opts : opts, bind
                           }
                         – if `n' < 2 {
                         = if 0 < 2 {
                         – exit
```

```
                  – opts_exclusive "`omitted' `noomitted'"
                  = opts_exclusive " "
```

```
                         – version 8.2
                         – args opts optname errcode optslab
                         – local opts `opts'
                         = local opts
                         – local n 0
                         – while `"`opts'"' != "" {
                         = while `""' != "" {
                           local ++n
                           gettoken item`n' opts : opts, bind
                           }
```

```
                        – if `n' < 2 {
                        = if 0 < 2 {
                        – exit
                        ─────────────────────────────────────────
> ──────────────────────────── end opts_exclusive ─────────────
                  – opts_exclusive "`lstretch' `nolstretch'"
                  = opts_exclusive " "
                        ─────────────────────────────────────────
> ──────────────────────────── begin opts_exclusive ───────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                        ─────────────────────────────────────────
> ──────────────────────────── end opts_exclusive ─────────────
                  – opts_exclusive "`cnsreport' `fullcnsreport'"
                  = opts_exclusive " "
                        ─────────────────────────────────────────
> ──────────────────────────── begin opts_exclusive ───────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                        ─────────────────────────────────────────
> ──────────────────────────── end opts_exclusive ─────────────
                  – opts_exclusive "`coeflegend' `selegend'"
                  = opts_exclusive " "
                        ─────────────────────────────────────────
```

```
> ───────────────────────────── begin opts_exclusive ─────────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  ───────────────────────────────────────────────
> ───────────────────────────── end opts_exclusive ───────────────
              – opts_exclusive "`noci' `nopvalues'"
              = opts_exclusive " "
                  ───────────────────────────────────────────────
> ───────────────────────────── begin opts_exclusive ─────────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  ───────────────────────────────────────────────
> ───────────────────────────── end opts_exclusive ───────────────
              – local K : list sizeof namelist
              – gettoken c_diopts c_opts : namelist
              – opts_exclusive "`coding' `compare'"
              = opts_exclusive " "
                  ───────────────────────────────────────────────
> ───────────────────────────── begin opts_exclusive ─────────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
```

```
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────
> ─────────────────────────── end opts_exclusive ───────────
              – opts_exclusive "`versus' `compare'"
              = opts_exclusive " "
                    ─────────────────────────────────────────
> ──────────────────────── begin opts_exclusive ────────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
                    ─────────────────────────────────────────
> ─────────────────────────── end opts_exclusive ───────────
            – opts_exclusive "`abbrev' `noabbrev'"
            = opts_exclusive " "
                    ─────────────────────────────────────────
> ──────────────────────── begin opts_exclusive ────────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
```

```
  _____
> ──────────────────────────────── end opts_exclusive ────────────────
        – local allbaselevels `allbaselevels' `noallbaselevels'
        = local allbaselevels
        – local baselevels `baselevels' `nobaselevels'
        = local baselevels
        – local emptycells `emptycells' `noemptycells'
        = local emptycells
        – local omitted `omitted' `noomitted'
        = local omitted
        – local lstretch `lstretch' `nolstretch'
        = local lstretch
        – local fvlabel `fvlabel' `nofvlabel'
        = local fvlabel
        – local abbrev `abbrev' `noabbrev'
        = local abbrev
        – if "`allbaselevels'`baselevels'" == "" {
        = if "" == "" {
        – if c(showbaselevels) == "all" {
          local allbaselevels allbaselevels
          }
        – else if c(showbaselevels) == "on" {
          local baselevels baselevels
          }
        – }
        – if "`emptycells'" == "" {
        = if "" == "" {
        – if c(showemptycells) == "off" {
          local emptycells noemptycells
          }
        – }
        – if "`omitted'" == "" {
        = if "" == "" {
        – if c(showomitted) == "off" {
          local omitted noomitted
          }
        – }
        – if "`lstretch'" == "" {
        = if "" == "" {
        – if c(lstretch) == "off" {
          local lstretch nolstretch
          }
        – }
        – if `:length local cformat' {
        = if 0 {
          confirm numeric format `cformat'
```

```
                    if fmtwidth(`"'`cformat'""') > 9 {
                    local cformat "%9.0g"
                    di "{txt}note: invalid cformat(), using default"
                    }
                    sreturn local cformat `"'`cformat'"'
                    local cformat `"cformat(`cformat')"'
                    }
      - if `:length local sformat' {
      = if 0 {
                    confirm numeric format `sformat'
                    if fmtwidth(`"'`sformat'"'') > 8 {
                    local sformat "%8.2f"
                    di "{txt}note: invalid sformat(), using default"
                    }
                    sreturn local sformat `"'`sformat'"'
                    local sformat `"sformat(`sformat')"'
                    }
      - if `:length local pformat' {
      = if 0 {
                    confirm numeric format `pformat'
                    if fmtwidth(`"'`pformat'"'') > 5 {
                    local pformat "%5.3f"
                    di "{txt}note: invalid pformat(), using default"
                    }
                    sreturn local pformat `"'`pformat'"'
                    local pformat `"pformat(`pformat')"'
                    }
      - if `K' == 1 & `:length local options' {
      = if 2 == 1 & 0 {
                    syntax namelist(max=2) [, `DIOPTS']
                    }
      - if reldif(`level', c(level)) > 1e-3 {
      = if reldif(95, c(level)) > 1e-3 {
                    local levelopt level(`level')
                    }
      - Wrapon , `fvwrapon'
      = Wrapon ,
                    ────────────────────────────────────────────────────
  > ───────────────────────────────── begin _get_diopts.Wrapon ─────────────
                    - capture syntax [, WOrd WIdth]
                    - if c(rc) {
                      di as err "invalid fvwrapon() option;"
                      syntax [, WOrd WIdth]
                      exit 198
                      }
                    - opts_exclusive "`word' `width'" fvwrapon
```

```
                          = opts_exclusive " " fvwrapon
                         ────────────────────────────────────────────
>  ──────────────────────────────────── begin opts_exclusive ───────────
                         ─ version 8.2
                         ─ args opts optname errcode optslab
                         ─ local opts `opts'
                         = local opts
                         ─ local n 0
                         ─ while `"`opts'"' != "" {
                         = while `""' != "" {
                           local ++n
                           gettoken item`n' opts : opts, bind
                           }
                         ─ if `n' < 2 {
                         = if 0 < 2 {
                         ─ exit
                         ────────────────────────────────────────────
>  ──────────────────────────────────── end opts_exclusive ─────────────
                       ─ local fvwrapon `word' `width'
                       = local fvwrapon
                       ─ if `:length local fvwrapon' {
                       = if 0 {
                         c_local fvwrapon fvwrapon(`fvwrapon')
                         }
                         ────────────────────────────────────────────
>  ──────────────────────────────────── end _get_diopts.Wrapon ─────────
                     ─ if "`fvwrap'" != "" {
                     = if "fvwrap(1)" != "" {
                     ─ FVWrap, `fvwrap'
                     = FVWrap, fvwrap(1)
                         ────────────────────────────────────────────
>  ──────────────────────────────────── begin _get_diopts.FVWrap ───────
                     ─ syntax, fvwrap(integer)
                     ─ if `fvwrap' < 0 {
                     = if 1 < 0 {
                       di as err "{p}invalid option {bf:fvwrap(`fvwrap')}; "
> "nonnegative integer required{p_end}"
                       exit 198
                       }
                         ────────────────────────────────────────────
>  ──────────────────────────────────── end _get_diopts.FVWrap ─────────
                   ─ }
                   ─ c_local `c_diopts' `levelopt' `vsquish' `allbaselevels'
> `baselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `
> coeflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `comp
> are' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `a
```

```
> bbrev'
                        = c_local diopts                        fvwrap(1)
                        – if `K' == 2 {
                        = if 2 == 2 {
                        – c_local `c_opts' `"`options'"'
                        = c_local  options `""'
                        – }
                        – sreturn local coding `coding'
                        = sreturn local coding
                        – sreturn local versus `versus'
                        = sreturn local versus
                        – sreturn local compare `compare'
                        = sreturn local compare
                        – sreturn local level `level'
                        = sreturn local level 95
                        ───────────────────────────────────────
> ──────────────────────────────── end _get_diopts.GetDiopts ──────────────
                   – c_local `name1' `"`diopts'"'
                   = c_local ignore `"fvwrap(1)"'
                   – local snames : s(macros)
                   – foreach sname of local snames {
                   – local S_`sname' = s(`sname')
                   = local S_level = s(level)
                   – }
                   – local S_`sname' = s(`sname')
                   = local S_options = s(options)
                   – }
                   – local S_`sname' = s(`sname')
                   = local S_method = s(method)
                   – }
                   – sreturn clear
                   – GetDiopts DEFAULT
                        ───────────────────────────────────────
> ──────────────────────────────── begin _get_diopts.GetDiopts ──────────────
                   – local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLB
> ASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMP
> TYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(st
> ring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru)
>  FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru)
>  NOABBREV ABBREV
                   – syntax namelist(max=2) [, `DIOPTS' *]
                   = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBA
> SElevels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOE
> MPTYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGE
> ND cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVW
> RAP(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CIT
```

```
> YPE(passthru) NOABBREV ABBREV *]
                        - opts_exclusive "`allbaselevels' `noallbaselevels'"
                        = opts_exclusive " "
                        ─────────────────────────────────────────────
> ───────────────────────────────────── begin opts_exclusive ─────────────
                        - version 8.2
                        - args opts optname errcode optslab
                        - local opts `opts'
                        = local opts
                        - local n 0
                        - while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        - if `n' < 2 {
                        = if 0 < 2 {
                        - exit
                        ─────────────────────────────────────────────
> ───────────────────────────────────── end opts_exclusive ───────────────
                        - opts_exclusive "`allbaselevels' `nobaselevels'"
                        = opts_exclusive " "
                        ─────────────────────────────────────────────
> ───────────────────────────────────── begin opts_exclusive ─────────────
                        - version 8.2
                        - args opts optname errcode optslab
                        - local opts `opts'
                        = local opts
                        - local n 0
                        - while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        - if `n' < 2 {
                        = if 0 < 2 {
                        - exit
                        ─────────────────────────────────────────────
> ───────────────────────────────────── end opts_exclusive ───────────────
                        - opts_exclusive "`baselevels' `nobaselevels'"
                        = opts_exclusive " "
                        ─────────────────────────────────────────────
> ───────────────────────────────────── begin opts_exclusive ─────────────
                        - version 8.2
                        - args opts optname errcode optslab
                        - local opts `opts'
```

```
                        = local opts
                        – local n 0
                        – while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        – if `n' < 2 {
                        = if 0 < 2 {
                        – exit
                     ───────────────────────────────────────────
>  ─────────────────────────────── end opts_exclusive ──────────────
                – opts_exclusive "`emptycells' `noemptycells'"
                = opts_exclusive " "
                     ───────────────────────────────────────────
>  ────────────────────────────── begin opts_exclusive ──────────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
                     ───────────────────────────────────────────
>  ─────────────────────────────── end opts_exclusive ──────────────
                – opts_exclusive "`fvlabel' `nofvlabel'"
                = opts_exclusive " "
                     ───────────────────────────────────────────
>  ────────────────────────────── begin opts_exclusive ──────────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
```

```
                       = if 0 < 2 {
                       – exit
                       ─────────────────────────────────────────────
>  ───────────────────────────────── end opts_exclusive ─────────────
               – opts_exclusive "`omitted' `noomitted'"
               = opts_exclusive " "
                       ─────────────────────────────────────────────
>  ─────────────────────────────── begin opts_exclusive ─────────────
               – version 8.2
               – args opts optname errcode optslab
               – local opts `opts'
               = local opts
               – local n 0
               – while `"`opts'"' != "" {
               = while `""' != "" {
                 local ++n
                 gettoken item`n' opts : opts, bind
                 }
               – if `n' < 2 {
               = if 0 < 2 {
               – exit
                       ─────────────────────────────────────────────
>  ───────────────────────────────── end opts_exclusive ─────────────
               – opts_exclusive "`lstretch' `nolstretch'"
               = opts_exclusive " "
                       ─────────────────────────────────────────────
>  ─────────────────────────────── begin opts_exclusive ─────────────
               – version 8.2
               – args opts optname errcode optslab
               – local opts `opts'
               = local opts
               – local n 0
               – while `"`opts'"' != "" {
               = while `""' != "" {
                 local ++n
                 gettoken item`n' opts : opts, bind
                 }
               – if `n' < 2 {
               = if 0 < 2 {
               – exit
                       ─────────────────────────────────────────────
>  ───────────────────────────────── end opts_exclusive ─────────────
               – opts_exclusive "`cnsreport' `fullcnsreport'"
               = opts_exclusive " "
                       ─────────────────────────────────────────────
>  ─────────────────────────────── begin opts_exclusive ─────────────
```

```
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────────
>   ───────────────────────────────── end opts_exclusive ──────────
                  – opts_exclusive "`coeflegend' `selegend'"
                  = opts_exclusive " "
                    ─────────────────────────────────────────────
>   ───────────────────────────────── begin opts_exclusive ──────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                    ─────────────────────────────────────────────
>   ───────────────────────────────── end opts_exclusive ──────────
                  – opts_exclusive "`noci' `nopvalues'"
                  = opts_exclusive " "
                    ─────────────────────────────────────────────
>   ───────────────────────────────── begin opts_exclusive ──────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
```

```
                  gettoken item`n' opts : opts, bind
                  }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
                ───────────────────────────────────────────
> ─────────────────────────── end opts_exclusive ──────────────
              – local K : list sizeof namelist
              – gettoken c_diopts c_opts : namelist
              – opts_exclusive "`coding' `compare'"
              = opts_exclusive " "
                ───────────────────────────────────────────
> ─────────────────────────── begin opts_exclusive ────────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
                ───────────────────────────────────────────
> ─────────────────────────── end opts_exclusive ──────────────
              – opts_exclusive "`versus' `compare'"
              = opts_exclusive " "
                ───────────────────────────────────────────
> ─────────────────────────── begin opts_exclusive ────────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
                ───────────────────────────────────────────
```

```
> ─────────────────────────────── end opts_exclusive ───────────────
                  – opts_exclusive "`abbrev' `noabbrev'"
                  = opts_exclusive " "
                      ─────────────────────────────────────────────

> ───────────────────────────────── begin opts_exclusive ───────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit

                      ─────────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ──────────────
                  – local allbaselevels `allbaselevels' `noallbaselevels'
                  = local allbaselevels
                  – local baselevels `baselevels' `nobaselevels'
                  = local baselevels
                  – local emptycells `emptycells' `noemptycells'
                  = local emptycells
                  – local omitted `omitted' `noomitted'
                  = local omitted
                  – local lstretch `lstretch' `nolstretch'
                  = local lstretch
                  – local fvlabel `fvlabel' `nofvlabel'
                  = local fvlabel
                  – local abbrev `abbrev' `noabbrev'
                  = local abbrev
                  – if "`allbaselevels'`baselevels'" == "" {
                  = if "" == "" {
                  – if c(showbaselevels) == "all" {
                    local allbaselevels allbaselevels
                    }
                  – else if c(showbaselevels) == "on" {
                    local baselevels baselevels
                    }
                  – }
                  – if "`emptycells'" == "" {
                  = if "" == "" {
                  – if c(showemptycells) == "off" {
```

```
                      local emptycells noemptycells
                      }
-                     }
-             if "`omitted'" == "" {
=             if "" == "" {
-             if c(showomitted) == "off" {
              local omitted noomitted
              }
-             }
-             if "`lstretch'" == "" {
=             if "" == "" {
-             if c(lstretch) == "off" {
              local lstretch nolstretch
              }
-             }
-             if `:length local cformat' {
=             if 0 {
              confirm numeric format `cformat'
              if fmtwidth(`"`cformat'"') > 9 {
              local cformat "%9.0g"
              di "{txt}note: invalid cformat(), using default"
              }
              sreturn local cformat `"`cformat'"'
              local cformat `"cformat(`cformat')"'
              }
-             if `:length local sformat' {
=             if 0 {
              confirm numeric format `sformat'
              if fmtwidth(`"`sformat'"') > 8 {
              local sformat "%8.2f"
              di "{txt}note: invalid sformat(), using default"
              }
              sreturn local sformat `"`sformat'"'
              local sformat `"sformat(`sformat')"'
              }
-             if `:length local pformat' {
=             if 0 {
              confirm numeric format `pformat'
              if fmtwidth(`"`pformat'"') > 5 {
              local pformat "%5.3f"
              di "{txt}note: invalid pformat(), using default"
              }
              sreturn local pformat `"`pformat'"'
              local pformat `"pformat(`pformat')"'
              }
-             if `K' == 1 & `:length local options' {
```

```
                      = if 1 == 1 & 0 {
                        syntax namelist(max=2) [, `DIOPTS']
                        }
                      - if reldif(`level', c(level)) > 1e-3 {
                      = if reldif(95, c(level)) > 1e-3 {
                        local levelopt level(`level')
                        }
                      - Wrapon , `fvwrapon'
                      = Wrapon ,
                        ─────────────────────────────────────────────────────
> ──────────────────────────── begin _get_diopts.Wrapon ──────────────
                      - capture syntax [, WOrd WIdth]
                      - if c(rc) {
                        di as err "invalid fvwrapon() option;"
                        syntax [, WOrd WIdth]
                        exit 198
                        }
                      - opts_exclusive "`word' `width'" fvwrapon
                      = opts_exclusive " " fvwrapon
                        ─────────────────────────────────────────────────────
> ──────────────────────────── begin opts_exclusive ──────────────────
                      - version 8.2
                      - args opts optname errcode optslab
                      - local opts `opts'
                      = local opts
                      - local n 0
                      - while `"`opts'"' != "" {
                      = while `""' != "" {
                        local ++n
                        gettoken item`n' opts : opts, bind
                        }
                      - if `n' < 2 {
                      = if 0 < 2 {
                      - exit
                        ─────────────────────────────────────────────────────
> ──────────────────────────── end opts_exclusive ────────────────────
                      - local fvwrapon `word' `width'
                      = local fvwrapon
                      - if `:length local fvwrapon' {
                      = if 0 {
                        c_local fvwrapon fvwrapon(`fvwrapon')
                        }
                        ─────────────────────────────────────────────────────
> ──────────────────────────── end _get_diopts.Wrapon ────────────────
                      - if "`fvwrap'" != "" {
                      = if "" != "" {
```

```
                          FVWrap, `fvwrap'
                          }
                        – c_local `c_diopts' `levelopt' `vsquish' `allbaselevels'
> `baselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `
> coeflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `comp
> are' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `a
> bbrev'
                        = c_local DEFAULT
                        – if `K' == 2 {
                        = if 1 == 2 {
                          c_local `c_opts' `"`options'"'
                          }
                        – sreturn local coding `coding'
                        = sreturn local coding
                        – sreturn local versus `versus'
                        = sreturn local versus
                        – sreturn local compare `compare'
                        = sreturn local compare
                        – sreturn local level `level'
                        = sreturn local level 95
                        ───────────────────────────────────────────
> ───────────────────────── end _get_diopts.GetDiopts ─────────────
                    – if `"`name2'"' == "" {
                    = if `""' == "" {
                    – GetDiopts DUPS, `options'
                    = GetDiopts DUPS,
                        ───────────────────────────────────────────
> ──────────────────────── begin _get_diopts.GetDiopts ────────────
                        – local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLB
> ASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMP
> TYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(st
> ring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru)
>  FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru)
>  NOABBREV ABBREV
                        – syntax namelist(max=2) [, `DIOPTS' *]
                        = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBA
> SElevels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOE
> MPTYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGE
> ND cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVW
> RAP(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CIT
> YPE(passthru) NOABBREV ABBREV *]
                        – opts_exclusive "`allbaselevels' `noallbaselevels'"
                        = opts_exclusive " "
                        ───────────────────────────────────────────
> ──────────────────────────── begin opts_exclusive ───────────────
                        – version 8.2
```

```
                     – args opts optname errcode optslab
                     – local opts `opts'
                     = local opts
                     – local n 0
                     – while `"`opts'"' != "" {
                     = while `""' != "" {
                       local ++n
                       gettoken item`n' opts : opts, bind
                       }
                     – if `n' < 2 {
                     = if 0 < 2 {
                     – exit
                     ─────────────────────────────────────
  > ───────────────────────────── end opts_exclusive ─────────────
              – opts_exclusive "`allbaselevels' `nobaselevels'"
              = opts_exclusive " "
                     ─────────────────────────────────────
  > ───────────────────────────── begin opts_exclusive ──────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
                     ─────────────────────────────────────
  > ───────────────────────────── end opts_exclusive ─────────────
              – opts_exclusive "`baselevels' `nobaselevels'"
              = opts_exclusive " "
                     ─────────────────────────────────────
  > ───────────────────────────── begin opts_exclusive ──────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
```

```
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
                _____
>  _____ end opts_exclusive _____
              – opts_exclusive "`emptycells' `noemptycells'"
              = opts_exclusive " "
                _____
>  _____ begin opts_exclusive _____
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
                _____
>  _____ end opts_exclusive _____
              – opts_exclusive "`fvlabel' `nofvlabel'"
              = opts_exclusive " "
                _____
>  _____ begin opts_exclusive _____
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
                _____
>  _____ end opts_exclusive _____
              – opts_exclusive "`omitted' `noomitted'"
              = opts_exclusive " "
```

```
> ———————————————————————————— begin opts_exclusive ——————————
                 – version 8.2
                 – args opts optname errcode optslab
                 – local opts `opts'
                 = local opts
                 – local n 0
                 – while `"`opts'"' != "" {
                 = while `""' != "" {
                   local ++n
                   gettoken item`n' opts : opts, bind
                   }
                 – if `n' < 2 {
                 = if 0 < 2 {
                 – exit

> ———————————————————————————— end opts_exclusive ——————————
               – opts_exclusive "`lstretch' `nolstretch'"
               = opts_exclusive " "

> ———————————————————————————— begin opts_exclusive ——————————
                 – version 8.2
                 – args opts optname errcode optslab
                 – local opts `opts'
                 = local opts
                 – local n 0
                 – while `"`opts'"' != "" {
                 = while `""' != "" {
                   local ++n
                   gettoken item`n' opts : opts, bind
                   }
                 – if `n' < 2 {
                 = if 0 < 2 {
                 – exit

> ———————————————————————————— end opts_exclusive ——————————
               – opts_exclusive "`cnsreport' `fullcnsreport'"
               = opts_exclusive " "

> ———————————————————————————— begin opts_exclusive ——————————
                 – version 8.2
                 – args opts optname errcode optslab
                 – local opts `opts'
                 = local opts
                 – local n 0
                 – while `"`opts'"' != "" {
```

```
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        - if `n' < 2 {
                        = if 0 < 2 {
                        - exit
                          ─────────────────────────────────────────
 > ───────────────────────────────── end opts_exclusive ──────────
                    - opts_exclusive "`coeflegend' `selegend'"
                    = opts_exclusive " "
                          ─────────────────────────────────────────
 > ───────────────────────────────── begin opts_exclusive ────────
                        - version 8.2
                        - args opts optname errcode optslab
                        - local opts `opts'
                        = local opts
                        - local n 0
                        - while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        - if `n' < 2 {
                        = if 0 < 2 {
                        - exit
                          ─────────────────────────────────────────
 > ───────────────────────────────── end opts_exclusive ──────────
                    - opts_exclusive "`noci' `nopvalues'"
                    = opts_exclusive " "
                          ─────────────────────────────────────────
 > ───────────────────────────────── begin opts_exclusive ────────
                        - version 8.2
                        - args opts optname errcode optslab
                        - local opts `opts'
                        = local opts
                        - local n 0
                        - while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        - if `n' < 2 {
                        = if 0 < 2 {
                        - exit
                          ─────────────────────────────────────────
```

```
> ———————————————————————————— end opts_exclusive ————————————
              – local K : list sizeof namelist
              – gettoken c_diopts c_opts : namelist
              – opts_exclusive "`coding' `compare'"
              = opts_exclusive " "
              ————————————————————————————————————————————
> ———————————————————————————— begin opts_exclusive ————————————
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
              ————————————————————————————————————————————
> ———————————————————————————— end opts_exclusive ————————————
              – opts_exclusive "`versus' `compare'"
              = opts_exclusive " "
              ————————————————————————————————————————————
> ———————————————————————————— begin opts_exclusive ————————————
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
              ————————————————————————————————————————————
> ———————————————————————————— end opts_exclusive ————————————
              – opts_exclusive "`abbrev' `noabbrev'"
              = opts_exclusive " "
              ————————————————————————————————————————————
> ———————————————————————————— begin opts_exclusive ————————————
              – version 8.2
```

```
                          - args opts optname errcode optslab
                          - local opts `opts'
                          = local opts
                          - local n 0
                          - while `"`opts'"' != "" {
                          = while `""' != "" {
                            local ++n
                            gettoken item`n' opts : opts, bind
                            }
                          - if `n' < 2 {
                          = if 0 < 2 {
                          - exit
                        ─────────────────────────────────────────────
  > ──────────────────────────────────── end opts_exclusive ────────────────
                    - local allbaselevels `allbaselevels' `noallbaselevels'
                    = local allbaselevels
                    - local baselevels `baselevels' `nobaselevels'
                    = local baselevels
                    - local emptycells `emptycells' `noemptycells'
                    = local emptycells
                    - local omitted `omitted' `noomitted'
                    = local omitted
                    - local lstretch `lstretch' `nolstretch'
                    = local lstretch
                    - local fvlabel `fvlabel' `nofvlabel'
                    = local fvlabel
                    - local abbrev `abbrev' `noabbrev'
                    = local abbrev
                    - if "`allbaselevels'`baselevels'" == "" {
                    = if "" == "" {
                    - if c(showbaselevels) == "all" {
                      local allbaselevels allbaselevels
                      }
                    - else if c(showbaselevels) == "on" {
                      local baselevels baselevels
                      }
                    - }
                    - if "`emptycells'" == "" {
                    = if "" == "" {
                    - if c(showemptycells) == "off" {
                      local emptycells noemptycells
                      }
                    - }
                    - if "`omitted'" == "" {
                    = if "" == "" {
                    - if c(showomitted) == "off" {
```

```
     local omitted noomitted
     }
  -  }
  -  if "`lstretch'" == "" {
  =  if "" == "" {
  -  if c(lstretch) == "off" {
     local lstretch nolstretch
     }
  -  }
  -  if `:length local cformat' {
  =  if 0 {
     confirm numeric format `cformat'
     if fmtwidth(`"`cformat'"') > 9 {
     local cformat "%9.0g"
     di "{txt}note: invalid cformat(), using default"
     }
     sreturn local cformat `"`cformat'"'
     local cformat `"cformat(`cformat')"'
     }
  -  if `:length local sformat' {
  =  if 0 {
     confirm numeric format `sformat'
     if fmtwidth(`"`sformat'"') > 8 {
     local sformat "%8.2f"
     di "{txt}note: invalid sformat(), using default"
     }
     sreturn local sformat `"`sformat'"'
     local sformat `"sformat(`sformat')"'
     }
  -  if `:length local pformat' {
  =  if 0 {
     confirm numeric format `pformat'
     if fmtwidth(`"`pformat'"') > 5 {
     local pformat "%5.3f"
     di "{txt}note: invalid pformat(), using default"
     }
     sreturn local pformat `"`pformat'"'
     local pformat `"pformat(`pformat')"'
     }
  -  if `K' == 1 & `:length local options' {
  =  if 1 == 1 & 0 {
     syntax namelist(max=2) [, `DIOPTS']
     }
  -  if reldif(`level', c(level)) > 1e-3 {
  =  if reldif(95, c(level)) > 1e-3 {
     local levelopt level(`level')
```

```
                                    }
                            ─ Wrapon , `fvwrapon'
                            = Wrapon ,
                            ──────────────────────────────────────────
    > ──────────────────────────── begin _get_diopts.Wrapon ────────────
                            ─ capture syntax [, WOrd WIdth]
                            ─ if c(rc) {
                              di as err "invalid fvwrapon() option;"
                              syntax [, WOrd WIdth]
                              exit 198
                              }
                            ─ opts_exclusive "`word' `width'" fvwrapon
                            = opts_exclusive " " fvwrapon
                            ──────────────────────────────────────────
    > ──────────────────────────── begin opts_exclusive ────────────────
                            ─ version 8.2
                            ─ args opts optname errcode optslab
                            ─ local opts `opts'
                            = local opts
                            ─ local n 0
                            ─ while `"`opts'"' != "" {
                            = while `""' != "" {
                              local ++n
                              gettoken item`n' opts : opts, bind
                              }
                            ─ if `n' < 2 {
                            = if 0 < 2 {
                            ─ exit
                            ──────────────────────────────────────────
    > ──────────────────────────── end opts_exclusive ──────────────────
                            ─ local fvwrapon `word' `width'
                            = local fvwrapon
                            ─ if `:length local fvwrapon' {
                            = if 0 {
                              c_local fvwrapon fvwrapon(`fvwrapon')
                              }
                            ──────────────────────────────────────────
    > ──────────────────────────── end _get_diopts.Wrapon ──────────────
                            ─ if "`fvwrap'" != "" {
                            = if "" != "" {
                              FVWrap, `fvwrap'
                              }
                            ─ c_local `c_diopts' `levelopt' `vsquish' `allbaselevels'
    > `baselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `
    > coeflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `comp
    > are' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `a
```

```
> bbrev'
                        = c_local DUPS
                        - if `K' == 2 {
                        = if 1 == 2 {
                          c_local `c_opts' `"`options'"'
                          }
                        - sreturn local coding `coding'
                        = sreturn local coding
                        - sreturn local versus `versus'
                        = sreturn local versus
                        - sreturn local compare `compare'
                        = sreturn local compare
                        - sreturn local level `level'
                        = sreturn local level 95
                        ─────────────────────────────────────────────
> ───────────────────────────── end _get_diopts.GetDiopts ──────────────
                      - }
                      - else {
                        GetDiopts DUPS options, `options'
                        c_local `name2' `"`options'"'
                        }
                      - local DUPS : list DUPS - DEFAULT
                      - gettoken DUPS : DUPS
                      - if `"`DUPS'"' != "" {
                      = if `""' != "" {
                        if (strpos(`"`DUPS'"', "(")) {
                        gettoken DUPS : DUPS, parse("(")
                        local DUPS `"`DUPS'()"'
                        }
                        di as err "duplicate {bf:`DUPS'} option not allowed"
                        exit 198
                        }
                      - sreturn clear
                      - foreach sname of local snames {
                      - sreturn local `sname' = `"`S_`sname''"'
                      = sreturn local level = `"95"'
                      - }
                      - sreturn local `sname' = `"`S_`sname''"'
                      = sreturn local options = `"fvwrap(1)"'
                      - }
                      - sreturn local `sname' = `"`S_`sname''"'
                      = sreturn local method = `"noadjust"'
                      - }
                        ─────────────────────────────────────────────
> ───────────────────────────── end _get_diopts ────────────────
              - local cformat `"`s(cformat)'"'
```

```
              = local cformat `""'
              - local sformat `"`s(sformat)'"'
              = local sformat `""'
              - local pformat `"`s(pformat)'"'
              = local pformat `""'
              - _get_eformopts , eformopts(`options') allowed(__all__) sopti
> ons
              = _get_eformopts , eformopts() allowed(__all__) soptions
                ─────────────────────────────────────────────────────────
> ─────────────────────────────────────── begin _get_eformopts ───────────────
              - version 8.0
              - syntax [, eformopts(string asis) soptions ALLOWed(string)
> ]
              - local 0 , `eformopts'
              = local 0 ,
              - local EFALL NOHR hr NOSHR shr or IRr RRr tr TRatio
              - if "`soptions'" != "" {
              = if "soptions" != "" {
              - syntax [, EForm1(passthru) EForm `EFALL' * ]
              = syntax [, EForm1(passthru) EForm NOHR hr NOSHR shr or IRr
> RRr tr TRatio * ]
              - local opts `"`options'"'
              = local opts `""'
              - local 0 , `eform1' `eform' `nohr' `hr' `noshr' `shr' `or'
> `irr' `rrr' `tr' `tratio'
              = local 0 ,
              - }
              - if "`allowed'" == "__all__" {
              = if "__all__" == "__all__" {
              - local allowed `EFALL'
              = local allowed NOHR hr NOSHR shr or IRr RRr tr TRatio
              - }
              - foreach ef of local allowed {
              - capture confirm name `ef'
              = capture confirm name NOHR
              - if _rc {
                di as err "`ef' is not a valid name"
                exit 198
                }
              - local efopts `efopts' `=lower("`ef'")'
              = local efopts  nohr
              - }
              - capture confirm name `ef'
              = capture confirm name hr
              - if _rc {
                di as err "`ef' is not a valid name"
```

```
      exit 198
      }
 - local efopts `efopts' `=lower("`ef'")'
 = local efopts nohr hr
 - }
 - capture confirm name `ef'
 = capture confirm name NOSHR
 - if _rc {
   di as err "`ef' is not a valid name"
   exit 198
   }
 - local efopts `efopts' `=lower("`ef'")'
 = local efopts nohr hr noshr
 - }
 - capture confirm name `ef'
 = capture confirm name shr
 - if _rc {
   di as err "`ef' is not a valid name"
   exit 198
   }
 - local efopts `efopts' `=lower("`ef'")'
 = local efopts nohr hr noshr shr
 - }
 - capture confirm name `ef'
 = capture confirm name or
 - if _rc {
   di as err "`ef' is not a valid name"
   exit 198
   }
 - local efopts `efopts' `=lower("`ef'")'
 = local efopts nohr hr noshr shr or
 - }
 - capture confirm name `ef'
 = capture confirm name IRr
 - if _rc {
   di as err "`ef' is not a valid name"
   exit 198
   }
 - local efopts `efopts' `=lower("`ef'")'
 = local efopts nohr hr noshr shr or irr
 - }
 - capture confirm name `ef'
 = capture confirm name RRr
 - if _rc {
   di as err "`ef' is not a valid name"
   exit 198
```

```
                          }
                        – local efopts `efopts' `=lower("`ef'")'
                        = local efopts nohr hr noshr shr or irr rrr
                        – }
                        – capture confirm name `ef'
                        = capture confirm name tr
                        – if _rc {
                          di as err "`ef' is not a valid name"
                          exit 198
                          }
                        – local efopts `efopts' `=lower("`ef'")'
                        = local efopts nohr hr noshr shr or irr rrr tr
                        – }
                        – capture confirm name `ef'
                        = capture confirm name TRatio
                        – if _rc {
                          di as err "`ef' is not a valid name"
                          exit 198
                          }
                        – local efopts `efopts' `=lower("`ef'")'
                        = local efopts nohr hr noshr shr or irr rrr tr tratio
                        – }
                        – local efopts : list uniq efopts
                        – syntax [, EForm1(string) EForm `allowed' ]
                        = syntax [, EForm1(string) EForm NOHR hr NOSHR shr or IRr RR
> r tr TRatio ]
                        – foreach ef of local efopts {
                        – local eform `eform' ``ef''
                        = local eform
                        – }
                        – local eform `eform' ``ef''
                        = local eform
                        – }
                        – local eform `eform' ``ef''
                        = local eform
                        – }
                        – local eform `eform' ``ef''
                        = local eform
                        – }
                        – local eform `eform' ``ef''
                        = local eform
                        – }
                        – local eform `eform' ``ef''
                        = local eform
                        – }
                        – local eform `eform' ``ef''
```

```
=   local eform
-   }
-   local eform `eform' ``ef''
=   local eform
-   }
-   local eform `eform' ``ef''
=   local eform
-   }
-   if `"`eform1'"'=="Odds ratio" {
=   if `""'=="Odds ratio" {
    local eform_cons_ti = "Odds"
    local eform_cons_note = "odds ratios"
    }
-   else if `"`eform1'"'=="Haz. ratio" {
=   else if `""'=="Haz. ratio" {
    local eform_cons_ti = "Hazard"
    local eform_cons_note = "hazard ratios"
    }
-   else if `"`eform1'"'=="Time ratio" {
=   else if `""'=="Time ratio" {
    local eform_cons_ti = "Time"
    local eform_cons_note = "time ratios"
    }
-   else if `"`eform1'"'=="IRR" {
=   else if `""'=="IRR" {
    local eform_cons_ti = "Inc. rate"
    local eform_cons_note = "incidence-rate ratios"
    local eform_cons_ti2 = "incidence rate"
    }
-   else if `"`eform1'"'=="Risk ratio" {
=   else if `""'=="Risk ratio" {
    local eform_cons_ti = "Risk"
    local eform_cons_note = "risk ratios"
    }
-   else if `"`eform1'"'=="Hlth ratio" {
=   else if `""'=="Hlth ratio" {
    local eform_cons_ti = "Health"
    local eform_cons_note = "health ratios"
    }
-   local k : list sizeof eform
-   if `k' {
=   if 0 {
    opts_exclusive "`eform'"
    if `:length local eform1' {
    opts_exclusive "eform() `eform'"
    }
```

```
                                }
                            - if `k' {
                            = if 0 {
                                if ("`eform'"=="eform") local eform1 = "exp(b)"
                                else if ("`eform'"=="hr") {
                                local eform1 = "Haz. ratio"
                                local eform_cons_ti = "Hazard"
                                local eform_cons_note = "hazard ratios"
                                }
                                else if ("`eform'"=="shr") {
                                local eform1 = "SHR"
                                local eform_cons_ti = "Subhazard"
                                local eform_cons_note = "subhazard ratios"
                                }
                                else if ("`eform'"=="tr") {
                                local eform1 = "Time ratio"
                                local eform_cons_ti = "Time"
                                local eform_cons_note = "time ratios"
                                }
                                else if ("`eform'"=="tratio") {
                                local eform1 = "Time ratio"
                                local eform_cons_ti = "Time"
                                local eform_cons_note = "time ratios"
                                }
                                else if ("`eform'"=="or") {
                                local eform1 = "Odds ratio"
                                if ("`e(cmd)'"=="asclogit" | "`e(cmd)'"=="cmclogit" | "`e(
> cmd)'"=="cmmixlogit" | "`e(cmd)'"=="cmxtmixlogit" ) {
                                local eform_cons_ti = "Rel. risk"
                                local eform_cons_note = "relative-risk ratios"
                                local eform_cons_ti2 = "relative risk"
                                }
                                else {
                                local eform_cons_ti = "Odds"
                                local eform_cons_note = "odds ratios"
                                }
                                }
                                else if ("`eform'"=="irr") {
                                local eform1 = "IRR"
                                local eform_cons_ti = "Inc. rate"
                                local eform_cons_note = "incidence-rate ratios"
                                local eform_cons_ti2 = "incidence rate"
                                }
                                else if ("`eform'"=="rrr") {
                                local eform1 = "RRR"
                                local eform_cons_ti = "Rel. risk"
```

```
                      local eform_cons_note = "relative-risk ratios"
                      local eform_cons_ti2 = "relative risk"
                      }
                      else if ("`eform'"!="nohr") & ("`eform'"!="noshr") {
                      local eform1 = upper("`eform'")
                      }
                      }
            - sreturn clear
            - sreturn local options `"`opts'"'
            = sreturn local options `""'
            - sreturn local opt `eform'
            = sreturn local opt
            - sreturn local str `eform1'
            = sreturn local str
            - if `"`eform1'"' != "" {
            = if `""' != "" {
              sreturn local eform eform(`"`eform1'"')
              }
            - else sreturn local eform ""
            - sreturn local eform_cons_ti `eform_cons_ti'
            = sreturn local eform_cons_ti
            - sreturn local eform_cons_note `eform_cons_note'
            = sreturn local eform_cons_note
            - sreturn local eform_cons_ti2 `eform_cons_ti2'
            = sreturn local eform_cons_ti2
              ─────────────────────────────────────────────────
  > ─────────────────────────────────── end _get_eformopts ───────────────
            - local tr_item = `"`s(eform_cons_note)'"'
            = local tr_item = `""'
            - if inlist("`bmatrix'", "", "e(b)") & "`e(k_eform)'" == "0" {
            = if inlist("", "", "e(b)") & "" == "0" {
              local eform
              }
            - else local eform `"`s(str)'"'
            = else local eform `""'
            - local eform_cons_ti `"`s(eform_cons_ti)'"'
            = local eform_cons_ti `""'
            - local eform_cons_ti2 `"`s(eform_cons_ti2)'"'
            = local eform_cons_ti2 `""'
            - if ("`e(consonly)'"!="1" | `"`eform_cons_ti'"'=="") {
            = if (""!="1" | `""'=="") {
            - local eformdi `"`s(str)'"'
            = local eformdi `""'
            - }
            - else {
              local eformdi `"`eform_cons_ti'"'
```

```
                  local tr_item = cond(missing("`eform_cons_ti2'"), strlower(`
> "`eform_cons_ti'"'), `"`eform_cons_ti2'"')
                  }
              – local coefttl = cond(`"`eform'"'==`""', `"`coeftitle'"', `"`
> eformdi'"')
              = local coefttl = cond(`""'==`""', `""', `""')
              – local options `"`s(options)'"'
              = local options `""'
              – _get_diparmopts, diparmopts(`options') level(`level')
              = _get_diparmopts, diparmopts() level(95)
              ─────────────────────────────────────────────────────────────
> ───────────────────────────── begin _get_diparmopts ─────────────────
              – if _caller() < 8.2 {
                _get_diparmopts_8 `0'
                exit
                }
              – version 9
              – local version : di "version " string(_caller()) ":"
              – syntax [, diparmopts(string asis) EXECute soptions bottom
> plus SYNTAXonly * ]
              – local goptions `options'
              = local goptions level(95)
              – SpliceGlobals junk , `goptions'
              = SpliceGlobals junk , level(95)
              ─────────────────────────────────────────────────────────────
> ───────────────────────── begin _get_diparmopts.SpliceGlobals ───────
              – syntax name(id="macro name" name=c_diparm) [, diparm(str
> ing asis) Level(cilevel) dof(passthru) syntaxonly ]
                  – if `"`dof'"' == "" & `"`e(df_r)'"' != "" {
                  = if `""' == "" & `"137"' != "" {
                  – capture confirm integer number `e(df_r)'
                  = capture confirm integer number 137
                  – if !c(rc) {
                  – local gdof dof(`e(df_r)')
                  = local gdof dof(137)
                  – }
                  – capture
                  – }
                  – else local gdof `"`dof'"'
                  = else local gdof `""'
                  – local glevel `level'
                  = local glevel 95
                  – local lopt level(`glevel')
                  = local lopt level(95)
                  – if (`"`diparm'"' == "") exit
                  = if (`""' == "") exit
```

```
> ─────────────────────────── end _get_diparmopts.SpliceGlobals ───────────────
                    – local 0 `", `diparmopts'"'
                    = local 0 `", "'
                    – local diparmopts
                    – local k 0
                    – syntax [, diparm(string asis) * ]
                    – while `"`diparm'"' != "" {
                    = while `""' != "" {
                      local ++k
                      local single 1
                      local after
                      capture _on_colon_parse `diparm'
                      if !c(rc) {
                      local single 0
                      local diparm `"`s(before)'"'
                      local after `"`s(after)'"'
                      }
                      capture
                      SpliceGlobals diparm , diparm(`diparm') `syntaxonly' `gopt
> ions'
                      local diparm`k' `"`diparm'"'
                      local diparmopts `"`diparmopts' : `diparm'"'
                      if `single' | `"`:list retok after'"' == "" {
                      local 0 `", `options'"'
                      syntax [, diparm(string asis) * ]
                      }
                      else {
                      local diparm `"`after'"'
                      }
                      }
                    – if `"`soptions'"' == "" {
                    = if `""' == "" {
                    – syntax [, diparm(string asis) ]
                    – }
                    – if ("`execute'" == "") {
                    = if ("" == "") {
                    – sreturn clear
                    – sreturn local options `"`options'"'
                    = sreturn local options `""'
                    – sreturn local diparm `"`diparmopts'"'
                    = sreturn local diparm `""'
                    – forval i = 1/`k' {
                    = forval i = 1/0 {
                      sreturn local diparm`i' `"`diparm`i''"'
                      }
```

```
                    − sreturn local k `k'
                    = sreturn local k 0
                    − exit
                    ─────────────────────────────────────────

> ──────────────────────────────────────── end _get_diparmopts ─────────────
              − local NODIPARM : length local nodiparm
              − if `NODIPARM' {
              = if 8 {
              − local options
              − }
              − local GTOPTS parse(":") bind quotes
              − local k 0
              − if !`NODIPARM' {
              = if !8 {
                if `"`e(diparm)'"' != "" {
                local i 0
                local diparm `"`e(diparm)'"'
                }
                else if `"`e(diparm1)'"' != "" {
                local i 1
                local diparm `"`e(diparm1)'"'
                }
                while `:length local diparm' {
                gettoken diparm rest : diparm, `GTOPTS'
                while `:length local rest' {
                local ++k
                local diparm`k' : copy local diparm
                gettoken COLON rest : rest, `GTOPTS'
                gettoken diparm rest : rest, `GTOPTS'
                }
                local ++k
                local diparm`k' : copy local diparm
                local ++i
                local diparm `"`e(diparm`i')'"'
                }
                }
              − if `:length local options' {
              = if 0 {
                local 0 `", `options'"'
                syntax [, diparm(string asis) *]
                if `k' & `:length local diparm' {
                local ++k
                local diparm`k' __sep__
                }
                while `:length local diparm' {
                gettoken diparm rest : diparm, `GTOPTS'
```

```
                        while `:length local rest' {
                        local ++k
                        local diparm`k' : copy local diparm
                        gettoken COLON rest : rest, `GTOPTS'
                        gettoken diparm rest : rest, `GTOPTS'
                        }
                        local ++k
                        local diparm`k' : copy local diparm
                        local 0 `", `options'"'
                        syntax [, diparm(string asis) *]
                        }
                        }
                  - if "`markdown'" != "" {
                  = if "" != "" {
                        local lsize = c(linesize)
                        set linesize 255
                        }
                  - `vv' mata: _coef_table()
                  = version 11, missing: mata: _coef_table()
                  ─────────────────────────────────────────────────────────

  > ─────────────────────────────────── begin _get_diopts ───────────────
                  - version 11
                  - syntax namelist(max=2) [, *]
                  - gettoken name1 namelist : namelist
                  - gettoken name2 namelist : namelist
                  - GetDiopts diopts options, `options'
                  = GetDiopts diopts options, fvwrap(1)
                        ───────────────────────────────────────────────────

  > ──────────────────────────────── begin _get_diopts.GetDiopts ────────────
                        - local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLB
  > ASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMP
  > TYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(st
  > ring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru)
  >  FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru)
  >  NOABBREV ABBREV
                        - syntax namelist(max=2) [, `DIOPTS' *]
                        = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBA
  > SElevels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOE
  > MPTYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGE
  > ND cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVW
  > RAP(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CIT
  > YPE(passthru) NOABBREV ABBREV *]
                        - opts_exclusive "`allbaselevels' `noallbaselevels'"
                        = opts_exclusive " "
                              ─────────────────────────────────────────────

  > ─────────────────────────────── begin opts_exclusive ─────────────────
```

```
                        – version 8.2
                        – args opts optname errcode optslab
                        – local opts `opts'
                        = local opts
                        – local n 0
                        – while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        – if `n' < 2 {
                        = if 0 < 2 {
                        – exit
                       _____
> ———————————————————————————— end opts_exclusive ————————————
              – opts_exclusive "`allbaselevels' `nobaselevels'"
              = opts_exclusive " "
                       _____
> ———————————————————————————— begin opts_exclusive ——————————
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
                       _____
> ———————————————————————————— end opts_exclusive ————————————
              – opts_exclusive "`baselevels' `nobaselevels'"
              = opts_exclusive " "
                       _____
> ———————————————————————————— begin opts_exclusive ——————————
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
```

```
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  ─────────────────────────────────────────────
  > ─────────────────────────────────── end opts_exclusive ─────────────
              – opts_exclusive "`emptycells' `noemptycells'"
              = opts_exclusive " "
                  ─────────────────────────────────────────────
  > ─────────────────────────────────── begin opts_exclusive ───────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  ─────────────────────────────────────────────
  > ─────────────────────────────────── end opts_exclusive ─────────────
              – opts_exclusive "`fvlabel' `nofvlabel'"
              = opts_exclusive " "
                  ─────────────────────────────────────────────
  > ─────────────────────────────────── begin opts_exclusive ───────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  ─────────────────────────────────────────────
  > ─────────────────────────────────── end opts_exclusive ─────────────
              – opts_exclusive "`omitted' `noomitted'"
```

```
                    = opts_exclusive " "
                    ─────────────────────────────────────────────
>  ──────────────────────────────── begin opts_exclusive ─────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────────
>  ──────────────────────────────── end opts_exclusive ──────────────
                    – opts_exclusive "`lstretch' `nolstretch'"
                    = opts_exclusive " "
                    ─────────────────────────────────────────────
>  ──────────────────────────────── begin opts_exclusive ─────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────────
>  ──────────────────────────────── end opts_exclusive ──────────────
                    – opts_exclusive "`cnsreport' `fullcnsreport'"
                    = opts_exclusive " "
                    ─────────────────────────────────────────────
>  ──────────────────────────────── begin opts_exclusive ─────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
```

```
− while `"`opts'"' != "" {
= while `""' != "" {
  local ++n
  gettoken item`n' opts : opts, bind
  }
− if `n' < 2 {
= if 0 < 2 {
− exit
  ────────────────────────────────────────────
```
> ───────────────────────────── end opts_exclusive ─────────────
```
        − opts_exclusive "`coeflegend' `selegend'"
        = opts_exclusive " "
          ──────────────────────────────────────
```
> ───────────────────────────── begin opts_exclusive ───────────
```
        − version 8.2
        − args opts optname errcode optslab
        − local opts `opts'
        = local opts
        − local n 0
        − while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
        − if `n' < 2 {
        = if 0 < 2 {
        − exit
          ──────────────────────────────────────
```
> ───────────────────────────── end opts_exclusive ─────────────
```
        − opts_exclusive "`noci' `nopvalues'"
        = opts_exclusive " "
          ──────────────────────────────────────
```
> ───────────────────────────── begin opts_exclusive ───────────
```
        − version 8.2
        − args opts optname errcode optslab
        − local opts `opts'
        = local opts
        − local n 0
        − while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
        − if `n' < 2 {
        = if 0 < 2 {
        − exit
```

```
> ─────────────────────────────────────────────────────────
> ─────────────────────────────── end opts_exclusive ───────────────
         – local K : list sizeof namelist
         – gettoken c_diopts c_opts : namelist
         – opts_exclusive "`coding' `compare'"
         = opts_exclusive " "
                    ─────────────────────────────────────────
> ─────────────────────────────── begin opts_exclusive ───────────────
         – version 8.2
         – args opts optname errcode optslab
         – local opts `opts'
         = local opts
         – local n 0
         – while `"`opts'"' != "" {
         = while `""' != "" {
           local ++n
           gettoken item`n' opts : opts, bind
           }
         – if `n' < 2 {
         = if 0 < 2 {
         – exit
                    ─────────────────────────────────────────
> ─────────────────────────────── end opts_exclusive ───────────────
         – opts_exclusive "`versus' `compare'"
         = opts_exclusive " "
                    ─────────────────────────────────────────
> ─────────────────────────────── begin opts_exclusive ───────────────
         – version 8.2
         – args opts optname errcode optslab
         – local opts `opts'
         = local opts
         – local n 0
         – while `"`opts'"' != "" {
         = while `""' != "" {
           local ++n
           gettoken item`n' opts : opts, bind
           }
         – if `n' < 2 {
         = if 0 < 2 {
         – exit
                    ─────────────────────────────────────────
> ─────────────────────────────── end opts_exclusive ───────────────
         – opts_exclusive "`abbrev' `noabbrev'"
         = opts_exclusive " "
                    ─────────────────────────────────────────
> ─────────────────────────────── begin opts_exclusive ───────────────
```

```
                          – version 8.2
                          – args opts optname errcode optslab
                          – local opts `opts'
                          = local opts
                          – local n 0
                          – while `"`opts'"' != "" {
                          = while `""' != "" {
                            local ++n
                            gettoken item`n' opts : opts, bind
                            }
                          – if `n' < 2 {
                          = if 0 < 2 {
                          – exit
                          ─────────────────────────────────────────────
```

```
                      – local allbaselevels `allbaselevels' `noallbaselevels'
                      = local allbaselevels
                      – local baselevels `baselevels' `nobaselevels'
                      = local baselevels
                      – local emptycells `emptycells' `noemptycells'
                      = local emptycells
                      – local omitted `omitted' `noomitted'
                      = local omitted
                      – local lstretch `lstretch' `nolstretch'
                      = local lstretch
                      – local fvlabel `fvlabel' `nofvlabel'
                      = local fvlabel
                      – local abbrev `abbrev' `noabbrev'
                      = local abbrev
                      – if "`allbaselevels'`baselevels'" == "" {
                      = if "" == "" {
                      – if c(showbaselevels) == "all" {
                        local allbaselevels allbaselevels
                        }
                      – else if c(showbaselevels) == "on" {
                        local baselevels baselevels
                        }
                      – }
                      – if "`emptycells'" == "" {
                      = if "" == "" {
                      – if c(showemptycells) == "off" {
                        local emptycells noemptycells
                        }
                      – }
                      – if "`omitted'" == "" {
                      = if "" == "" {
```

```
-  if c(showomitted) == "off" {
   local omitted noomitted
   }
-  }
-  if "`lstretch'" == "" {
=  if "" == "" {
-  if c(lstretch) == "off" {
   local lstretch nolstretch
   }
-  }
-  if `:length local cformat' {
=  if 0 {
   confirm numeric format `cformat'
   if fmtwidth(`"`cformat'"') > 9 {
   local cformat "%9.0g"
   di "{txt}note: invalid cformat(), using default"
   }
   sreturn local cformat `"`cformat'"'
   local cformat `"cformat(`cformat')"'
   }
-  if `:length local sformat' {
=  if 0 {
   confirm numeric format `sformat'
   if fmtwidth(`"`sformat'"') > 8 {
   local sformat "%8.2f"
   di "{txt}note: invalid sformat(), using default"
   }
   sreturn local sformat `"`sformat'"'
   local sformat `"sformat(`sformat')"'
   }
-  if `:length local pformat' {
=  if 0 {
   confirm numeric format `pformat'
   if fmtwidth(`"`pformat'"') > 5 {
   local pformat "%5.3f"
   di "{txt}note: invalid pformat(), using default"
   }
   sreturn local pformat `"`pformat'"'
   local pformat `"pformat(`pformat')"'
   }
-  if `K' == 1 & `:length local options' {
=  if 2 == 1 & 0 {
   syntax namelist(max=2) [, `DIOPTS']
   }
-  if reldif(`level', c(level)) > 1e-3 {
=  if reldif(95, c(level)) > 1e-3 {
```

```
                  local levelopt level(`level')
                  }
          — Wrapon , `fvwrapon'
          = Wrapon ,
          ─────────────────────────────────────────────
  > ─────────────────────────── begin _get_diopts.Wrapon ───────────
          — capture syntax [, WOrd WIdth]
          — if c(rc) {
            di as err "invalid fvwrapon() option;"
            syntax [, WOrd WIdth]
            exit 198
            }
          — opts_exclusive "`word' `width'" fvwrapon
          = opts_exclusive " " fvwrapon
          ─────────────────────────────────────────────
  > ─────────────────────────── begin opts_exclusive ──────────────
          — version 8.2
          — args opts optname errcode optslab
          — local opts `opts'
          = local opts
          — local n 0
          — while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          — if `n' < 2 {
          = if 0 < 2 {
          — exit
          ─────────────────────────────────────────────
  > ─────────────────────────── end opts_exclusive ───────────────
          — local fvwrapon `word' `width'
          = local fvwrapon
          — if `:length local fvwrapon' {
          = if 0 {
            c_local fvwrapon fvwrapon(`fvwrapon')
            }
          ─────────────────────────────────────────────
  > ─────────────────────────── end _get_diopts.Wrapon ───────────
          — if "`fvwrap'" != "" {
          = if "fvwrap(1)" != "" {
          — FVWrap, `fvwrap'
          = FVWrap, fvwrap(1)
          ─────────────────────────────────────────────
  > ─────────────────────────── begin _get_diopts.FVWrap ──────────
          — syntax, fvwrap(integer)
```

```
                       ─ if `fvwrap' < 0 {
                       = if 1 < 0 {
                         di as err "{p}invalid option {bf:fvwrap(`fvwrap')}; "
> "nonnegative integer required{p_end}"
                         exit 198
                         }
                       ────────────────────────────────────────
> ───────────────────────────────── end _get_diopts.FVWrap ─────────────
                  ─ }
                  ─ c_local `c_diopts' `levelopt' `vsquish' `allbaselevels'
> `baselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `
> coeflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `comp
> are' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `a
> bbrev'
                  = c_local diopts                    fvwrap(1)
                  ─ if `K' == 2 {
                  = if 2 == 2 {
                  ─ c_local `c_opts' `"`options'"'
                  = c_local  options `""'
                  ─ }
                  ─ sreturn local coding `coding'
                  = sreturn local coding
                  ─ sreturn local versus `versus'
                  = sreturn local versus
                  ─ sreturn local compare `compare'
                  = sreturn local compare
                  ─ sreturn local level `level'
                  = sreturn local level 95
                       ────────────────────────────────────────
> ──────────────────────────────── end _get_diopts.GetDiopts ───────────────
              ─ c_local `name1' `"`diopts'"'
              = c_local __00000D `"fvwrap(1)"'
              ─ local snames : s(macros)
              ─ foreach sname of local snames {
              ─ local S_`sname' = s(`sname')
              = local S_level = s(level)
              ─ }
              ─ local S_`sname' = s(`sname')
              = local S_k = s(k)
              ─ }
              ─ sreturn clear
              ─ GetDiopts DEFAULT
                       ────────────────────────────────────────
> ──────────────────────────────── begin _get_diopts.GetDiopts ───────────────
              ─ local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLB
> ASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMP
```

```
> TYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(st
> ring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru)
>  FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru)
>  NOABBREV ABBREV
                    — syntax namelist(max=2) [, `DIOPTS' *]
                    = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBA
> SElevels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOE
> MPTYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGE
> ND cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVW
> RAP(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CIT
> YPE(passthru) NOABBREV ABBREV *]
                    — opts_exclusive "`allbaselevels' `noallbaselevels'"
                    = opts_exclusive " "
                      ──────────────────────────────────────────────────
> ─────────────────────────────── begin opts_exclusive ───────────────
                    — version 8.2
                    — args opts optname errcode optslab
                    — local opts `opts'
                    = local opts
                    — local n 0
                    — while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    — if `n' < 2 {
                    = if 0 < 2 {
                    — exit
                      ──────────────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ────────────────
                    — opts_exclusive "`allbaselevels' `nobaselevels'"
                    = opts_exclusive " "

                      ──────────────────────────────────────────────────
> ─────────────────────────────── begin opts_exclusive ───────────────
                    — version 8.2
                    — args opts optname errcode optslab
                    — local opts `opts'
                    = local opts
                    — local n 0
                    — while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    — if `n' < 2 {
                    = if 0 < 2 {
```

```
                                  – exit
                        ───────────────────────────────────────────
>  ──────────────────────────────── end opts_exclusive ────────────
                – opts_exclusive "`baselevels' `nobaselevels'"
                = opts_exclusive " "
                        ───────────────────────────────────────────
>  ──────────────────────────────── begin opts_exclusive ──────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
                        ───────────────────────────────────────────
>  ──────────────────────────────── end opts_exclusive ────────────
                – opts_exclusive "`emptycells' `noemptycells'"
                = opts_exclusive " "
                        ───────────────────────────────────────────
>  ──────────────────────────────── begin opts_exclusive ──────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
                        ───────────────────────────────────────────
>  ──────────────────────────────── end opts_exclusive ────────────
                – opts_exclusive "`fvlabel' `nofvlabel'"
                = opts_exclusive " "
                        ───────────────────────────────────────────
>  ──────────────────────────────── begin opts_exclusive ──────────
                – version 8.2
```

```
                    - args opts optname errcode optslab
                    - local opts `opts'
                    = local opts
                    - local n 0
                    - while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    - if `n' < 2 {
                    = if 0 < 2 {
                    - exit
                    ─────────────────────────────────────────
> ──────────────────────────────────── end opts_exclusive ──────────
              - opts_exclusive "`omitted' `noomitted'"
              = opts_exclusive " "
                    ─────────────────────────────────────────
> ──────────────────────────────────── begin opts_exclusive ──────────
              - version 8.2
              - args opts optname errcode optslab
              - local opts `opts'
              = local opts
              - local n 0
              - while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              - if `n' < 2 {
              = if 0 < 2 {
              - exit
                    ─────────────────────────────────────────
> ──────────────────────────────────── end opts_exclusive ──────────
              - opts_exclusive "`lstretch' `nolstretch'"
              = opts_exclusive " "
                    ─────────────────────────────────────────
> ──────────────────────────────────── begin opts_exclusive ──────────
              - version 8.2
              - args opts optname errcode optslab
              - local opts `opts'
              = local opts
              - local n 0
              - while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
```

```
        }
      — if `n' < 2 {
      = if 0 < 2 {
      — exit
      ─────────────────────────────────────────
> ─────────────────────────── end opts_exclusive ─────────────
   — opts_exclusive "`cnsreport' `fullcnsreport'"
   = opts_exclusive " "
      ─────────────────────────────────────────
> ─────────────────────────── begin opts_exclusive ───────────
      — version 8.2
      — args opts optname errcode optslab
      — local opts `opts'
      = local opts
      — local n 0
      — while `"`opts'"' != "" {
      = while `""' != "" {
        local ++n
        gettoken item`n' opts : opts, bind
        }
      — if `n' < 2 {
      = if 0 < 2 {
      — exit
      ─────────────────────────────────────────
> ─────────────────────────── end opts_exclusive ─────────────
   — opts_exclusive "`coeflegend' `selegend'"
   = opts_exclusive " "
      ─────────────────────────────────────────
> ─────────────────────────── begin opts_exclusive ───────────
      — version 8.2
      — args opts optname errcode optslab
      — local opts `opts'
      = local opts
      — local n 0
      — while `"`opts'"' != "" {
      = while `""' != "" {
        local ++n
        gettoken item`n' opts : opts, bind
        }
      — if `n' < 2 {
      = if 0 < 2 {
      — exit
      ─────────────────────────────────────────
> ─────────────────────────── end opts_exclusive ─────────────
   — opts_exclusive "`noci' `nopvalues'"
   = opts_exclusive " "
```

```
> ————————————————————————————— begin opts_exclusive —————————————
                   – version 8.2
                   – args opts optname errcode optslab
                   – local opts `opts'
                   = local opts
                   – local n 0
                   – while `"`opts'"' != "" {
                   = while `""' != "" {
                     local ++n
                     gettoken item`n' opts : opts, bind
                     }
                   – if `n' < 2 {
                   = if 0 < 2 {
                   – exit

> ————————————————————————————— end opts_exclusive —————————————————
                 – local K : list sizeof namelist
                 – gettoken c_diopts c_opts : namelist
                 – opts_exclusive "`coding' `compare'"
                 = opts_exclusive " "

> ————————————————————————————— begin opts_exclusive —————————————
                   – version 8.2
                   – args opts optname errcode optslab
                   – local opts `opts'
                   = local opts
                   – local n 0
                   – while `"`opts'"' != "" {
                   = while `""' != "" {
                     local ++n
                     gettoken item`n' opts : opts, bind
                     }
                   – if `n' < 2 {
                   = if 0 < 2 {
                   – exit

> ————————————————————————————— end opts_exclusive —————————————————
                 – opts_exclusive "`versus' `compare'"
                 = opts_exclusive " "

> ————————————————————————————— begin opts_exclusive —————————————
                   – version 8.2
                   – args opts optname errcode optslab
                   – local opts `opts'
                   = local opts
```

```
                              – local n 0
                              – while `"`opts'"' != "" {
                              = while `""' != "" {
                                local ++n
                                gettoken item`n' opts : opts, bind
                                }
                              – if `n' < 2 {
                              = if 0 < 2 {
                              – exit
```

> ───────────────────────── end opts_exclusive ─────────────

```
                       – opts_exclusive "`abbrev' `noabbrev'"
                       = opts_exclusive " "
```

> ───────────────────────── begin opts_exclusive ─────────────

```
                       – version 8.2
                       – args opts optname errcode optslab
                       – local opts `opts'
                       = local opts
                       – local n 0
                       – while `"`opts'"' != "" {
                       = while `""' != "" {
                         local ++n
                         gettoken item`n' opts : opts, bind
                         }
                       – if `n' < 2 {
                       = if 0 < 2 {
                       – exit
```

> ───────────────────────── end opts_exclusive ─────────────

```
                    – local allbaselevels `allbaselevels' `noallbaselevels'
                    = local allbaselevels
                    – local baselevels `baselevels' `nobaselevels'
                    = local baselevels
                    – local emptycells `emptycells' `noemptycells'
                    = local emptycells
                    – local omitted `omitted' `noomitted'
                    = local omitted
                    – local lstretch `lstretch' `nolstretch'
                    = local lstretch
                    – local fvlabel `fvlabel' `nofvlabel'
                    = local fvlabel
                    – local abbrev `abbrev' `noabbrev'
                    = local abbrev
                    – if "`allbaselevels'`baselevels'" == "" {
                    = if "" == "" {
```

```
-  if c(showbaselevels) == "all" {
   local allbaselevels allbaselevels
   }
-  else if c(showbaselevels) == "on" {
   local baselevels baselevels
   }
-  }
-  if "`emptycells'" == "" {
=  if "" == "" {
-  if c(showemptycells) == "off" {
   local emptycells noemptycells
   }
-  }
-  if "`omitted'" == "" {
=  if "" == "" {
-  if c(showomitted) == "off" {
   local omitted noomitted
   }
-  }
-  if "`lstretch'" == "" {
=  if "" == "" {
-  if c(lstretch) == "off" {
   local lstretch nolstretch
   }
-  }
-  if `:length local cformat' {
=  if 0 {
   confirm numeric format `cformat'
   if fmtwidth(`"`cformat'"') > 9 {
   local cformat "%9.0g"
   di "{txt}note: invalid cformat(), using default"
   }
   sreturn local cformat `"`cformat'"'
   local cformat `"cformat(`cformat')"'
   }
-  if `:length local sformat' {
=  if 0 {
   confirm numeric format `sformat'
   if fmtwidth(`"`sformat'"') > 8 {
   local sformat "%8.2f"
   di "{txt}note: invalid sformat(), using default"
   }
   sreturn local sformat `"`sformat'"'
   local sformat `"sformat(`sformat')"'
   }
-  if `:length local pformat' {
```

```
                  = if 0 {
                    confirm numeric format `pformat'
                    if fmtwidth(`"'`pformat'"') > 5 {
                    local pformat "%5.3f"
                    di "{txt}note: invalid pformat(), using default"
                    }
                    sreturn local pformat `"'`pformat'"'
                    local pformat `"pformat(`pformat')"'
                    }
                  - if `K' == 1 & `:length local options' {
                  = if 1 == 1 & 0 {
                    syntax namelist(max=2) [, `DIOPTS']
                    }
                  - if reldif(`level', c(level)) > 1e-3 {
                  = if reldif(95, c(level)) > 1e-3 {
                    local levelopt level(`level')
                    }
                  - Wrapon , `fvwrapon'
                  = Wrapon ,
                    ─────────────────────────────────────────
  > ───────────────────────────── begin _get_diopts.Wrapon ─────────────
                  - capture syntax [, WOrd WIdth]
                  - if c(rc) {
                    di as err "invalid fvwrapon() option;"
                    syntax [, WOrd WIdth]
                    exit 198
                    }
                  - opts_exclusive "`word' `width'" fvwrapon
                  = opts_exclusive " " fvwrapon
                    ─────────────────────────────────────────
  > ─────────────────────────────── begin opts_exclusive ───────────────
                  - version 8.2
                  - args opts optname errcode optslab
                  - local opts `opts'
                  = local opts
                  - local n 0
                  - while `"'`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  - if `n' < 2 {
                  = if 0 < 2 {
                  - exit
                    ─────────────────────────────────────────
  > ─────────────────────────────── end opts_exclusive ─────────────────
```

```
                            – local fvwrapon `word' `width'
                            = local fvwrapon
                            – if `:length local fvwrapon' {
                            = if 0 {
                              c_local fvwrapon fvwrapon(`fvwrapon')
                              }
                           ────────────────────────────────────────────
> ──────────────────────────────── end _get_diopts.Wrapon ──────────────
                         – if "`fvwrap'" != "" {
                         = if "" != "" {
                           FVWrap, `fvwrap'
                           }
                         – c_local `c_diopts' `levelopt' `vsquish' `allbaselevels'
> `baselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `
> coeflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `comp
> are' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `a
> bbrev'
                         = c_local DEFAULT
                         – if `K' == 2 {
                         = if 1 == 2 {
                           c_local `c_opts' `"`options'"'
                           }
                         – sreturn local coding `coding'
                         = sreturn local coding
                         – sreturn local versus `versus'
                         = sreturn local versus
                         – sreturn local compare `compare'
                         = sreturn local compare
                         – sreturn local level `level'
                         = sreturn local level 95
                        ────────────────────────────────────────────
> ─────────────────────────────── end _get_diopts.GetDiopts ──────────────
                     – if `"`name2'"' == "" {
                     = if `""' == "" {
                     – GetDiopts DUPS, `options'
                     = GetDiopts DUPS,
                        ────────────────────────────────────────────
> ─────────────────────────────── begin _get_diopts.GetDiopts ─────────────
                     – local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLB
> ASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMP
> TYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(st
> ring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru)
>  FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru)
>  NOABBREV ABBREV
                     – syntax namelist(max=2) [, `DIOPTS' *]
                     = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBA
```

```
> SElevels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOE
> MPTYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGE
> ND cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVW
> RAP(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CIT
> YPE(passthru) NOABBREV ABBREV *]
                        - opts_exclusive "`allbaselevels' `noallbaselevels'"
                        = opts_exclusive " "
                        ─────────────────────────────────────────────────────
> ─────────────────────────────── begin opts_exclusive ───────────────
                        - version 8.2
                        - args opts optname errcode optslab
                        - local opts `opts'
                        = local opts
                        - local n 0
                        - while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        - if `n' < 2 {
                        = if 0 < 2 {
                        - exit
                        ─────────────────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ───────────────
                   - opts_exclusive "`allbaselevels' `nobaselevels'"
                   = opts_exclusive " "
                        ─────────────────────────────────────────────────────
> ─────────────────────────────── begin opts_exclusive ───────────────
                   - version 8.2
                   - args opts optname errcode optslab
                   - local opts `opts'
                   = local opts
                   - local n 0
                   - while `"`opts'"' != "" {
                   = while `""' != "" {
                     local ++n
                     gettoken item`n' opts : opts, bind
                     }
                   - if `n' < 2 {
                   = if 0 < 2 {
                   - exit
                        ─────────────────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ───────────────
                   - opts_exclusive "`baselevels' `nobaselevels'"
                   = opts_exclusive " "
                        ─────────────────────────────────────────────────────
```

```
> ──────────────────────────────── begin opts_exclusive ───────────────

                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  ─────────────────────────────────────────────────────

> ──────────────────────────────── end opts_exclusive ─────────────────

              – opts_exclusive "`emptycells' `noemptycells'"
              = opts_exclusive " "
                  ─────────────────────────────────────────────────────

> ──────────────────────────────── begin opts_exclusive ───────────────

                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  ─────────────────────────────────────────────────────

> ──────────────────────────────── end opts_exclusive ─────────────────

              – opts_exclusive "`fvlabel' `nofvlabel'"
              = opts_exclusive " "
                  ─────────────────────────────────────────────────────

> ──────────────────────────────── begin opts_exclusive ───────────────

                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
```

```
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
              − if `n' < 2 {
              = if 0 < 2 {
              − exit
              ──────────────────────────────────────────
```

```
            − opts_exclusive "`omitted' `noomitted'"
            = opts_exclusive " "
              ──────────────────────────────────────────
```

```
            − version 8.2
            − args opts optname errcode optslab
            − local opts `opts'
            = local opts
            − local n 0
            − while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            − if `n' < 2 {
            = if 0 < 2 {
            − exit
              ──────────────────────────────────────────
```

```
            − opts_exclusive "`lstretch' `nolstretch'"
            = opts_exclusive " "
              ──────────────────────────────────────────
```

```
            − version 8.2
            − args opts optname errcode optslab
            − local opts `opts'
            = local opts
            − local n 0
            − while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            − if `n' < 2 {
            = if 0 < 2 {
            − exit
              ──────────────────────────────────────────
```

```
                     – opts_exclusive "`cnsreport' `fullcnsreport'"
                   = opts_exclusive " "
                     ─────────────────────────────────────────────────
>  ──────────────────────────────── begin opts_exclusive ─────────
                   – version 8.2
                   – args opts optname errcode optslab
                   – local opts `opts'
                   = local opts
                   – local n 0
                   – while `"`opts'"' != "" {
                   = while `""' != "" {
                     local ++n
                     gettoken item`n' opts : opts, bind
                     }
                   – if `n' < 2 {
                   = if 0 < 2 {
                   – exit
                     ─────────────────────────────────────────────────
>  ──────────────────────────────── end opts_exclusive ──────────
                   – opts_exclusive "`coeflegend' `selegend'"
                   = opts_exclusive " "
                     ─────────────────────────────────────────────────
>  ──────────────────────────────── begin opts_exclusive ─────────
                   – version 8.2
                   – args opts optname errcode optslab
                   – local opts `opts'
                   = local opts
                   – local n 0
                   – while `"`opts'"' != "" {
                   = while `""' != "" {
                     local ++n
                     gettoken item`n' opts : opts, bind
                     }
                   – if `n' < 2 {
                   = if 0 < 2 {
                   – exit
                     ─────────────────────────────────────────────────
>  ──────────────────────────────── end opts_exclusive ──────────
                   – opts_exclusive "`noci' `nopvalues'"
                   = opts_exclusive " "
                     ─────────────────────────────────────────────────
>  ──────────────────────────────── begin opts_exclusive ─────────
                   – version 8.2
                   – args opts optname errcode optslab
                   – local opts `opts'
                   = local opts
```

```
                   – local n 0
                   – while `"`opts'"' != "" {
                   = while `""' != "" {
                     local ++n
                     gettoken item`n' opts : opts, bind
                     }
                   – if `n' < 2 {
                   = if 0 < 2 {
                   – exit
                   ────────────────────────────────────
  > ─────────────────────────────── end opts_exclusive ─────────────
               – local K : list sizeof namelist
               – gettoken c_diopts c_opts : namelist
               – opts_exclusive "`coding' `compare'"
               = opts_exclusive " "
                   ────────────────────────────────────
  > ─────────────────────────────── begin opts_exclusive ─────────────
               – version 8.2
               – args opts optname errcode optslab
               – local opts `opts'
               = local opts
               – local n 0
               – while `"`opts'"' != "" {
               = while `""' != "" {
                 local ++n
                 gettoken item`n' opts : opts, bind
                 }
               – if `n' < 2 {
               = if 0 < 2 {
               – exit
                   ────────────────────────────────────
  > ─────────────────────────────── end opts_exclusive ─────────────
               – opts_exclusive "`versus' `compare'"
               = opts_exclusive " "
                   ────────────────────────────────────
  > ─────────────────────────────── begin opts_exclusive ─────────────
               – version 8.2
               – args opts optname errcode optslab
               – local opts `opts'
               = local opts
               – local n 0
               – while `"`opts'"' != "" {
               = while `""' != "" {
                 local ++n
                 gettoken item`n' opts : opts, bind
                 }
```

```
                       – if `n' < 2 {
                       = if 0 < 2 {
                       – exit
                       ────────────────────────────────────────────────
>   ───────────────────────────── end opts_exclusive ─────────────
              – opts_exclusive "`abbrev' `noabbrev'"
              = opts_exclusive " "
                       ────────────────────────────────────────────────
>   ───────────────────────────── begin opts_exclusive ───────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
                       ────────────────────────────────────────────────
>   ───────────────────────────── end opts_exclusive ─────────────
              – local allbaselevels `allbaselevels' `noallbaselevels'
              = local allbaselevels
              – local baselevels `baselevels' `nobaselevels'
              = local baselevels
              – local emptycells `emptycells' `noemptycells'
              = local emptycells
              – local omitted `omitted' `noomitted'
              = local omitted
              – local lstretch `lstretch' `nolstretch'
              = local lstretch
              – local fvlabel `fvlabel' `nofvlabel'
              = local fvlabel
              – local abbrev `abbrev' `noabbrev'
              = local abbrev
              – if "`allbaselevels'`baselevels'" == "" {
              = if "" == "" {
              – if c(showbaselevels) == "all" {
                local allbaselevels allbaselevels
                }
              – else if c(showbaselevels) == "on" {
                local baselevels baselevels
                }
```

```
-  }
-  if "`emptycells'" == "" {
=  if "" == "" {
-  if c(showemptycells) == "off" {
   local emptycells noemptycells
   }
-  }
-  if "`omitted'" == "" {
=  if "" == "" {
-  if c(showomitted) == "off" {
   local omitted noomitted
   }
-  }
-  if "`lstretch'" == "" {
=  if "" == "" {
-  if c(lstretch) == "off" {
   local lstretch nolstretch
   }
-  }
-  if `:length local cformat' {
=  if 0 {
   confirm numeric format `cformat'
   if fmtwidth(`"`cformat'"') > 9 {
   local cformat "%9.0g"
   di "{txt}note: invalid cformat(), using default"
   }
   sreturn local cformat `"`cformat'"'
   local cformat `"cformat(`cformat')"'
   }
-  if `:length local sformat' {
=  if 0 {
   confirm numeric format `sformat'
   if fmtwidth(`"`sformat'"') > 8 {
   local sformat "%8.2f"
   di "{txt}note: invalid sformat(), using default"
   }
   sreturn local sformat `"`sformat'"'
   local sformat `"sformat(`sformat')"'
   }
-  if `:length local pformat' {
=  if 0 {
   confirm numeric format `pformat'
   if fmtwidth(`"`pformat'"') > 5 {
   local pformat "%5.3f"
   di "{txt}note: invalid pformat(), using default"
   }
```

```
                    sreturn local pformat `"'`pformat'"'
                    local pformat `"pformat(`pformat')"'
                    }
        - if `K' == 1 & `:length local options' {
        = if 1 == 1 & 0 {
          syntax namelist(max=2) [, `DIOPTS']
          }
        - if reldif(`level', c(level)) > 1e-3 {
        = if reldif(95, c(level)) > 1e-3 {
          local levelopt level(`level')
          }
        - Wrapon , `fvwrapon'
        = Wrapon ,
          ─────────────────────────────────────────────
>  ───────────────────── begin _get_diopts.Wrapon ─────────────
            - capture syntax [, WOrd WIdth]
            - if c(rc) {
              di as err "invalid fvwrapon() option;"
              syntax [, WOrd WIdth]
              exit 198
              }
            - opts_exclusive "`word' `width'" fvwrapon
            = opts_exclusive " " fvwrapon
              ─────────────────────────────────────────
>  ─────────────────────── begin opts_exclusive ───────────────
              - version 8.2
              - args opts optname errcode optslab
              - local opts `opts'
              = local opts
              - local n 0
              - while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              - if `n' < 2 {
              = if 0 < 2 {
              - exit
                ─────────────────────────────────────────
>  ─────────────────────── end opts_exclusive ─────────────────
            - local fvwrapon `word' `width'
            = local fvwrapon
            - if `:length local fvwrapon' {
            = if 0 {
              c_local fvwrapon fvwrapon(`fvwrapon')
              }
```

```
 ──────────────────────────────────────────
> ───────────────────────── end _get_diopts.Wrapon ─────────────
                  - if "`fvwrap'" != "" {
                  = if "" != "" {
                    FVWrap, `fvwrap'
                    }
                  - c_local `c_diopts' `levelopt' `vsquish' `allbaselevels'
> `baselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `
> coeflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `comp
> are' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `a
> bbrev'
                  = c_local DUPS
                  - if `K' == 2 {
                  = if 1 == 2 {
                    c_local `c_opts' `"`options'"'
                    }
                  - sreturn local coding `coding'
                  = sreturn local coding
                  - sreturn local versus `versus'
                  = sreturn local versus
                  - sreturn local compare `compare'
                  = sreturn local compare
                  - sreturn local level `level'
                  = sreturn local level 95
                  ──────────────────────────────────────────
> ───────────────────────── end _get_diopts.GetDiopts ──────────────
                  - }
                  - else {
                    GetDiopts DUPS options, `options'
                    c_local `name2' `"`options'"'
                    }
                  - local DUPS : list DUPS - DEFAULT
                  - gettoken DUPS : DUPS
                  - if `"`DUPS'"' != "" {
                  = if `""' != "" {
                    if (strpos(`"`DUPS'"', "(")) {
                    gettoken DUPS : DUPS, parse("(")
                    local DUPS `"`DUPS'()"'
                    }
                    di as err "duplicate {bf:`DUPS'} option not allowed"
                    exit 198
                    }
                  - sreturn clear
                  - foreach sname of local snames {
                  - sreturn local `sname' = `"`S_`sname''"'
                  = sreturn local level = `"95"'
```

```
                    - }
                    - sreturn local `sname' = `"`S_`sname''"'
                    = sreturn local k = `"0"'
                    - }
                    _____
>  ─────────────────────────────────────── end _get_diopts ─────────────
                  - if "`markdown'" != "" {
                  = if "" != "" {
                    set linesize `lsize'
                    }
                  - if "`eqselect'" == "" & "`eformnote'" != "noeformnote" {
                  = if "" == "" & "" != "noeformnote" {
                  - if `"`eformdi'"'!="" & ("`e(cmd)'"!="gnbreg" | "`e(prefix)'"
>  =="svy") {
                  = if `""'!="" & ("regress"!="gnbreg" | ""=="svy") {
                    local k_eform `e(k_eform)'
                    if ("`k_eform'"=="") {
                    local k_eform = 1
                    }
                    local k_eq `e(k_eq)'
                    if ("`k_eq'"=="") {
                    local k_eq = 1
                    }
                    if (`k_eform'<`k_eq' & `k_eform') {
                    if ("`e(cmd2)'" == "stintreg" | "`e(cmd2)'" == "streg") & ("
>  `e(cmd)'" == "weibull" | "`e(cmd)'" == "gompertz") {
                    }
                    else {
                    _eform_multeq_note efnote : `k_eform' `"`tr_item'"'
                    di as txt "`efnote'"
                    }
                    }
                    }
                  - if (`"`eformdi'"'!="" & "`e(noconstant)'"=="0" & `"`eform_co
>  ns_ti'"'!="" & "`e(consonly)'"!="1") {
                  = if (`""'!="" & ""=="0" & `""'!="" & ""!="1") {
                    if ("`e(cmd)'"=="asclogit" | "`e(cmd)'"=="cmclogit" | "`e(cm
>  d)'"=="cmmixlogit" | "`e(cmd)'"=="cmxtmixlogit" ) {
                    local asvar = `"`e(ranvars)'`e(fixvars)'`e(indvars)'"' != ""
                    if `"`e(casevars)'"' != "" & `asvar' {
                    local note1 "Exponentiated coefficients represent odds ratio
>  s for "
                    local note2 "alternative-specific variables (first equation)
>   and "
                    local note3 "{help j_cmrisk##|_new:relative-risk ratios} "
                    local note4 "for case-specific variables."
```

```
                        di as txt "{p 0 6 2}Note: `note1'`note2'`note3'`note4'{p_end
> }"
                        }
                        }
                        if "`eform_cons_ti'" == "Inc. rate" {
                        local eform_cons_note "incidence rate"
                        }
                        else if "`eform_cons_ti'" == "Rel. risk" {
                        local eform_cons_note "relative risk"
                        }
                        else if "`eform_cons_ti'" == "Health" {
                        local eform_cons_note "health (probability of no disease)"
                        }
                        else {
                        local eform_cons_note = strlower(`"`eform_cons_ti'"')
                        }
                        local eform_cons_note "baseline `eform_cons_note'"
                        if ("`e(cmd2)'"=="") {
                        local cmd `e(cmd)'
                        }
                        else {
                        local cmd `e(cmd2)'
                        }
                        local f2 = udsubstr("`cmd'",1,2)
                        local is_re = ("`f2'"=="xt" | "`f2'"=="me")
                        if `is_re' {
                        local extranote " (conditional on zero random effects)"
                        }
                        di as txt "{p 0 6 2}Note: {bf:_cons} estimates " "`eform_con
> s_note'`extranote'" _c
                        if ("`e(cmd)'"=="mlogit" | "`e(cmd)'"=="asclogit" | "`e(cmd)
> '"=="cmclogit" | "`e(cmd)'"=="cmmixlogit" | "`e(cmd)'"=="cmxtmixlogit" ) {
                        di as txt " for each outcome" _c
                        }
                        di as txt ".{p_end}"
                        }
                 -  }
                 -  return add
                 -  if !`keepmc' {
                 =  if !0 {
                 -  return local mcmethod
                 -  return local mctitle
                 -  }
                ─────────────────────────────────────────────────────────────
>  ──────────────────────────────────── end _coef_table ───────────────
       ─────────────────────────────────────────────────────────────
```

```
>  ───────────────────────────────── end _ereturn_display ──────────────
            - mat `b2' = e(b)
            = mat __000009 = e(b)
            - drop `xb'
            = drop __000006
            - _predict double `xb' `if'
            = _predict double __000006 if __000002
            - LikePois `y' `xb'`poff' [`weight'`exp'] `if', n(`nobs')
            = LikePois piq_timing_max __000006 [] if __000002, n(__000004)
            ─────────────────────────────────────────────────────────────

>  ───────────────────────────────── begin poisson.LikePois ──────────────
            - gettoken y 0 : 0
            - gettoken xb 0 : 0
            - syntax [fw aw pw iw] [if] , Nobs(string)
            - if "`weight'"!="" {
            = if ""!="" {
              if "`weight'"=="fweight" {
              local wt `"[fw`exp']"'
              }
              else if "`weight'"=="iweight" {
              local wt `"[iw`exp']"'
              }
              else local wt `"[aw`exp']"'
              }
            - tempvar lnf
            - qui gen double `lnf' = `y'*(`xb')-exp(`xb')-lngamma(`y'+1) `if
>  '
            = qui gen double __00000D = piq_timing_max*(__000006)-exp(__0000
> 06)-lngamma(piq_timing_max+1) if __000002
            - summarize `lnf' `wt' `if', meanonly
            = summarize __00000D  if __000002, meanonly
            - if r(N) != `nobs' { exit }
            = if r(N) != __000004 { exit }
            - if "`weight'"=="aweight" {
            = if ""=="aweight" {
              ret scalar lnf = r(N)*r(mean)
              }
            - else ret scalar lnf = r(sum)
            ─────────────────────────────────────────────────────────────

>  ───────────────────────────────── end poisson.LikePois ──────────────
            - tempname lnf2
            - scalar `lnf2' = r(lnf)
            = scalar __00000D = r(lnf)
            - }
            - if _rc { local lnf2 . }
            - if `lnf1'>=. & `lnf1c'>=. & `lnf2'>=. { exit }
```

```
            = if __00000A>=. & __00000C>=. & __00000D>=. { exit }
            - if `lnf2'<.&(`lnf2'>`lnf1'|`lnf1'>=.)&(`lnf2'>`lnf1c'|`lnf1c'>=.
> ) {
            = if __00000D<.&(__00000D>__00000A|__00000A>=.)&(__00000D>__00000C
> |__00000C>=.) {
            - ret matrix b0 `b2'
            = ret matrix b0 __000009
            - exit
            ─────────────────────────────────────────────────────

> ────────────────────────────────── end poisson.Ipois ──────────────
            - if "`r(b0)'"!="" {
            = if "matrix"!="" {
            - tempname from
            - mat `from' = r(b0)
            = mat __000006 = r(b0)
            - }
            - }
            - if "`from'"!="" {
            = if "__000006"!="" {
            - local initopt `"init(`from') search(off)"'
            = local initopt `"init(__000006) search(off)"'
            - }
            - else local initopt "search(on) maxfeas(50)"
            - `vv' ml model `mm' `eval' (`yname': `y' = `xvars', `constan' `offo
> pt') [`weight'`exp'] if `touse', collinear missing max nooutput nopreserve `
> mlopts' title(Poisson regression) `scopt' `robust' `clopt' `initopt' `ll0' `
> negh' `moptobj'
            = version 18, missing: ml model e2 poiss_lf (piq_timing_max: piq_tim
> ing_max = ln_neq cb_authors_ext estimated est_late o.est_early wg_ndx_other
> stky_pr_rotemberg stky_pr_calvo,  ) [] if __000002, collinear missing max no
> output nopreserve  title(Poisson regression)  robust  init(__000006) search(
> off) lf0(1 −401.5531151051299) negh

            ─────────────────────────────────────────────────────

> ─────────────────────────────────── begin ml ──────────────────
            - if _caller()>=11 {
            - mopt `0'
            = mopt model e2 poiss_lf (piq_timing_max: piq_timing_max = ln_neq
> cb_authors_ext estimated est_late o.est_early wg_ndx_other stky_pr_rotemberg
>  stky_pr_calvo,  ) [] if __000002, collinear missing max nooutput nopreserve
>   title(Poisson regression)  robust  init(__000006) search(off) lf0(1 −401.5
> 531151051299) negh

            ─────────────────────────────────────────────────────

> ───────────────────────────────── begin mopt ──────────────────
            - local vv : di "version " string(_caller()) ":"
            - version 12
            - gettoken subcmd 0 : 0, parse(" ,")
```

```
- local lcmd : length local subcmd
- if "`subcmd'" == "clear" {
= if "model" == "clear" {
  Clear
  exit
  }
- if `"`subcmd'"' == "hold" {
= if `"model"' == "hold" {
  ml_hold `0'
  exit
  }
- if `"`subcmd'"' == "unhold" {
= if `"model"' == "unhold" {
  ml_unhold `0'
  exit
  }
- if "`subcmd'" == "score" {
= if "model" == "score" {
  if _caller() > 12 {
  `vv' Score `0'
  }
  else {
  Score `0'
  }
  exit
  }
- if "`subcmd'" == "count" {
= if "model" == "count" {
  Count `0'
  exit
  }
- if "`subcmd'" == "trace" {
= if "model" == "trace" {
  Trace `0'
  exit
  }
- if "`subcmd'" == bsubstr("graph",1,max(2,`lcmd')) {
= if "model" == bsubstr("graph",1,max(2,5)) {
  Graph `0'
  exit
  }
- if "`subcmd'" == "init" {
= if "model" == "init" {
  Interactive 0
  `vv' Init `0'
  exit
```

```
                           }
                  − if "`subcmd'" == bsubstr("maximize",1,max(3,`lcmd')) {
                  = if "model" == bsubstr("maximize",1,max(3,5)) {
                    Interactive 1
                    `vv' MaxMin maximize `0'
                    exit
                    }
                  − if "`subcmd'" == bsubstr("minimize",1,max(3,`lcmd')) {
                  = if "model" == bsubstr("minimize",1,max(3,5)) {
                    Interactive 1
                    `vv' MaxMin minimize `0'
                    exit
                    }
                  − if "`subcmd'" == bsubstr("display",1,max(2,`lcmd')) {
                  = if "model" == bsubstr("display",1,max(2,5)) {
                    Display `0'
                    exit
                    }
                  − if "`subcmd'" == bsubstr("footnote",1,max(4,`lcmd')) {
                  = if "model" == bsubstr("footnote",1,max(4,5)) {
                    ml_footnote `0'
                    exit
                    }
                  − if "`subcmd'" == "," {
                  = if "model" == "," {
                    Display, `0'
                    exit
                    }
                  − if "`subcmd'" == bsubstr("model",1,max(3,`lcmd')) {
                  = if "model" == bsubstr("model",1,max(3,5)) {
                  − `vv' capture noi Model `0'
                  = version 18: capture noi Model  e2 poiss_lf (piq_timing_max: pi
>  q_timing_max = ln_neq cb_authors_ext estimated est_late o.est_early wg_ndx_o
>  ther stky_pr_rotemberg stky_pr_calvo,  ) [] if __000002, collinear missing m
>  ax nooutput nopreserve  title(Poisson regression)  robust  init(__000006) se
>  arch(off) lf0(1 −401.5531151051299) negh
                        ─────────────────────────────────────────────────────
>  ──────────────────────────────────────────── begin mopt.Model ─────────────
                  − local version = string(_caller())
                  − local vv : di "version `version':"
                  = local vv : di "version 18:"
                  − version 12
                  − syntax anything(id="model" name=spec) [if] [in] [fw aw pw iw
>  ] [, BRACKET COLlinear MISSing CONTinue lf0(string) INIT(string) CONSTraints
>  (string) noCNSNOTEs VCE(passthru) NEGH NOPREserve TECHnique(string) ITERID(s
>  tring) CRITtype(string) OBS(numlist max=1 >0) TItle(string) WALDtest(integer
```

```
>   -1) SVY SUBpop(string) SRSsubpop noSVYadjust SCore(passthru) noOUTput noSCV
> ARS GROUP(varname) ITERPROLOG(string) DERIVPROLOG(string) DERIVH(string) DER
> IVSCALE(string) DERIV(string) nrderiv GNWMATrix(string) KAUXiliary(numlist i
> nt >=0) MAXimize MINimize USERinfo(namelist) PUPDATED Robust CLuster(passthr
> u) moptobj(string) USEVIEWS * ]
                    - if `"`moptobj'"' == "" {
                    = if `""' == "" {
                    - Clear
                         ─────────────────────────────────────────────
>  ────────────────────────────────────────── begin mopt.Clear ─────────────────
                    - syntax [, NOTANOPTION]
                    - capture drop $ML_w
                    = capture drop
                    - capture drop $ML_samp
                    = capture drop
                    - capture drop $ML_sample
                    = capture drop
                    - capture drop $ML_subv
                    = capture drop
                    - capture drop $ML_grp
                    = capture drop
                    - mata: Mopt_drop_external()
                    - macro drop ML_*
                         ─────────────────────────────────────────────
>  ───────────────────────────────────────────── end mopt.Clear ─────────────────
                    - }
                    - local maxmin `minimize' `maximize'
                    = local maxmin  maximize
                    - opts_exclusive "`maxmin'"
                    = opts_exclusive "maximize"
                         ─────────────────────────────────────────────
>  ──────────────────────────────────────── begin opts_exclusive ────────────────
                    - version 8.2
                    - args opts optname errcode optslab
                    - local opts `opts'
                    = local opts maximize
                    - local n 0
                    - while `"`opts'"' != "" {
                    = while `"maximize"' != "" {
                    - local ++n
                    - gettoken item`n' opts : opts, bind
                    = gettoken item1 opts : opts, bind
                    - }
                    - while `"`opts'"' != "" {
                    = while `""' != "" {
                       local ++n
```

```
                     gettoken item`n' opts : opts, bind
                     }
               ─ if `n' < 2 {
               = if 1 < 2 {
               ─ exit
                     ───────────────────────────────────────────────────
>  ───────────────────────────────────── end opts_exclusive ──────────────
               ─ if `:length local maxmin' {
               = if 8 {
               ─ local interactive 0
               ─ }
               ─ else local interactive 1
               ─ _get_diparmopts, diparmopts(`options') soptions syntaxonly
               = _get_diparmopts, diparmopts(search(off)) soptions syntaxonly
                     ───────────────────────────────────────────────────
>  ───────────────────────────────── begin _get_diparmopts ──────────────
               ─ if _caller() < 8.2 {
                 _get_diparmopts_8 `0'
                 exit
                 }
               ─ version 9
               ─ local version : di "version " string(_caller()) ":"
               ─ syntax [, diparmopts(string asis) EXECute soptions bottom
> plus SYNTAXonly * ]
               ─ local goptions `options'
               = local goptions
               ─ SpliceGlobals junk , `goptions'
               = SpliceGlobals junk ,
                     ───────────────────────────────────────────────────
>  ──────────────────────── begin _get_diparmopts.SpliceGlobals ───────────
                 ─ syntax name(id="macro name" name=c_diparm) [, diparm(str
> ing asis) Level(cilevel) dof(passthru) syntaxonly ]
                 ─ if `"`dof'"' == "" & `"`e(df_r)'"' != "" {
                 = if `""' == "" & `"137"' != "" {
                 ─ capture confirm integer number `e(df_r)'
                 = capture confirm integer number 137
                 ─ if !c(rc) {
                 ─ local gdof dof(`e(df_r)')
                 = local gdof dof(137)
                 ─ }
                 ─ capture
                 ─ }
                 ─ else local gdof `"`dof'"'
                 = else local gdof `""'
                 ─ local glevel `level'
                 = local glevel 95
```

```
                        - local lopt level(`glevel')
                        = local lopt level(95)
                        - if (`"`diparm'"' == "") exit
                        = if (`""' == "") exit
                        ─────────────────────────────────────────────────
```
> ────────────────────── end _get_diparmopts.SpliceGlobals ─────────────
```
                  - local 0 `", `diparmopts'"'
                  = local 0 `", search(off)"'
                  - local diparmopts
                  - local k 0
                  - syntax [, diparm(string asis) * ]
                  - while `"`diparm'"' != "" {
                  = while `""' != "" {
                    local ++k
                    local single 1
                    local after
                    capture _on_colon_parse `diparm'
                    if !c(rc) {
                    local single 0
                    local diparm `"`s(before)'"'
                    local after `"`s(after)'"'
                    }
                    capture
                    SpliceGlobals diparm , diparm(`diparm') `syntaxonly' `gopt
```
> ions'
```
                    local diparm`k' `"`diparm'"'
                    local diparmopts `"`diparmopts' : `diparm'"'
                    if `single' | `"`:list retok after'"' == "" {
                    local 0 `", `options'"'
                    syntax [, diparm(string asis) * ]
                    }
                    else {
                    local diparm `"`after'"'
                    }
                    }
                  - if `"`soptions'"' == "" {
                  = if `"soptions"' == "" {
                    syntax [, diparm(string asis) ]
                    }
                  - if ("`execute'" == "") {
                  = if ("" == "") {
                  - sreturn clear
                  - sreturn local options `"`options'"'
                  = sreturn local options `"search(off)"'
                  - sreturn local diparm `"`diparmopts'"'
                  = sreturn local diparm `""'
```

```
                                – forval i = 1/`k' {
                                = forval i = 1/0 {
                                  sreturn local diparm`i' `"'`diparm`i''"'
                                  }
                                – sreturn local k `k'
                                = sreturn local k 0
                                – exit
                                ─────────────────────────────────────────────

   > ─────────────────────────────────────── end _get_diparmopts ─────────────

                            – forval k = 1/`s(k)' {
                            = forval k = 1/0 {
                              local diparm`k' `"'`s(diparm`k')'"'
                              }
                            – local ndiparm `s(k)'
                            = local ndiparm 0
                            – local options `"'`s(options)'"'
                            = local options `"search(off)"'
                            – if `interactive' & `:length local options' {
                            = if 0 & 11 {
                              local 0 , `options'
                              syntax [, NOTANOPTION]
                              }
                            – if `:length local nopreserve' | `:length local score' {
                            = if 10 | 0 {
                            – global ML_preserve no
                            – }
                            – else global ML_preserve yes
                            – gettoken evaltype spec : spec
                            – confirm name `evaltype'
                            = confirm name e2
                            – gettoken evaluator spec : spec
                            – global ML_evaltype : copy local evaltype
                            – if `:length local srssubpop' {
                            = if 0 {
                              local 0 , srssubpop
                              syntax [, NONOPTION]
                              exit 198
                              }
                            – if `:length local subpop' {
                            = if 0 {
                              local svy svy
                              }
                            – if `:length local svy' {
                            = if 0 {
                              opts_exclusive "`vce' `svy'" vce
                              if `:length local weight' {
```

```
                       di as err "svy option not allowed with weights"
                       exit 198
                       }
                       global ML_noadj : copy local svyadjust
                       }
               - global ML_svy : copy local svy
               - if _caller() >= 15 & c(userversion) >= 15 {
               - local fparm ", freeparm"
               - }
               - local eqspec : copy local spec
               - local ieq 0
               - while `:length local eqspec' {
               = while 139 {
               - local ++ieq
               - gettoken eq eqspec : eqspec, bind
               - if bsubstr(trim("`eq'"),1,1) == "/" {
               = if bsubstr(trim("(piq_timing_max: piq_timing_max = ln_neq cb
> _authors_ext estimated est_late o.est_early wg_ndx_other stky_pr_rotemberg s
> tky_pr_calvo,  )"),1,1) == "/" {
                       local eq = bsubstr(trim("`eq'"),2,.)
                       local spec : subinstr local spec "/`eq'" `"("`eq'":`fparm')"
> ', word

                       }
               - else {
               - gettoken p1 p2 : eq, parse("()")
               - local p2 = trim(`"`p2'"')
               = local p2 = trim(`"piq_timing_max: piq_timing_max = ln_neq cb
> _authors_ext estimated est_late o.est_early wg_ndx_other stky_pr_rotemberg s
> tky_pr_calvo,  )"')
                   - if bsubstr("`p2'",1,1) == "," {
                   = if bsubstr("piq_timing_max: piq_timing_max = ln_neq cb_autho
> rs_ext estimated est_late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr
> _calvo,  )",1,1) == "," {
                       gettoken comma p2 : p2, parse(",")
                       local p2 = trim(`"`p2'"')
                       }
                   - if `"`p1'`p2'"' == "()" {
                   = if `"(piq_timing_max: piq_timing_max = ln_neq cb_authors_ext
>  estimated est_late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo
> ,  )"' == "()" {
                       local spec : subinstr local spec "`eq'" "(eq`ieq':)", word
                       }
                   - }
               - }
               - while `:length local eqspec' {
               = while 3 {
```

```
                     - local ++ieq
                     - gettoken eq eqspec : eqspec, bind
                     - if bsubstr(trim("`eq'"),1,1) == "/" {
                     = if bsubstr(trim("[]"),1,1) == "/" {
                       local eq = bsubstr(trim("`eq'"),2,.)
                       local spec : subinstr local spec "/`eq'" `"("`eq'":`fparm')"
> ', word

                       }
                     - else {
                     - gettoken p1 p2 : eq, parse("()")
                     - local p2 = trim(`"`p2'"')
                     = local p2 = trim(`""')
                     - if bsubstr("`p2'",1,1) == "," {
                     = if bsubstr("",1,1) == "," {
                       gettoken comma p2 : p2, parse(",")
                       local p2 = trim(`"`p2'"')
                       }
                     - if `"`p1'`p2'"' == "()" {
                     = if `"[]"' == "()" {
                       local spec : subinstr local spec "`eq'" "(eq`ieq':)", word
                       }
                     - }
                     - }
                     - while `:length local eqspec' {
                     = while 0 {
                       local ++ieq
                       gettoken eq eqspec : eqspec, bind
                       if bsubstr(trim("`eq'"),1,1) == "/" {
                       local eq = bsubstr(trim("`eq'"),2,.)
                       local spec : subinstr local spec "/`eq'" `"("`eq'":`fparm')"
> ', word

                       }
                       else {
                       gettoken p1 p2 : eq, parse("()")
                       local p2 = trim(`"`p2'"')
                       if bsubstr("`p2'",1,1) == "," {
                       gettoken comma p2 : p2, parse(",")
                       local p2 = trim(`"`p2'"')
                       }
                       if `"`p1'`p2'"' == "()" {
                       local spec : subinstr local spec "`eq'" "(eq`ieq':)", word
                       }
                       }
                       }
                     - if `interactive' {
                     = if 0 {
```

```
                    SetGlobalVar ML_sample : _MLtua
                    }
            -   else {
            -   global ML_sample : tempvar
            -   if `"`moptobj'"' != "" {
            =   if `""' != "" {
                global ML_sample `moptobj'$ML_sample
                }
            -   }
            -   if `"`moptobj'"' != "" {
            =   if `""' != "" {
                cap drop $ML_sample
                }
            -   `vv' mark $ML_sample `if' `in' [`weight'`exp'], `zeroweight'
            =   version 18: mark __000007 if __000002  [],
            -   tempname eqlist
            -   .`eqlist' = ._eqlist.new, eqopts(NOCONStant FREEParm) eqargo
> pts(OFFset EXPosure) noneedvarlist numdepvars(0) needequal
            =   .__000008 = ._eqlist.new, eqopts(NOCONStant FREEParm) eqargo
> pts(OFFset EXPosure) noneedvarlist numdepvars(0) needequal
                    -class {
                    -instance:
                    -       array           n_depvars
                    -       string          needequal
                    -       string          noneedvarlist
                    -       string          wtypes
                    -       string          collinear
                    -       string          nocons
                    -       string          nocons_ignore
                    -       double          n_eq
                    -       string          gl_if
                    -       string          gl_in
                    -       string          gl_wgt
                    -       string          gl_options
                    -       _optlist        eq_opts_allowed
                      -class {
                      -instance:
                      -       array options   = {}
                      -       array names     = {}
                      -}
                    -       array           eq_list
                    -       _optlist        mark_opts
                    -       array           mark_list
                    -       array           mark_name
                    -       _optlist        smark_opts
                    -       array           smark_list
```

```
         –          array             smark_name
         –          _optlist           rmcoll_opts
         –          array              rmcoll_list
         –          array              rmcoll_name
         –          _optlist           rmdcoll_opts
         –          array              rmdcoll_list
         –          array              rmdcoll_name
         –}
                    ─────────────────────────────────────────────
> ─────────────────────────────────── begin _eqlist.new ───────────────
         – version 9.2
         – ._init
                    ─────────────────────────────────────────────
> ─────────────────────────────────── begin _eqlist._init ──────────────
         – version 9.2
         – .n_eq = 0
         – .gl_if = ""
         – .gl_in = ""
         – .gl_wgt = ""
         – .gl_options = ""
         – .eq_list = {}
                    ─────────────────────────────────────────────
> ─────────────────────────────────── end _eqlist._init ────────────────
         – ._setup `0'
         = ._setup , eqopts(NOCONStant FREEParm) eqargopts(OFFset EXP
> osure) noneedvarlist numdepvars(0) needequal
                    ─────────────────────────────────────────────
> ─────────────────────────────────── begin _eqlist._setup ─────────────
         – version 9.2
         – .mark_list = {}
         – .mark_name = {}
         – .mark_opts.reset
                    ─────────────────────────────────────────────
> ─────────────────────────────────── begin _optlist.reset ─────────────
         – version 9
         – .options = {}
         – .names = {}
                    ─────────────────────────────────────────────
> ─────────────────────────────────── end _optlist.reset ───────────────
         – .smark_list = {}
         – .smark_name = {}
         – .smark_opts.reset
                    ─────────────────────────────────────────────
> ─────────────────────────────────── begin _optlist.reset ─────────────
         – version 9
         – .options = {}
```

```
                                   – .names = {}
                           ──────────────────────────────────────────────
> ──────────────────────────────── end _optlist.reset ──────────────
                    – .rmcoll_list = {}
                    – .rmcoll_name = {}
                    – .rmcoll_opts.reset
                           ──────────────────────────────────────────────
> ──────────────────────────────── begin _optlist.reset ──────────────
                    – version 9
                    – .options = {}
                    – .names = {}
                           ──────────────────────────────────────────────
> ──────────────────────────────── end _optlist.reset ──────────────
                    – .rmdcoll_list = {}
                    – .rmdcoll_name = {}
                    – .rmdcoll_opts.reset
                           ──────────────────────────────────────────────
> ──────────────────────────────── begin _optlist.reset ──────────────
                    – version 9
                    – .options = {}
                    – .names = {}
                           ──────────────────────────────────────────────
> ──────────────────────────────── end _optlist.reset ──────────────
                    – syntax [, EQopts(namelist) EQARGopts(namelist) noNEEDVAR
> LIST COMMONopts(string asis) MARKopts(namelist) SMARKopts(namelist) RMCOLLop
> ts(namelist) RMDCOLLopts(namelist) NUMDEPvars(numlist integer >=0) NEEDEQUAL
>  WTYPES(string) IGNORENOCONS ]
                    – .eq_opts_allowed.reset
                           ──────────────────────────────────────────────
> ──────────────────────────────── begin _optlist.reset ──────────────
                    – version 9
                    – .options = {}
                    – .names = {}
                           ──────────────────────────────────────────────
> ──────────────────────────────── end _optlist.reset ──────────────
                    – foreach opt of local eqopts {
                    – .eq_opts_allowed.addopt `opt'
                    = .eq_opts_allowed.addopt NOCONStant
                           ──────────────────────────────────────────────
> ──────────────────────────────── begin _optlist.addopt ──────────────
                    – version 9
                    – syntax name(name=optspec) [, PASSthru]
                    – local mname = lower("`optspec'")
                    = local mname = lower("NOCONStant")
                    – if "`passthru'" != "" {
                    = if "" != "" {
```

```
                     local optspec `optspec'(passthru)
                     }
        − .options.Arrpush "`optspec'"
        = .options.Arrpush "NOCONStant"
        − .names.Arrpush "`mname'"
        = .names.Arrpush "noconstant"
                     ─────────────────────────────────────────
>   ───────────────────────────────────── end _optlist.addopt ─────────────────
        − }
        − .eq_opts_allowed.addopt `opt'
        = .eq_opts_allowed.addopt FREEParm
                     ─────────────────────────────────────────
>   ───────────────────────────────────── begin _optlist.addopt ───────────────
        − version 9
        − syntax name(name=optspec) [, PASSthru]
        − local mname = lower("`optspec'")
        = local mname = lower("FREEParm")
        − if "`passthru'" != "" {
        = if "" != "" {
                     local optspec `optspec'(passthru)
                     }
        − .options.Arrpush "`optspec'"
        = .options.Arrpush "FREEParm"
        − .names.Arrpush "`mname'"
        = .names.Arrpush "freeparm"
                     ─────────────────────────────────────────
>   ───────────────────────────────────── end _optlist.addopt ─────────────────
        − }
        − foreach opt of local eqargopts {
        − .eq_opts_allowed.addopt `opt', passthru
        = .eq_opts_allowed.addopt OFFset, passthru
                     ─────────────────────────────────────────
>   ───────────────────────────────────── begin _optlist.addopt ───────────────
        − version 9
        − syntax name(name=optspec) [, PASSthru]
        − local mname = lower("`optspec'")
        = local mname = lower("OFFset")
        − if "`passthru'" != "" {
        = if "passthru" != "" {
        − local optspec `optspec'(passthru)
        = local optspec OFFset(passthru)
        − }
        − .options.Arrpush "`optspec'"
        = .options.Arrpush "OFFset(passthru)"
        − .names.Arrpush "`mname'"
        = .names.Arrpush "offset"
```

```
> ───────────────────────────────── end _optlist.addopt ─────────────────
              - }
              - .eq_opts_allowed.addopt `opt', passthru
              = .eq_opts_allowed.addopt EXPosure, passthru

> ───────────────────────────────── begin _optlist.addopt ───────────────
                - version 9
                - syntax name(name=optspec) [, PASSthru]
                - local mname = lower("`optspec'")
                = local mname = lower("EXPosure")
                - if "`passthru'" != "" {
                = if "passthru" != "" {
                - local optspec `optspec'(passthru)
                = local optspec EXPosure(passthru)
                - }
                - .options.Arrpush "`optspec'"
                = .options.Arrpush "EXPosure(passthru)"
                - .names.Arrpush "`mname'"
                = .names.Arrpush "exposure"

> ───────────────────────────────── end _optlist.addopt ─────────────────
              - }
              - local i 0
              - foreach opt of local markopts {
                .mark_opts.addopt `opt', passthru
                }
              - local i 0
              - foreach opt of local smarkopts {
                .smark_opts.addopt `opt', passthru
                }
              - local i 0
              - foreach opt of local rmcollopts {
                .rmcoll_opts.addopt `opt', passthru
                }
              - local i 0
              - foreach opt of local rmdcollopts {
                .rmdcoll_opts.addopt `opt', passthru
                }
              - .n_depvars.Arrdropall
              - if "`numdepvars'" != "" {
              = if "0" != "" {
              - foreach ndep of local numdepvars {
              - .n_depvars.Arrpush `ndep'
              = .n_depvars.Arrpush 0
              - }
```

```
– }
– else .n_depvars.Arrpush 1
– .needequal = "`needequal'"
= .needequal = "needequal"
– .wtypes = "`wtypes'"
= .wtypes = ""
– .noneedvarlist = "`needvarlist'"
= .noneedvarlist = "noneedvarlist"
– .nocons_ignore = "`ignorenocons'"
= .nocons_ignore = ""
```
───

> ───────────────────────── end _eqlist._setup ─────────────
───

> ───────────────────────── end _eqlist.new ───────────────
```
– .`eqlist'.parse `spec'
= .__000008.parse  (piq_timing_max: piq_timing_max = ln_neq cb
```
> _authors_ext estimated est_late o.est_early wg_ndx_other stky_pr_rotemberg s
> tky_pr_calvo,) []
───

> ───────────────────────── begin _eqlist.parse ─────────────
```
– version 9.2
– ._init
```
───

> ───────────────────────── begin _eqlist._init ─────────────
```
– version 9.2
– .n_eq = 0
– .gl_if = ""
– .gl_in = ""
– .gl_wgt = ""
– .gl_options = ""
– .eq_list = {}
```
───

> ───────────────────────── end _eqlist._init ─────────────
```
– local MARKOPTLIST `"`.mark_opts.dumpoptions'"'
```
───

> ───────────────────────── begin _optlist.dumpoptions ─────────
```
– version 9
– forval i = 1/`.options.arrnels' {
= forval i = 1/0 {
  local optlist `optlist' `.options[`i']'
  }
– local optlist : list uniq optlist
– sreturn local optlist `"`optlist'"'
= sreturn local optlist `""'
– class exit `"`optlist'"'
= class exit `""'
```

```
> ————————————————————————— end _optlist.dumpoptions —————————————
  = local MARKOPTLIST `""'
  - local SMARKOPTLIST `"'`.smark_opts.dumpoptions'"'

> ————————————————————————— begin _optlist.dumpoptions —————————————
  - version 9
  - forval i = 1/`.options.arrnels' {
  = forval i = 1/0 {
    local optlist `optlist' `.options[`i']'
    }
  - local optlist : list uniq optlist
  - sreturn local optlist `"'`optlist'"'
  = sreturn local optlist `""'
  - class exit `"'`optlist'"'
  = class exit `""'

> ————————————————————————— end _optlist.dumpoptions —————————————
  = local SMARKOPTLIST `""'
  - local RMCOLLOPTLIST `"'`.rmcoll_opts.dumpoptions'"'

> ————————————————————————— begin _optlist.dumpoptions —————————————
  - version 9
  - forval i = 1/`.options.arrnels' {
  = forval i = 1/0 {
    local optlist `optlist' `.options[`i']'
    }
  - local optlist : list uniq optlist
  - sreturn local optlist `"'`optlist'"'
  = sreturn local optlist `""'
  - class exit `"'`optlist'"'
  = class exit `""'

> ————————————————————————— end _optlist.dumpoptions —————————————
  = local RMCOLLOPTLIST `""'
  - local RMDCOLLOPTLIST `"'`.rmdcoll_opts.dumpoptions'"'

> ————————————————————————— begin _optlist.dumpoptions —————————————
  - version 9
  - forval i = 1/`.options.arrnels' {
  = forval i = 1/0 {
    local optlist `optlist' `.options[`i']'
    }
  - local optlist : list uniq optlist
  - sreturn local optlist `"'`optlist'"'
  = sreturn local optlist `""'
```

```
                          – class exit `"`optlist'"'
                          = class exit `""'
                          _____
> ———————————————————————————— end _optlist.dumpoptions ————————————————
                       = local RMDCOLLOPTLIST `""'
                       – _parse expand EQ GL : 0, gweight common( `MARKOPTLIST' `SM
> ARKOPTLIST' `RMCOLLOPTLIST' `RMDCOLLOPTLIST' COLlinear )
                       = _parse expand EQ GL : 0, gweight common(     COLlinear )
                       – if `EQ_n' == 0 & "`.noneedvarlist'" == "" {
                       = if 1 == 0 & "noneedvarlist" == "" {
                         syntax varlist
                         }
                       – local rebind = `EQ_n' == 1
                       = local rebind = 1 == 1
                       – if `rebind' {
                       = if 1 {
                       – tokenize `"`0'"', parse(",()[]")
                       = tokenize `"(piq_timing_max: piq_timing_max = ln_neq cb_aut
> hors_ext estimated est_late o.est_early wg_ndx_other stky_pr_rotemberg stky_
> pr_calvo,  ) []"', parse(",()[]")
                         – local rebind = `"`1'"' != "(" & `"`2'"' == "("
                         = local rebind = `"("' != "(" & `"piq_timing_max: piq_timing
> _max = ln_neq cb_authors_ext estimated est_late o.est_early wg_ndx_other stk
> y_pr_rotemberg stky_pr_calvo"' == "("
                         – }
                       – if `rebind' {
                       = if 0 {
                         while `:length local 0' {
                         gettoken tok 0 : 0, parse(" ,") bind match(par)
                         if "`par'" == "(" {
                         gettoken nxt : 0
                         local nxt = substr(`"`nxt'"',1,1)
                         if inlist(`"`nxt'"', "#", "|") {
                         local ZERO `"`ZERO' (`tok')"'
                         }
                         else {
                         local ZERO `"(`ZERO') (`tok') `0'"'
                         local 0
                         }
                         }
                         else if inlist("`tok'", "if", "in", ",") {
                         local ZERO `"(`ZERO') `tok' `0'"'
                         local 0
                         }
                         else if inlist(substr(`"`tok'"',1,1), "#", "|") {
                         local ZERO `"`ZERO'`tok'"'
```

```
                              }
                              else {
                              local ZERO `"`ZERO' `tok'"'
                              }
                              }
                              _parse expand EQ GL : ZERO, gweight common( `MARKOPTLIST'
> `SMARKOPTLIST' `RMCOLLOPTLIST' `RMDCOLLOPTLIST' COLlinear )
                              }
                      - forval i = 1/`EQ_n' {
                      = forval i = 1/1 {
                      - if `i' <= `.n_depvars.arrnels' {
                      = if 1 <= 1 {
                      - local ndep = `.n_depvars[`i']'
                      = local ndep = 0
                      - }
                      - .eq_list[`i'] = ._eqspec.new, numdepvars(`ndep') `.needequ
> al' `.noneedvarlist' wtypes(`.wtypes') `.nocons_ignore'
                      = .eq_list[1] = ._eqspec.new, numdepvars(0) needequal noneed
> varlist wtypes()
                      -class {
                      -instance:
                      -        double  n_depvars
                      -        double  needequal
                      -        double  needvarlist
                      -        string  wtypes
                      -        string  name
                      -        string  depvars
                      -        double  hasequal
                      -        string  indepvars
                      -        string  other_markvars
                      -        double  nocons
                      -        double  nocons_ignore
                      -        string  offset
                      -        double  exposure
                      -        double  freeparm
                      -        string  if
                      -        string  in
                      -        string  wgt
                      -        string  options
                      -}
                      ─────────────────────────────────────────────────────
> ───────────────────────────────────── begin _eqspec.new ──────────────
                      - version 9.2
                      - syntax [, NUMDEPvars(numlist integer >=0 max=1) NEEDEQUA
> L noNEEDVARLIST WTYPES(string) IGNORENOCONS ]
                      - .n_depvars = 1
```

```
                          – if `:list sizeof numdepvars' {
                          = if 1 {
                          – .n_depvars = `numdepvars'
                          = .n_depvars = 0
                          – }
                          – .needequal = ("`needequal'" != "")
                          = .needequal = ("needequal" != "")
                          – .needvarlist = ("`needvarlist'" == "")
                          = .needvarlist = ("noneedvarlist" == "")
                          – .nocons_ignore = ("`ignorenocons'" != "")
                          = .nocons_ignore = ("" != "")
                          – .wtypes = "`wtypes'"
                          = .wtypes = ""
                        ───────────────────────────────────────────
  > ──────────────────────────────────── end _eqspec.new ─────────────
                    – .eq_list[`i'].parse `.eq_opts_allowed.objkey':`EQ_`i''
                    = .eq_list[1].parse __key(6000025b1dc0):piq_timing_max: piq_
  > timing_max = ln_neq cb_authors_ext estimated est_late o.est_early wg_ndx_oth
  > er stky_pr_rotemberg stky_pr_calvo
                        ───────────────────────────────────────────
  > ─────────────────────────────────── begin _eqspec.parse ──────────
                    – version 9.2
                    – _on_colon_parse `0'
                    = _on_colon_parse __key(6000025b1dc0):piq_timing_max: piq_
  > timing_max = ln_neq cb_authors_ext estimated est_late o.est_early wg_ndx_oth
  > er stky_pr_rotemberg stky_pr_calvo

                        ───────────────────────────────────────────
  > ────────────────────────────────── begin _on_colon_parse ─────────
                        – version 8.2
                        – sreturn local before ""
                        – sreturn local after ""
                        – gettoken before after : 0, parse(":") bind match(par)
  > quotes
                        – if "`par'" != "" {
                        = if "" != "" {
                          local before `"(`before')"'
                          }
                        – if `"`before'"' == ":" {
                        = if `"__key(6000025b1dc0)"' == ":" {
                          sreturn local after `"`after'"'
                          exit
                          }
                        – while `"`COLON'"' != ":" & `"`after'"' != "" {
                        = while `""' != ":" & `":piq_timing_max: piq_timing_max
  > = ln_neq cb_authors_ext estimated est_late o.est_early wg_ndx_other stky_pr_
  > rotemberg stky_pr_calvo"' != "" {
```

```
                            - gettoken COLON after : after, parse(":") bind match(pa
> r) quotes
                            - if "`par'" != "" {
                            = if "" != "" {
                              local before `before' (`COLON')
                              local COLON
                              }
                            - else if `"`COLON'"' != ":" {
                            = else if `":"' != ":" {
                              local before `"`before' `COLON'"'
                              local COLON
                              }
                            - }
                            - while `"`COLON'"' != ":" & `"`after'"' != "" {
                            = while `":"' != ":" & `"piq_timing_max: piq_timing_max
> = ln_neq cb_authors_ext estimated est_late o.est_early wg_ndx_other stky_pr_
> rotemberg stky_pr_calvo"' != "" {
                              gettoken COLON after : after, parse(":") bind match(pa
> r) quotes

                              if "`par'" != "" {
                              local before `before' (`COLON')
                              local COLON
                              }
                              else if `"`COLON'"' != ":" {
                              local before `"`before' `COLON'"'
                              local COLON
                              }
                              }
                            - if `"`COLON'"' != ":" {
                            = if `":"' != ":" {
                              di as err "'' found where ':' expected"
                              exit 198
                              }
                            - sreturn local before `"`before'"'
                            = sreturn local before `"__key(6000025b1dc0)"'
                            - sreturn local after `"`after'"'
                            = sreturn local after `"piq_timing_max: piq_timing_max =
>  ln_neq cb_authors_ext estimated est_late o.est_early wg_ndx_other stky_pr_r
> otemberg stky_pr_calvo"'
                              ─────────────────────────────────────────────────────
> ─────────────────────────────────────── end _on_colon_parse ─────────────────
                    - local ol `s(before)'
                    = local ol __key(6000025b1dc0)
                    - if `:list sizeof ol' {
                    = if 1 {
                    - local OPTLIST `"`.`ol'.dumpoptions'"'
```

```
  > ──────────────────────────────── begin _optlist.dumpoptions ──────────────────
                        - version 9
                        - forval i = 1/`.options.arrnels' {
                        = forval i = 1/4 {
                        - local optlist `optlist' `.options[`i']'
                        = local optlist  NOCONStant
                        - }
                        - local optlist `optlist' `.options[`i']'
                        = local optlist NOCONStant FREEParm
                        - }
                        - local optlist `optlist' `.options[`i']'
                        = local optlist NOCONStant FREEParm OFFset(passthru)
                        - }
                        - local optlist `optlist' `.options[`i']'
                        = local optlist NOCONStant FREEParm OFFset(passthru) EXP
  > osure(passthru)
                        - }
                        - local optlist : list uniq optlist
                        - sreturn local optlist `"`optlist'"'
                        = sreturn local optlist `"NOCONStant FREEParm OFFset(pas
  > sthru) EXPosure(passthru)"'
                        - class exit `"`optlist'"'
                        = class exit `"NOCONStant FREEParm OFFset(passthru) EXPo
  > sure(passthru)"'
                        ──────────────────────────────────────────────────────
  > ──────────────────────────────────── end _optlist.dumpoptions ──────────────
                    = local OPTLIST `"NOCONStant FREEParm OFFset(passthru) EXP
  > osure(passthru)"'
                    - local OPTNAMES `"`.`ol'.dumpnames'"'
                        ──────────────────────────────────────────────────────
  > ──────────────────────────────── begin _optlist.dumpnames ────────────────────
                        - version 9
                        - forval i = 1/`.names.arrnels' {
                        = forval i = 1/4 {
                        - local namelist `namelist' `.names[`i']'
                        = local namelist  noconstant
                        - }
                        - local namelist `namelist' `.names[`i']'
                        = local namelist noconstant freeparm
                        - }
                        - local namelist `namelist' `.names[`i']'
                        = local namelist noconstant freeparm offset
                        - }
                        - local namelist `namelist' `.names[`i']'
                        = local namelist noconstant freeparm offset exposure
```

```
                      - }
                      - local namelist : list uniq namelist
                      - sreturn local namelist `"`namelist'"'
                      = sreturn local namelist `"noconstant freeparm offset ex
> posure"'
                      - class exit `"`namelist'"'
                      = class exit `"noconstant freeparm offset exposure"'
                      ─────────────────────────────────────────────────────────
>  ────────────────────────────────────── end _optlist.dumpnames ───────────────
                  = local OPTNAMES `"noconstant freeparm offset exposure"'
                  - local NOCONS constant noconstant
                  - if `"`:list NOCONS & OPTNAMES'"' == "" {
                  = if `"noconstant"' == "" {
                    local NOCONS noCONStant
                    }
                  - else local NOCONS
                  - }
                  - local 0 `"`s(after)'"'
                  = local 0 `"piq_timing_max: piq_timing_max = ln_neq cb_aut
> hors_ext estimated est_late o.est_early wg_ndx_other stky_pr_rotemberg stky_
> pr_calvo"'
                  - if `"`.wtypes'"' != "" {
                  = if `""' != "" {
                    local wgt "[`.wtypes']"
                    }
                  - syntax [anything(equalok)] [if] [in] `wgt' [, `OPTLIST'
> `NOCONS' *]
                  = syntax [anything(equalok)] [if] [in]  [, NOCONStant FREE
> Parm OFFset(passthru) EXPosure(passthru)  *]
                  - local HOLDIF `"`if'"'
                  = local HOLDIF `""'
                  - local HOLDIN `"`in'"'
                  = local HOLDIN `""'
                  - if "`wgt'" != "" & "`weight'" != "" {
                  = if "" != "" & "" != "" {
                    local HOLDWGT `"[`weight'`exp']"'
                    }
                  - gettoken NAME REST : anything, parse(":")
                  - if trim("`NAME'") == ":" {
                  = if trim("piq_timing_max") == ":" {
                    di as err "nothing found where equation name expected"
                    exit 198
                    }
                  - if `:list sizeof REST' {
                  = if 11 {
                  - if strpos(`"`NAME'"', ":") {
```

```
    =  if strpos(`"piq_timing_max"', ":") {
       capture _msparse `NAME'
       if c(rc) {
       di as err "{bf:`NAME'} invalid equation specification"
       exit 198
       }
       }
    -  else {
    -  ._confirm_eqname `NAME'
    =  ._confirm_eqname piq_timing_max
       ──────────────────────────────────────────────────
>  ───────────────────────── begin _eqspec._confirm_eqname ─────────────────
    -  version 9.2
    -  capture confirm number `0'
    =  capture confirm number piq_timing_max
    -  if (! c(rc)) exit
    -  local hasdot = strpos(`"`0'"',".")
    =  local hasdot = strpos(`"piq_timing_max"',".")
    -  if `hasdot' {
    =  if 0 {
       syntax varname(ts)
       exit
       }
    -  capture syntax name(id="equation name")
    -  if (! c(rc)) exit
       ──────────────────────────────────────────────────
>  ───────────────────────── end _eqspec._confirm_eqname ──────────────────
    -  }
    -  local NAME : list retok NAME
    -  gettoken COLON anything : REST, parse(":")
    -  }
    -  else {
       local NAME
       }
    -  gettoken DEPVARS REST : anything, parse("=") bind
    -  if "`DEPVARS'" == "=" {
    =  if "piq_timing_max " == "=" {
       local REST : copy local anything
       local DEPVARS
       }
    -  if (`:length local DEPVARS' == 0 & `.n_depvars') {
    =  if (15 == 0 & 0) {
       di as err "nothing found where depvar expected"
       exit 198
       }
    -  if `"`REST'"' == "" {
```

```
                             = if `"= ln_neq cb_authors_ext estimated est_late o.est_ea
> rly wg_ndx_other stky_pr_rotemberg stky_pr_calvo"' == "" {
                             if 0`.needequal' {
                             if `.needvarlist' | (`:length local DEPVARS' != 0 & `.n_
> depvars') {
                             di as err "equal sign required to separate depvars from
> indepvars"

                             exit 198
                             }
                             }
                             local DEPVARS
                             local n_deps : list sizeof anything
                             if `n_deps' != 0 | `.needvarlist' {
                             if `n_deps' < `.n_depvars' {
                             error 102
                             }
                             forval j = 1/`.n_depvars' {
                             gettoken YY anything : anything
                             local DEPVARS `DEPVARS' `YY'
                             }
                             local INDEPVARS : list retok anything
                             }
                             loca hasequal 0
                             }
                          − else {
                          − gettoken EQ INDEPVARS : REST, parse("=") bind
                          − local hasequal 1
                          − }
                          − if `:list sizeof DEPVARS' {
                          = if 1 {
                          − _fv_check_depvar `DEPVARS'
                          = _fv_check_depvar piq_timing_max
                          − tsunab DEPVARS : `DEPVARS'
                          = tsunab DEPVARS : piq_timing_max
                             ─────────────────────────────────────────────
> ─────────────────────────────────── begin tsunab ────────────────
                          − version 6
                          − gettoken user 0: 0, parse(" :")
                          − gettoken colon 0: 0, parse(" :")
                          − if `"`colon'"' != ":" { error 198 }
                          = if `":"' != ":" { error 198 }
                          − syntax [varlist(ts default=empty)] [, MIN(integer 1) M
> AX(integer 32000) NAME(string)]
                          − c_local `user' `varlist'
                          = c_local DEPVARS piq_timing_max
                          − local n : word count `varlist'
```

```
                            = local n : word count piq_timing_max
                            – if `n'>=`min' & `n'<=`max' { exit }
                            = if 1>=1 & 1<=32000 { exit }
                            ─────────────────────────────────────────
>  ──────────────────────────────────────────── end tsunab ──────────────
                    – }
                    – if `:list sizeof INDEPVARS' {
                    = if 8 {
                    – fvunab INDEPVARS : `INDEPVARS'
                    = fvunab INDEPVARS :  ln_neq cb_authors_ext estimated est_
>  late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo
                            ─────────────────────────────────────────
>  ──────────────────────────────────────────── begin fvunab ──────────────
                    – version 11
                    – _on_colon_parse `0'
                    = _on_colon_parse INDEPVARS :  ln_neq cb_authors_ext est
>  imated est_late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo
                            ─────────────────────────────────────────
>  ──────────────────────────────── begin _on_colon_parse ──────────────
                    – version 8.2
                    – sreturn local before ""
                    – sreturn local after ""
                    – gettoken before after : 0, parse(":") bind match(par
>  ) quotes

                    – if "`par'" != "" {
                    = if "" != "" {
                      local before `"(`before')"'
                      }
                    – if `"`before'"' == ":" {
                    = if `"INDEPVARS "' == ":" {
                      sreturn local after `"`after'"'
                      exit
                      }
                    – while `"`COLON'"' != ":" & `"`after'"' != "" {
                    = while `""' != ":" & `":  ln_neq cb_authors_ext estim
>  ated est_late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo"' !=
>  "" {
                    – gettoken COLON after : after, parse(":") bind match(
>  par) quotes

                    – if "`par'" != "" {
                    = if "" != "" {
                      local before `before' (`COLON')
                      local COLON
                      }
                    – else if `"`COLON'"' != ":" {
                    = else if `":"' != ":" {
```

```
                                local before `"`before' `COLON'"'
                                local COLON
                                }
                        – }
                        – while `"`COLON'"' != ":" & `"`after'"' != "" {
                        = while `":"' != ":" & `"  ln_neq cb_authors_ext estim
> ated est_late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo"' !=
> "" {
                                gettoken COLON after : after, parse(":") bind match(
> par) quotes

                                if "`par'" != "" {
                                local before `before' (`COLON')
                                local COLON
                                }
                                else if `"`COLON'"' != ":" {
                                local before `"`before' `COLON'"'
                                local COLON
                                }
                                }
                        – if `"`COLON'"' != ":" {
                        = if `":"' != ":" {
                                di as err "'' found where ':' expected"
                                exit 198
                                }
                        – sreturn local before `"`before'"'
                        = sreturn local before `"INDEPVARS "'
                        – sreturn local after `"`after'"'
                        = sreturn local after `"  ln_neq cb_authors_ext estima
> ted est_late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo"'
                                ───────────────────────────────────────
> ──────────────────────────────────── end _on_colon_parse ────────────────
                        – local 0 `"`s(before)'"'
                        = local 0 `"INDEPVARS "'
                        – syntax name(id="macro name" name=user)
                        – local 0 `"`s(after)'"'
                        = local 0 `"  ln_neq cb_authors_ext estimated est_late o
> .est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo"'
                        – syntax [varlist(ts fv default=none)] [, MIN(integer 1)
>  MAX(integer 32000) NAME(string) ]
                        – c_local `user' `varlist'
                        = c_local INDEPVARS ln_neq cb_authors_ext estimated est_
> late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo
                        – local n : list sizeof varlist
                        – if (`min' <= `n' & `n' <= `max') exit
                        = if (1 <= 8 & 8 <= 32000) exit
                                ───────────────────────────────────────────
```

```
                        - }
                        - if inlist("noconstant", "`noconstant'", "`constant'") {
                        = if inlist("noconstant", "", "") {
                          if "`INDEPVARS'" == "" & ! `.nocons_ignore' {
                          di as err "independent variables are required when optio
> n noconstant is specified"
                          exit 102
                          }
                          if "`NOCONS'" != "" {
                          local options `options' noconstant
                          }
                          local NOCONS 1
                          }
                        - else local NOCONS 0
                        - if `"`offset'`exposure'"' != "" {
                        = if `""' != "" {
                          ._check_offset, `offset' `exposure'
                          local OFFSET "`s(offset)'"
                          local EXPOSURE = ("`exposure'" != "")
                          local OTHER `s(offset)'
                          }
                        - else local EXPOSURE 0
                        - local FREEPARM = `"`freeparm'"' != ""
                        = local FREEPARM = `""' != ""
                        - local OPTIONS
                        - local SPACE
                        - foreach OPTNAME of local OPTNAMES {
                        - if `"``OPTNAME''"' != "" {
                        = if `""' != "" {
                          local OPTIONS `"`OPTIONS'`SPACE'``OPTNAME''"'
                          local SPACE " "
                          }
                        - }
                        - if `"``OPTNAME''"' != "" {
                        = if `""' != "" {
                          local OPTIONS `"`OPTIONS'`SPACE'``OPTNAME''"'
                          local SPACE " "
                          }
                        - }
                        - if `"``OPTNAME''"' != "" {
                        = if `""' != "" {
                          local OPTIONS `"`OPTIONS'`SPACE'``OPTNAME''"'
                          local SPACE " "
                          }
                        - }
```

```
                          - if `"``OPTNAME''"' != "" {
                        = if `""' != "" {
                          local OPTIONS `"`OPTIONS'`SPACE'``OPTNAME''"'
                          local SPACE " "
                          }
                        - }
                        - if `"`options'"' != "" {
                        = if `""' != "" {
                          local OPTIONS `"`OPTIONS'`SPACE'`options'"'
                          }
                        - .name = `"`NAME'"'
                        = .name = `"piq_timing_max"'
                        - .depvars = `"`DEPVARS'"'
                        = .depvars = `"piq_timing_max"'
                        - .hasequal = `hasequal'
                        = .hasequal = 1
                        - .indepvars = `"`:list retok INDEPVARS'"'
                        = .indepvars = `"ln_neq cb_authors_ext estimated est_late
> o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo"'
                        - .other_markvars = `"`:list retok OTHER'"'
                        = .other_markvars = `""'
                        - .nocons = `NOCONS'
                        = .nocons = 0
                        - .if = `"`HOLDIF'"'
                        = .if = `""'
                        - .in = `"`HOLDIN'"'
                        = .in = `""'
                        - .wgt = `"`HOLDWGT'"'
                        = .wgt = `""'
                        - .offset = `"`OFFSET'"'
                        = .offset = `""'
                        - .exposure = `EXPOSURE'
                        = .exposure = 0
                        - .freeparm = `FREEPARM'
                        = .freeparm = 0
                        - .options = `"`OPTIONS'"'
                        = .options = `""'
                   ─────────────────────────────────────────────
> ──────────────────────────────── end _eqspec.parse ───────────────
                - }
                - local MARKOPTLIST `"`.mark_opts.dumpoptions'"'
                   ─────────────────────────────────────────────
> ───────────────────────────── begin _optlist.dumpoptions ──────────────
                - version 9
                - forval i = 1/`.options.arrnels' {
                = forval i = 1/0 {
```

```
                    local optlist `optlist' `.options[`i']'
                    }
                  – local optlist : list uniq optlist
                  – sreturn local optlist `"`optlist'"'
                  = sreturn local optlist `""'
                  – class exit `"`optlist'"'
                  = class exit `""'
                  ─────────────────────────────────────────────
> ───────────────────────────── end _optlist.dumpoptions ─────────────
                  = local MARKOPTLIST `""'
                  – local MARKOPTNAMES `"'`.mark_opts.dumpnames'"'
                  ─────────────────────────────────────────────
> ───────────────────────────── begin _optlist.dumpnames ─────────────
                  – version 9
                  – forval i = 1/`.names.arrnels' {
                  = forval i = 1/0 {
                    local namelist `namelist' `.names[`i']'
                    }
                  – local namelist : list uniq namelist
                  – sreturn local namelist `"`namelist'"'
                  = sreturn local namelist `""'
                  – class exit `"`namelist'"'
                  = class exit `""'
                  ─────────────────────────────────────────────
> ───────────────────────────── end _optlist.dumpnames ─────────────
                  = local MARKOPTNAMES `""'
                  – local OPTLIST1 : subinstr local MARKOPTLIST "(passthru)" "
> (string asis)", all
                  – local SMARKOPTLIST `"'`.smark_opts.dumpoptions'"'
                  ─────────────────────────────────────────────
> ───────────────────────────── begin _optlist.dumpoptions ─────────────
                  – version 9
                  – forval i = 1/`.options.arrnels' {
                  = forval i = 1/0 {
                    local optlist `optlist' `.options[`i']'
                    }
                  – local optlist : list uniq optlist
                  – sreturn local optlist `"`optlist'"'
                  = sreturn local optlist `""'
                  – class exit `"`optlist'"'
                  = class exit `""'
                  ─────────────────────────────────────────────
> ───────────────────────────── end _optlist.dumpoptions ─────────────
                  = local SMARKOPTLIST `""'
                  – local SMARKOPTNAMES `"'`.smark_opts.dumpnames'"'
                  ─────────────────────────────────────────────
```

```
> ───────────────────── begin _optlist.dumpnames ─────────────
                – version 9
                – forval i = 1/`.names.arrnels' {
                = forval i = 1/0 {
                  local namelist `namelist' `.names[`i']'
                  }
                – local namelist : list uniq namelist
                – sreturn local namelist `"`namelist'"'
                = sreturn local namelist `""'
                – class exit `"`namelist'"'
                = class exit `""'
                ──────────────────────────────────────────────
> ───────────────────── end _optlist.dumpnames ──────────────
            = local SMARKOPTNAMES `""'
            – local OPTLIST1s : subinstr local SMARKOPTLIST "(passthru)"
> "(string asis)", all
            – local RMCOLLOPTLIST `"`.rmcoll_opts.dumpoptions'"'
                ──────────────────────────────────────────────
> ───────────────────── begin _optlist.dumpoptions ──────────
                – version 9
                – forval i = 1/`.options.arrnels' {
                = forval i = 1/0 {
                  local optlist `optlist' `.options[`i']'
                  }
                – local optlist : list uniq optlist
                – sreturn local optlist `"`optlist'"'
                = sreturn local optlist `""'
                – class exit `"`optlist'"'
                = class exit `""'
                ──────────────────────────────────────────────
> ───────────────────── end _optlist.dumpoptions ────────────
            = local RMCOLLOPTLIST `""'
            – local RMCOLLOPTNAMES `"`.rmcoll_opts.dumpnames'"'
                ──────────────────────────────────────────────
> ───────────────────── begin _optlist.dumpnames ────────────
                – version 9
                – forval i = 1/`.names.arrnels' {
                = forval i = 1/0 {
                  local namelist `namelist' `.names[`i']'
                  }
                – local namelist : list uniq namelist
                – sreturn local namelist `"`namelist'"'
                = sreturn local namelist `""'
                – class exit `"`namelist'"'
                = class exit `""'
                ──────────────────────────────────────────────
```

```
> ──────────────────────────────── end _optlist.dumpnames ──────────────
                = local RMCOLLOPTNAMES `""'
                − local OPTLIST2 : subinstr local RMCOLLOPTLIST "(passthru)"
> "(string asis)", all
                − local RMDCOLLOPTLIST `"'`.rmdcoll_opts.dumpoptions'"'
                ─────────────────────────────────────────────────────────

> ──────────────────────────────── begin _optlist.dumpoptions ──────────
                − version 9
                − forval i = 1/`.options.arrnels' {
                = forval i = 1/0 {
                  local optlist `optlist' `.options[`i']'
                  }
                − local optlist : list uniq optlist
                − sreturn local optlist `"'`optlist'"'
                = sreturn local optlist `""'
                − class exit `"'`optlist'"'
                = class exit `""'
                ─────────────────────────────────────────────────────────
> ──────────────────────────────── end _optlist.dumpoptions ────────────
                = local RMDCOLLOPTLIST `""'
                − local RMDCOLLOPTNAMES `"'`.rmdcoll_opts.dumpnames'"'
                ─────────────────────────────────────────────────────────

> ──────────────────────────────── begin _optlist.dumpnames ────────────
                − version 9
                − forval i = 1/`.names.arrnels' {
                = forval i = 1/0 {
                  local namelist `namelist' `.names[`i']'
                  }
                − local namelist : list uniq namelist
                − sreturn local namelist `"'`namelist'"'
                = sreturn local namelist `""'
                − class exit `"'`namelist'"'
                = class exit `""'
                ─────────────────────────────────────────────────────────
> ──────────────────────────────── end _optlist.dumpnames ──────────────
                = local RMDCOLLOPTNAMES `""'
                − local OPTLIST3 : subinstr local RMDCOLLOPTLIST "(passthru)
> " "(string asis)", all
                − local 0 `", `GL_op'"'
                = local 0 `", "'
                − syntax [, `OPTLIST1' `OPTLIST1s' `OPTLIST2' `OPTLIST3' COL
> linear noCONStant * ]
                = syntax [,     COLlinear noCONStant * ]
                − local GL_op `"'`options'"'
                = local GL_op `""'
                − if `"'`collinear'"' != "" {
```

```
                         = if `""' != "" {
                           local GL_op `"`GL_op' `collinear'"'
                           .collinear = "`collinear'"
                           }
                         – if `"`constant'"' != "" {
                         = if `""' != "" {
                           local GL_op `"`GL_op' `constant'"'
                           .nocons = "`constant'"
                           }
                         – local I 0
                         – foreach OPT of local MARKOPTNAMES {
                           if `:list sizeof `OPT'' {
                           .mark_list[`++I'] = ._eqspec.new, numdep(0) wtypes(`.wtype
> s')

                           .mark_list[`I'].parse "" : ``OPT''
                           .mark_name.Arrpush "`OPT'"
                           }
                           }
                         – local I 0
                         – foreach OPT of local SMARKOPTNAMES {
                           if `:list sizeof `OPT'' {
                           .smark_list[`++I'] = ._eqspec.new, numdep(0) wtypes(`.wtyp
> es')

                           .smark_list[`I'].parse "" : ``OPT''
                           .smark_name.Arrpush "`OPT'"
                           }
                           }
                         – local I 0
                         – foreach OPT of local RMCOLLOPTNAMES {
                           if `:list sizeof `OPT'' {
                           .rmcoll_list[`++I'] = ._eqspec.new, numdep(0) wtypes(`.wty
> pes')

                           .rmcoll_list[`I'].parse "" : ``OPT''
                           .rmcoll_name.Arrpush "`OPT'"
                           }
                           }
                         – local I 0
                         – foreach OPT of local RMDCOLLOPTNAMES {
                           if `:list sizeof `OPT'' {
                           .rmdcoll_list[`++I'] = ._eqspec.new, wtypes(`.wtypes')
                           .rmdcoll_list[`I'].parse "" : ``OPT''
                           .rmdcoll_name.Arrpush "`OPT'"
                           }
                           }
                         – .n_eq = `EQ_n'
                         = .n_eq = 1
```

```
                 - .gl_if = `"`GL_if'"'
                 = .gl_if = `""'
                 - .gl_in = `"`GL_in'"'
                 = .gl_in = `""'
                 - .gl_wgt = `"`GL_wt'"'
                 = .gl_wgt = `"[]"'
                 - .gl_options = `"`:list retok GL_op'"'
                 = .gl_options = `""'
            ────────────────────────────────────────────────
>   ─────────────────────────────────────── end _eqlist.parse ───────────────
             - if "`subpop'" != "" & "`missing'" == "" {
             = if "" != "" & "missing" == "" {
               if `interactive' {
               SetGlobalVar ML_samp : _MLtu
               }
               else {
               global ML_samp : tempvar
               if `"`moptobj'"' != "" {
               global ML_samp `moptobj'$ML_samp
               }
               }
               tempvar markuse
               _svy_setup $ML_sample $ML_samp, svy subpop(`subpop')
               quietly gen byte `markuse' = $ML_samp
               }
             - else global ML_samp $ML_sample
             = else global ML_samp __000007
             - if "`collinear'" == "" {
             = if "collinear" == "" {
               .`eqlist'.rmcoll $ML_samp, replace `missing'
               }
             - else if "`missing'" == "" {
             = else if "missing" == "" {
               .`eqlist'.markout $ML_samp, replace
               }
             - if "$ML_samp" != "$ML_sample" {
             = if "__000007" != "__000007" {
               `vv' quietly replace $ML_sample = 0 if `markuse' & !$ML_samp
               drop `markuse'
               }
             - local eq_n = `.`eqlist'.eq count'
            ────────────────────────────────────────────────
>   ─────────────────────────────────────── begin _eqlist.eq ───────────────
             - version 9.2
             - args item idx
             - if "`item'" == "count" {
```

```
= if "count" == "count" {
- sreturn local value `"'`.n_eq'"'
= sreturn local value `"1"'
- class exit `"'`s(value)'"'
= class exit `"1"'
```

> ──────────────────────────────── end _eqlist.eq ──────────────

```
= local eq_n = 1
- global ML_n : copy local eq_n
- global ML_dim = `.`eqlist'.dim'
```

> ──────────────────────────────── begin _eqlist.dim ──────────────

```
- version 9.2
- syntax
- local neq = `.eq count'
```

> ──────────────────────────────── begin _eqlist.eq ──────────────

```
- version 9.2
- args item idx
- if "`item'" == "count" {
= if "count" == "count" {
- sreturn local value `"'`.n_eq'"'
= sreturn local value `"1"'
- class exit `"'`s(value)'"'
= class exit `"1"'
```

> ──────────────────────────────── end _eqlist.eq ──────────────

```
= local neq = 1
- forval i = 1/`neq' {
= forval i = 1/1 {
- local xvarsi `"'`.eq indepvars `i''"'
```

> ──────────────────────────────── begin _eqlist.eq ──────────────

```
- version 9.2
- args item idx
- if "`item'" == "count" {
= if "indepvars" == "count" {
  sreturn local value `"'`.n_eq'"'
  class exit `"'`s(value)'"'
  }
- else if 0 < `idx' & `idx' <= `.n_eq' {
= else if 0 < 1 & 1 <= 1 {
- .eq_list[`idx'].item `item'
= .eq_list[1].item indepvars
```

> ──────────────────────────────── begin _eqspec.item ──────────────

```
                          – version 9.2
                          – args item
                          – ._check_eq_item_name item, `item'
                          = ._check_eq_item_name item, indepvars
                          ─────────────────────────────────────────────
>  ───────────────────────── begin _eqspec._check_eq_item_name ─────────────
                          – version 9.2
                          – capture syntax name(name=c_item) [, NAME DEPvars IND
>  EPvars IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
                          – if c(rc) error 198
                          – if `:list sizeof other' {
                          = if 0 {
                            local other other_markvars
                            }
                          – local item `name' `depvars' `indepvars' `if' `in' `w
>  gt' `other' `nocons' `offset' `exposure' `freeparm' `options'
                          = local item    indepvars
                          – if `:list sizeof item' != 1 {
                          = if 1 != 1 {
                            error 198
                            }
                          – c_local `c_item' `item'
                          = c_local item indepvars
                          ─────────────────────────────────────────────
>  ───────────────────────── end _eqspec._check_eq_item_name ──────────────
                       – local value `"`.`item''"'
                       = local value `"ln_neq cb_authors_ext estimated est_late
>   o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo"'
                       – sreturn local value `"`value'"'
                       = sreturn local value `"ln_neq cb_authors_ext estimated
>  est_late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo"'
                       – class exit `"`value'"'
                       = class exit `"ln_neq cb_authors_ext estimated est_late
>  o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo"'
                       ─────────────────────────────────────────────
>  ───────────────────────────────── end _eqspec.item ──────────────
                    – class exit `"`s(value)'"'
                    = class exit `"ln_neq cb_authors_ext estimated est_late o.
>  est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo"'
                    ─────────────────────────────────────────────
>  ──────────────────────────────────── end _eqlist.eq ──────────────
                 = local xvarsi `"ln_neq cb_authors_ext estimated est_late o.
>  est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo"'
                 – local noconsi `"`.eq nocons `i''"'
                 ─────────────────────────────────────────────
>  ──────────────────────────────── begin _eqlist.eq ──────────────
```

```
                          – version 9.2
                          – args item idx
                          – if "`item'" == "count" {
                          = if "nocons" == "count" {
                            sreturn local value `"`.n_eq'"'
                            class exit `"`s(value)'"'
                            }
                          – else if 0 < `idx' & `idx' <= `.n_eq' {
                          = else if 0 < 1 & 1 <= 1 {
                          – .eq_list[`idx'].item `item'
                          = .eq_list[1].item nocons
                                   ─────────────────────────────────────────
>  ──────────────────────────────────── begin _eqspec.item ─────────────────
                          – version 9.2
                          – args item
                          – ._check_eq_item_name item, `item'
                          = ._check_eq_item_name item, nocons
                                   ─────────────────────────────────────────
>  ─────────────────────────── begin _eqspec._check_eq_item_name ───────────
                          – version 9.2
                          – capture syntax name(name=c_item) [, NAME DEPvars IND
>  EPvars IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
                          – if c(rc) error 198
                          – if `:list sizeof other' {
                          = if 0 {
                            local other other_markvars
                            }
                          – local item `name' `depvars' `indepvars' `if' `in' `w
>  gt' `other' `nocons' `offset' `exposure' `freeparm' `options'
                          = local item       nocons
                          – if `:list sizeof item' != 1 {
                          = if 1 != 1 {
                            error 198
                            }
                          – c_local `c_item' `item'
                          = c_local item nocons
                                   ─────────────────────────────────────────
>  ───────────────────────────── end _eqspec._check_eq_item_name ───────────
                          – local value `"`.`item''"'
                          = local value `"0"'
                          – sreturn local value `"`value'"'
                          = sreturn local value `"0"'
                          – class exit `"`value'"'
                          = class exit `"0"'
                                   ─────────────────────────────────────────
>  ──────────────────────────────────── end _eqspec.item ───────────────────
```

```
                   – class exit `"`s(value)'"'
                   = class exit `"0"'
                   ─────────────────────────────────────────────
>  ──────────────────────────────── end _eqlist.eq ─────────────
                = local noconsi `"0"'
                – local dim = `dim' + `:list sizeof xvarsi'
                = local dim =  + 8
                – if "`noconsi'" == "0" {
                = if "0" == "0" {
                – local ++dim
                – }
                – }
                – sreturn local value `"`dim'"'
                = sreturn local value `"9"'
                – class exit `"`s(value)'"'
                = class exit `"9"'
                   ─────────────────────────────────────────────
>  ──────────────────────────────── end _eqlist.dim ────────────
                = global ML_dim = 9
                – forval i = 1/`eq_n' {
                = forval i = 1/1 {
                – local depvars `.`eqlist'.eq depvars `i''
                   ─────────────────────────────────────────────
>  ──────────────────────────────── begin _eqlist.eq ───────────
                – version 9.2
                – args item idx
                – if "`item'" == "count" {
                = if "depvars" == "count" {
                  sreturn local value `"`.n_eq'"'
                  class exit `"`s(value)'"'
                  }
                – else if 0 < `idx' & `idx' <= `.n_eq' {
                = else if 0 < 1 & 1 <= 1 {
                – .eq_list[`idx'].item `item'
                = .eq_list[1].item depvars
                   ─────────────────────────────────────────────
>  ──────────────────────────────── begin _eqspec.item ─────────
                 – version 9.2
                 – args item
                 – ._check_eq_item_name item, `item'
                 = ._check_eq_item_name item, depvars
                   ─────────────────────────────────────────────
>  ────────────────────── begin _eqspec._check_eq_item_name ─────
                  – version 9.2
                  – capture syntax name(name=c_item) [, NAME DEPvars INDEP
> vars IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
```

```
                              – if c(rc) error 198
                              – if `:list sizeof other' {
                              = if 0 {
                                local other other_markvars
                                }
                              – local item `name' `depvars' `indepvars' `if' `in' `wgt
> ' `other' `nocons' `offset' `exposure' `freeparm' `options'
                              = local item  depvars
                              – if `:list sizeof item' != 1 {
                              = if 1 != 1 {
                                error 198
                                }
                              – c_local `c_item' `item'
                              = c_local item depvars
                              ──────────────────────────────────────────────
>  ──────────────────────────────── end _eqspec._check_eq_item_name ──────────────
                       – local value `"`.`item''"'
                       = local value `"piq_timing_max"'
                       – sreturn local value `"`value'"'
                       = sreturn local value `"piq_timing_max"'
                       – class exit `"`value'"'
                       = class exit `"piq_timing_max"'
                       ──────────────────────────────────────────────
>  ─────────────────────────────────────── end _eqspec.item ──────────────
                       – class exit `"`s(value)'"'
                       = class exit `"piq_timing_max"'
                       ──────────────────────────────────────────────
>  ────────────────────────────────────────── end _eqlist.eq ──────────────
                   = local depvars piq_timing_max
                   – local eq `.`eqlist'.eq name `i''
                   ──────────────────────────────────────────────
>  ───────────────────────────────────────── begin _eqlist.eq ──────────────
                   – version 9.2
                   – args item idx
                   – if "`item'" == "count" {
                   = if "name" == "count" {
                     sreturn local value `"`.n_eq'"'
                     class exit `"`s(value)'"'
                     }
                   – else if 0 < `idx' & `idx' <= `.n_eq' {
                   = else if 0 < 1 & 1 <= 1 {
                   – .eq_list[`idx'].item `item'
                   = .eq_list[1].item name
                   ──────────────────────────────────────────────
>  ───────────────────────────────────────── begin _eqspec.item ──────────────
                   – version 9.2
```

```
                    – args item
                    – ._check_eq_item_name item, `item'
                    = ._check_eq_item_name item, name
                    ─────────────────────────────────────────
> ───────────────────────────── begin _eqspec._check_eq_item_name ─────────────
                    – version 9.2
                    – capture syntax name(name=c_item) [, NAME DEPvars INDEP
> vars IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
                    – if c(rc) error 198
                    – if `:list sizeof other' {
                    = if 0 {
                      local other other_markvars
                      }
                    – local item `name' `depvars' `indepvars' `if' `in' `wgt
> ' `other' `nocons' `offset' `exposure' `freeparm' `options'
                    = local item name
                    – if `:list sizeof item' != 1 {
                    = if 1 != 1 {
                      error 198
                      }
                    – c_local `c_item' `item'
                    = c_local item name
                    ─────────────────────────────────────────
> ──────────────────────────── end _eqspec._check_eq_item_name ────────────────
                    – local value `"`.`item''"'
                    = local value `"piq_timing_max"'
                    – sreturn local value `"`value'"'
                    = sreturn local value `"piq_timing_max"'
                    – class exit `"`value'"'
                    = class exit `"piq_timing_max"'
                    ─────────────────────────────────────────
> ─────────────────────────────────────────── end _eqspec.item ───────────────
                    – class exit `"`s(value)'"'
                    = class exit `"piq_timing_max"'
                    ─────────────────────────────────────────
> ─────────────────────────────────────────── end _eqlist.eq ───────────────
                  = local eq piq_timing_max
                  – if !`:length local eq' {
                  = if !14 {
                    local eq eq`i'
                    }
                  – if `:list eq in eqnames' {
                  = if 0 {
                    di as err "equation '`eq'' multiply defined"
                    exit 110
                    }
```

```
                  – local eqnames `eqnames' `eq'
                  = local eqnames   piq_timing_max
                  – fvexpand `.`eqlist'.eq indepvars `i'' if $ML_samp
                  ────────────────────────────────────────────────
> ─────────────────────────────────── begin _eqlist.eq ───────────────
                  – version 9.2
                  – args item idx
                  – if "`item'" == "count" {
                  = if "indepvars" == "count" {
                    sreturn local value `"'`.n_eq'"'
                    class exit `"'`s(value)'"'
                    }
                  – else if 0 < `idx' & `idx' <= `.n_eq' {
                  = else if 0 < 1 & 1 <= 1 {
                  – .eq_list[`idx'].item `item'
                  = .eq_list[1].item indepvars
                  ────────────────────────────────────────────────
> ─────────────────────────────────── begin _eqspec.item ─────────────
                  – version 9.2
                  – args item
                  – ._check_eq_item_name item, `item'
                  = ._check_eq_item_name item, indepvars
                  ────────────────────────────────────────────────
> ──────────────────────────── begin _eqspec._check_eq_item_name ──────────
                    – version 9.2
                    – capture syntax name(name=c_item) [, NAME DEPvars INDEP
> vars IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
                    – if c(rc) error 198
                    – if `:list sizeof other' {
                    = if 0 {
                      local other other_markvars
                      }
                    – local item `name' `depvars' `indepvars' `if' `in' `wgt
> ' `other' `nocons' `offset' `exposure' `freeparm' `options'
                    = local item    indepvars
                    – if `:list sizeof item' != 1 {
                    = if 1 != 1 {
                      error 198
                      }
                    – c_local `c_item' `item'
                    = c_local item indepvars
                    ────────────────────────────────────────────────
> ──────────────────────────── end _eqspec._check_eq_item_name ──────────
                  – local value `"'`.`item''"'
                  = local value `"ln_neq cb_authors_ext estimated est_late o
> .est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo"'
```

```
                - sreturn local value `"`value'"'
                = sreturn local value `"ln_neq cb_authors_ext estimated es
> t_late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo"'
                - class exit `"`value'"'
                = class exit `"ln_neq cb_authors_ext estimated est_late o.
> est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo"'
                  ─────────────────────────────────────
> ──────────────────────────────── end _eqspec.item ────────────────
                - class exit `"`s(value)'"'
                = class exit `"ln_neq cb_authors_ext estimated est_late o.es
> t_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo"'
                  ─────────────────────────────────────
> ──────────────────────────────── end _eqlist.eq ──────────────────
              = fvexpand ln_neq cb_authors_ext estimated est_late o.est_earl
> y wg_ndx_other stky_pr_rotemberg stky_pr_calvo if __000007
                - if "`r(tsops)'" == "true" {
                = if "" == "true" {
                  global ML_preserve no
                  }
                - local eq_rhs`i' `"`r(varlist)'"'
                = local eq_rhs1 `"ln_neq cb_authors_ext estimated est_late o.e
> st_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo"'
                - local eq_nocons`i' `.`eqlist'.eq nocons `i''
                  ─────────────────────────────────────
> ──────────────────────────────── begin _eqlist.eq ────────────────
                - version 9.2
                - args item idx
                - if "`item'" == "count" {
                = if "nocons" == "count" {
                  sreturn local value `"`.n_eq'"'
                  class exit `"`s(value)'"'
                  }
                - else if 0 < `idx' & `idx' <= `.n_eq' {
                = else if 0 < 1 & 1 <= 1 {
                - .eq_list[`idx'].item `item'
                = .eq_list[1].item nocons
                  ─────────────────────────────────────
> ──────────────────────────────── begin _eqspec.item ──────────────
                - version 9.2
                - args item
                - ._check_eq_item_name item, `item'
                = ._check_eq_item_name item, nocons
                  ─────────────────────────────────────
> ─────────────────────────── begin _eqspec._check_eq_item_name ────
                  - version 9.2
                  - capture syntax name(name=c_item) [, NAME DEPvars INDEP
```

```
> vars IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
                        – if c(rc) error 198
                        – if `:list sizeof other' {
                        = if 0 {
                          local other other_markvars
                          }
                        – local item `name' `depvars' `indepvars' `if' `in' `wgt
> ' `other' `nocons' `offset' `exposure' `freeparm' `options'
                        = local item        nocons
                        – if `:list sizeof item' != 1 {
                        = if 1 != 1 {
                          error 198
                          }
                        – c_local `c_item' `item'
                        = c_local item nocons
                       ──────────────────────────────────────
>  ───────────────────────── end _eqspec._check_eq_item_name ─────────────
                  – local value `"`.`item''"'
                  = local value `"0"'
                  – sreturn local value `"`value'"'
                  = sreturn local value `"0"'
                  – class exit `"`value'"'
                  = class exit `"0"'
                       ──────────────────────────────────────
>  ──────────────────────────────────── end _eqspec.item ──────────────
                  – class exit `"`s(value)'"'
                  = class exit `"0"'
                       ──────────────────────────────────────
>  ──────────────────────────────────── end _eqlist.eq ──────────────
              = local eq_nocons1 0
              – local eq_offset`i' `.`eqlist'.eq offset `i''
                       ──────────────────────────────────────
>  ──────────────────────────────────── begin _eqlist.eq ──────────────
                  – version 9.2
                  – args item idx
                  – if "`item'" == "count" {
                  = if "offset" == "count" {
                    sreturn local value `"`.n_eq'"'
                    class exit `"`s(value)'"'
                    }
                  – else if 0 < `idx' & `idx' <= `.n_eq' {
                  = else if 0 < 1 & 1 <= 1 {
                  – .eq_list[`idx'].item `item'
                  = .eq_list[1].item offset
                       ──────────────────────────────────────
>  ──────────────────────────────────── begin _eqspec.item ──────────────
```

```
                              – version 9.2
                              – args item
                              – ._check_eq_item_name item, `item'
                              = ._check_eq_item_name item, offset
                              ────────────────────────────────────────
>  ──────────────────────── begin _eqspec._check_eq_item_name ──────────────
                              – version 9.2
                              – capture syntax name(name=c_item) [, NAME DEPvars INDEP
>  vars IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
                              – if c(rc) error 198
                              – if `:list sizeof other' {
                              = if 0 {
                                local other other_markvars
                                }
                              – local item `name' `depvars' `indepvars' `if' `in' `wgt
>  ' `other' `nocons' `offset' `exposure' `freeparm' `options'
                              = local item          offset
                              – if `:list sizeof item' != 1 {
                              = if 1 != 1 {
                                error 198
                                }
                              – c_local `c_item' `item'
                              = c_local item offset
                              ────────────────────────────────────────
>  ──────────────────────── end _eqspec._check_eq_item_name ──────────────
                          – local value `"`.`item''"'
                          = local value `""'
                          – sreturn local value `"`value'"'
                          = sreturn local value `""'
                          – class exit `"`value'"'
                          = class exit `""'
                          ────────────────────────────────────────
>  ──────────────────────────── end _eqspec.item ──────────────
                      – class exit `"`s(value)'"'
                      = class exit `""'
                      ────────────────────────────────────────
>  ──────────────────────────── end _eqlist.eq ──────────────
                  = local eq_offset1
                  – local eq_exposure`i' `.`eqlist'.eq exposure `i''
                      ────────────────────────────────────────
>  ──────────────────────────── begin _eqlist.eq ──────────────
                      – version 9.2
                      – args item idx
                      – if "`item'" == "count" {
                      = if "exposure" == "count" {
                        sreturn local value `"`.n_eq'"'
```

```
                       class exit `"`s(value)'"'
                       }
               - else if 0 < `idx' & `idx' <= `.n_eq' {
               = else if 0 < 1 & 1 <= 1 {
               - .eq_list[`idx'].item `item'
               = .eq_list[1].item exposure
              ─────────────────────────────────────────────

> ───────────────────────────── begin _eqspec.item ─────────────
               - version 9.2
               - args item
               - ._check_eq_item_name item, `item'
               = ._check_eq_item_name item, exposure
              ─────────────────────────────────────────────

> ─────────────────────── begin _eqspec._check_eq_item_name ───────────
               - version 9.2
               - capture syntax name(name=c_item) [, NAME DEPvars INDEP
> vars IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
               - if c(rc) error 198
               - if `:list sizeof other' {
               = if 0 {
                 local other other_markvars
                 }
               - local item `name' `depvars' `indepvars' `if' `in' `wgt
> ' `other' `nocons' `offset' `exposure' `freeparm' `options'
               = local item           exposure
               - if `:list sizeof item' != 1 {
               = if 1 != 1 {
                 error 198
                 }
               - c_local `c_item' `item'
               = c_local item exposure
              ─────────────────────────────────────────────

> ────────────────────── end _eqspec._check_eq_item_name ─────────────
               - local value `"`.`item''"'
               = local value `"0"'
               - sreturn local value `"`value'"'
               = sreturn local value `"0"'
               - class exit `"`value'"'
               = class exit `"0"'
              ─────────────────────────────────────────────

> ───────────────────────────── end _eqspec.item ─────────────
               - class exit `"`s(value)'"'
               = class exit `"0"'
              ─────────────────────────────────────────────

> ───────────────────────────── end _eqlist.eq ─────────────
            = local eq_exposure1 0
```

```
                  – local eq_freeparm`i' `.`eqlist'.eq freeparm `i''
                  ─────────────────────────────────────────────────────────
>  ──────────────────────────────────── begin _eqlist.eq ───────────────
                  – version 9.2
                  – args item idx
                  – if "`item'" == "count" {
                  = if "freeparm" == "count" {
                    sreturn local value `"'`.n_eq'"'
                    class exit `"'`s(value)'"'
                    }
                  – else if 0 < `idx' & `idx' <= `.n_eq' {
                  = else if 0 < 1 & 1 <= 1 {
                  – .eq_list[`idx'].item `item'
                  = .eq_list[1].item freeparm
                  ─────────────────────────────────────────────────────────
>  ──────────────────────────────────── begin _eqspec.item ─────────────
                  – version 9.2
                  – args item
                  – ._check_eq_item_name item, `item'
                  = ._check_eq_item_name item, freeparm
                  ─────────────────────────────────────────────────────────
>  ──────────────────────────── begin _eqspec._check_eq_item_name ───────────
                  – version 9.2
                  – capture syntax name(name=c_item) [, NAME DEPvars INDEP
>  vars IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
                  – if c(rc) error 198
                  – if `:list sizeof other' {
                  = if 0 {
                    local other other_markvars
                    }
                  – local item `name' `depvars' `indepvars' `if' `in' `wgt
>  ' `other' `nocons' `offset' `exposure' `freeparm' `options'
                  = local item              freeparm
                  – if `:list sizeof item' != 1 {
                  = if 1 != 1 {
                    error 198
                    }
                  – c_local `c_item' `item'
                  = c_local item freeparm
                  ─────────────────────────────────────────────────────────
>  ──────────────────────────── end _eqspec._check_eq_item_name ───────────
                  – local value `"'`.`item''"'
                  = local value `"0"'
                  – sreturn local value `"'`value'"'
                  = sreturn local value `"0"'
                  – class exit `"'`value'"'
```

```
                         = class exit `"0"'
              ─────────────────────────────────────────────────────
> ──────────────────────────────────────── end _eqspec.item ───────────────
                  – class exit `"`s(value)'"'
                  = class exit `"0"'

              ─────────────────────────────────────────────────────
> ──────────────────────────────────────── end _eqlist.eq ─────────────────
                  = local eq_freeparm1 0
                  – local lhs `lhs' `depvars'
                  = local lhs  piq_timing_max
                  – local eq_names `eq_names' `eq'
                  = local eq_names  piq_timing_max
                  – local nxvars :list sizeof eq_rhs`i'
                  = local nxvars :list sizeof eq_rhs1
                  – local TMP : copy local eq_rhs`i'
                  = local TMP : copy local eq_rhs1
                  – forval j = 1/`nxvars' {
                  = forval j = 1/8 {
                  – gettoken xvar TMP : TMP
                  – local colna `"`colna' `eq':`xvar'"'
                  = local colna `" piq_timing_max:ln_neq"'
                  – }
                  – gettoken xvar TMP : TMP
                  – local colna `"`colna' `eq':`xvar'"'
                  = local colna `" piq_timing_max:ln_neq piq_timing_max:cb_autho
> rs_ext"'
                  – }
                  – gettoken xvar TMP : TMP
                  – local colna `"`colna' `eq':`xvar'"'
                  = local colna `" piq_timing_max:ln_neq piq_timing_max:cb_autho
> rs_ext piq_timing_max:estimated"'
                  – }
                  – gettoken xvar TMP : TMP
                  – local colna `"`colna' `eq':`xvar'"'
                  = local colna `" piq_timing_max:ln_neq piq_timing_max:cb_autho
> rs_ext piq_timing_max:estimated piq_timing_max:est_late"'
                  – }
                  – gettoken xvar TMP : TMP
                  – local colna `"`colna' `eq':`xvar'"'
                  = local colna `" piq_timing_max:ln_neq piq_timing_max:cb_autho
> rs_ext piq_timing_max:estimated piq_timing_max:est_late piq_timing_max:o.est
> _early"'
                  – }
                  – gettoken xvar TMP : TMP
                  – local colna `"`colna' `eq':`xvar'"'
                  = local colna `" piq_timing_max:ln_neq piq_timing_max:cb_autho
```

```
>  rs_ext piq_timing_max:estimated piq_timing_max:est_late piq_timing_max:o.est
>  _early piq_timing_max:wg_ndx_other"'
                 -  }
                 -  gettoken xvar TMP : TMP
                 -  local colna `"`colna' `eq':`xvar'"'
                 =  local colna `" piq_timing_max:ln_neq piq_timing_max:cb_autho
>  rs_ext piq_timing_max:estimated piq_timing_max:est_late piq_timing_max:o.est
>  _early piq_timing_max:wg_ndx_other piq_timing_max:stky_pr_rotemberg"'
                 -  }
                 -  gettoken xvar TMP : TMP
                 -  local colna `"`colna' `eq':`xvar'"'
                 =  local colna `" piq_timing_max:ln_neq piq_timing_max:cb_autho
>  rs_ext piq_timing_max:estimated piq_timing_max:est_late piq_timing_max:o.est
>  _early piq_timing_max:wg_ndx_other piq_timing_max:stky_pr_rotemberg piq_timi
>  ng_max:stky_pr_calvo"'
                 -  }
                 -  if `eq_freeparm`i'' {
                 =  if 0 {
                    if `nxvars' {
                    di as err "{it:xvars} not allowed with option {bf:freeparm}"
                    exit 198
                    }
                    if strpos(`"`eq'"', ":") {
                    local colna `"`colna' /`eq'"'
                    }
                    else {
                    local colna `"`colna' /:`eq'"'
                    }
                    }
                 -  else if !`eq_nocons`i'' {
                 =  else if !0 {
                 -  local colna `"`colna' `eq':_cons"'
                 =  local colna `" piq_timing_max:ln_neq piq_timing_max:cb_autho
>  rs_ext piq_timing_max:estimated piq_timing_max:est_late piq_timing_max:o.est
>  _early piq_timing_max:wg_ndx_other piq_timing_max:stky_pr_rotemberg piq_timi
>  ng_max:stky_pr_calvo piq_timing_max:_cons"'
                 -  }
                 -  if "`moptobj'" != "" {
                 =  if "" != "" {
                    if "`eq_offset`i''" != "" {
                    if usubstr("`eq_offset`i''",1,2)=="__" {
                    capture clonevar `moptobj'`eq_offset`i'' = `eq_offset`i''
                    local dropmetoo `dropmetoo' `moptobj'`eq_offset`i''
                    }
                    }
                    }
```

```
-   }
-   if "`moptobj'" != "" {
=   if "" != "" {
    foreach y of local lhs {
    if usubstr("`y'",1,2)=="__" {
    capture clonevar `moptobj'`y' = `y'
    local tmp `tmp' `moptobj'`y'
    local dropmetoo `dropmetoo' `moptobj'`y'
    }
    else {
    local tmp `tmp' `y'
    }
    }
    local lhs `tmp'
    }
-   if `waldtest' > 0 & `:length local lf0' {
=   if -1 > 0 & 20 {
    opts_exclusive "waldtest() lf0()"
    }
-   if `:length local continue' {
=   if 0 {
    if !`:length local init' {
    tempname init
    local ub0 `init'
    }
    else tempname ub0
    mat `ub0' = e(b)
    tempname v0 iv0
    mat `v0' = e(V)
    mat `iv0' = syminv(`v0')
    global ML_rank0 = colsof(`v0') - diag0cnt(`iv0')
    if !`:length local lf0' & !missing(e(ll)) {
    local lf0 `=colsof(`ub0')' `e(ll)'
    }
    local ub0
    }
-   if `:length local init' {
=   if 8 {
-   tempname b0
-   local dim : list sizeof colna
-   matrix `b0' = J(1,`dim',0)
=   matrix __000009 = J(1,9,0)
-   matrix colna `b0' = `colna'
=   matrix colna __000009 =  piq_timing_max:ln_neq piq_timing_ma
> x:cb_authors_ext piq_timing_max:estimated piq_timing_max:est_late piq_timing
> _max:o.est_early piq_timing_max:wg_ndx_other piq_timing_max:stky_pr_rotember
```

```
> g piq_timing_max:stky_pr_calvo piq_timing_max:_cons
                - `vv' _mkvec `b0', from(`init') update first error("initial v
> ector")
                = version 18: _mkvec __000009, from(__000006) update first err
> or("initial vector")
                ─────────────────────────────────────────────────────────────
> ───────────────────────────────────────────── begin _mkvec ─────────────────
                - local vv : display "version " string(_caller()) ":"
                - version 6
                - gettoken matout 0 : 0, parse(", ")
                - if "`matout'"=="" | "`matout'"=="," {
                = if "__000009"=="" | "__000009"=="," {
                  error 198
                  }
                - syntax [, FROM(str) UPdate COLnames(str) ERRor(str) FIRST
> ]
                - if "`update'"!="" {
                = if "update"!="" {
                - if "`colname'"!="" {
                = if ""!="" {
                  di in red "update and colnames() cannot both be " "specifi
> ed"
                  exit 198
                  }
                - capture local colname : colfullnames `matout'
                = capture local colname : colfullnames __000009
                - if _rc {
                  di in red "matrix `matout' not found"
                  exit 111
                  }
                - if rowsof(matrix(`matout')) != 1 {
                = if rowsof(matrix(__000009)) != 1 {
                  di in red "`matout' matrix to be updated must be " "a row
> vector"
                  exit 503
                  }
                - local matin `matout'
                = local matin __000009
                - }
                - if `"`error'"'!="" {
                = if `"initial vector"'!="" {
                - local error `"`error': "'
                = local error `"initial vector: "'
                - }
                - tempname mat
                - if `"`from'"'!="" {
```

```
            = if `"__000006"'!="" {
            – From `from'
            = From __000006
            ───────────────────────────────────────────
>  ─────────────────────────  begin _mkvec.From ───────────────
            – gettoken from 0 : 0, parse(",") bind
            – sret clear
            – sret local from `from'
            = sret local from __000006
            – if `"`0'"'!="" {
            = if `""'!="" {
              syntax [, COPY SKIP ]
              }
            – sret local copy `copy'
            = sret local copy
            – sret local skip `skip'
            = sret local skip
            ───────────────────────────────────────────
>  ─────────────────────────  end _mkvec.From ─────────────────
            – local copy `s(copy)'
            = local copy
            – local skip `s(skip)'
            = local skip
            – if "`copy'"!="" {
            = if ""!="" {
              CopyMat `mat' `"`error'"' `s(from)'
              if `"`colname'"'!="" {
              local dim : list sizeof colname
              if `dim' != colsof(matrix(`mat')) {
              di in red `"`error'matrix must "' `"be dimension "' `dim'
              exit 503
              }
              `vv' mat colnames `mat' = `colname'
              }
              }
            – else {
            – `vv' BuildMat `mat' `"`error'"' "`skip'" `s(from)'
            = version 18: BuildMat __00000A `"initial vector: "' "" __00
> 0006
            ───────────────────────────────────────────
>  ─────────────────────────  begin _mkvec.BuildMat ───────────
            – local vv : display "version " string(_caller()) ":"
            – version 6
            – args matall error skip
            – macro shift 3
            – tokenize `"`*'"', parse(" =")
```

```
                    = tokenize `"__000006"', parse(" =")
                    - tempname matadd
                    - local i 1
                    - while "``i''"!="" {
                    = while "__000006"!="" {
                    - local k = `i' + 1
                    = local k = 1 + 1
                    - if "``k''"=="=" {
                    = if ""=="=" {
                      local j = `i' + 2
                      `vv' MkMat `matadd' ``i'' ``j'' `skip'
                      local i = `i' + 3
                      }
                    - else {
                    - ChkMat `matadd' ``i'' `"`error'"'
                    = ChkMat __00000B __000006 `"initial vector: "'
                    ────────────────────────────────────────────────
>  ──────────────────────────────────── begin _mkvec.ChkMat ──────────────
                    - args matout matin error
                    - capture di matrix(`matin'[1,1])
                    = capture di matrix(__000006[1,1])
                    - if _rc {
                      capture confirm number `matin'
                      if _rc {
                      di in red `"`error'matrix `matin' not found"'
                      exit 111
                      }
                      di in red `"`error'list of numbers requires copy optio
> n"'
                      exit 198
                      }
                    - if matrix(rowsof(`matin')!=1 & colsof(`matin')!=1) {
                    = if matrix(rowsof(__000006)!=1 & colsof(__000006)!=1) {
                      di in red "`matin' " matrix(rowsof(`matin')) " x " mat
> rix(colsof(`matin')) " is not a vector"
                      exit 503
                      }
                    - if matrix(rowsof(`matin')) == 1 {
                    = if matrix(rowsof(__000006)) == 1 {
                    - mat `matout' = `matin'
                    = mat __00000B = __000006
                    - }
                    - else mat `matout' = `matin''
                    = else mat __00000B = __000006'
                    ────────────────────────────────────────────────
>  ──────────────────────────────────── end _mkvec.ChkMat ──────────────
```

```
                        - local i = `i' + 1
                        = local i = 1 + 1
                        - }
                        - mat `matall' = nullmat(`matall') , `matadd'
                        = mat __00000A = nullmat(__00000A) , __00000B
                        - }
                        - while "``i''"!="" {
                        = while ""!="" {
                          local k = `i' + 1
                          if "``k''"=="=" {
                          local j = `i' + 2
                          `vv' MkMat `matadd' ``i'' ``j'' `skip'
                          local i = `i' + 3
                          }
                          else {
                          ChkMat `matadd' ``i'' `"`error'"'
                          local i = `i' + 1
                          }
                          mat `matall' = nullmat(`matall') , `matadd'
                          }
                        ─────────────────────────────────────────
>  ──────────────────────────────────────  end _mkvec.BuildMat ──────────────
                     - if `"`colname'"'!="" {
                     = if `"piq_timing_max:ln_neq piq_timing_max:cb_authors_ext p
>  iq_timing_max:estimated piq_timing_max:est_late piq_timing_max:o.est_early p
>  iq_timing_max:wg_ndx_other piq_timing_max:stky_pr_rotemberg piq_timing_max:s
>  tky_pr_calvo piq_timing_max:_cons"'!="" {
                        - `vv' ChkNames `mat' "`matin'" `"`colname'"' `"`error'"' "`
>  skip'" "`first'"
                        = version 18: ChkNames __00000A "__000009" `"piq_timing_max:
>  ln_neq piq_timing_max:cb_authors_ext piq_timing_max:estimated piq_timing_max
>  :est_late piq_timing_max:o.est_early piq_timing_max:wg_ndx_other piq_timing_
>  max:stky_pr_rotemberg piq_timing_max:stky_pr_calvo piq_timing_max:_cons"' `"
>  initial vector: "' "" "first"
                        ─────────────────────────────────────────
>  ──────────────────────────────────────  begin _mkvec.ChkNames ─────────────
                     - local vv : display "version " string(_caller()) ":"
                     - version 6
                     - args mat matin names error skip first
                     - local dim = colsof(matrix(`mat'))
                     = local dim = colsof(matrix(__00000A))
                     - if "`first'"!="" {
                     = if "first"!="" {
                     - gettoken name : names
                     - local eq1 = bsubstr(`"`name'"',1,index(`"`name'"',":"))
                     = local eq1 = bsubstr(`"piq_timing_max:ln_neq"',1,index(`"
```

```
> piq_timing_max:ln_neq"',":"))
                        - }
                        - tempname new fill x
                        - local k : list sizeof names
                        - if "`matin'"!="" {
                        = if "__000009"!="" {
                        - mat `new' = `matin'
                        = mat __00000B = __000009
                        - }
                        - else {
                          mat `new' = J(1,`k',0)
                          `vv' mat colnames `new' = `names'
                          }
                        - mat `fill' = J(1,`k',0)
                        = mat __00000C = J(1,9,0)
                        - local i 1
                        - while `i' <= `dim' {
                        = while 1 <= 9 {
                        - mat `x' = `mat'[1,`i'..`i']
                        = mat __00000D = __00000A[1,1..1]
                        - local eq : coleq `x'
                        = local eq : coleq __00000D
                        - local name : colname `x'
                        = local name : colname __00000D
                        - if "`eq'" == "/" {
                        = if "_" == "/" {
                          local spec "/`name'"
                          }
                        - else {
                        - local spec "`eq':`name'"
                        = local spec "_:ln_neq"
                        - if (usubstr("`eq'",1,1) != "/") {
                        = if (usubstr("_",1,1) != "/") {
                        - local sspec "/`eq':`name'"
                        = local sspec "/_:ln_neq"
                        - }
                        - }
                        - local oname
                        - local ospec
                        - capture _msparse `name', noomit
                        = capture _msparse ln_neq, noomit
                        - if c(rc) == 0 {
                        - if r(omit) {
                          local oname `"`r(stripe)'"'
                          local ospec "`eq':`oname'"
                          }
```

```
-   }
-   `vv' local j = colnumb(`new',`"`spec'"')
=   version 18: local j = colnumb(__00000B,`"_:ln_neq"')
-   if `j' == . & "`oname'" != "" {
=   if 1 == . & "" != "" {
      `vv' local j = colnumb(`new',`"`ospec'"')
      }
-   if `j' == . & "`sspec'" != "" {
=   if 1 == . & "/_:ln_neq" != "" {
      `vv' local j = colnumb(`new',`"`sspec'"')
      }
-   if `j'==. & `"`eq'"'=="_" & `"`eq1'"'!="" {
=   if 1==. & `"_"'=="_" & `"piq_timing_max:"'!="" {
      `vv' local j = colnumb(`new',`"`eq1'`name'"')
      if `j' == . & "`oname'" != "" {
      `vv' local j = colnumb(`new',`"`eq1'`oname'"')
      }
      }
-   if `j'!=. {
=   if 1!=. {
-   if `fill'[1,`j'] {
=   if __00000C[1,1] {
      _ms_parse_parts `name'
      if !r(omit) {
      if "`eq'"=="_" {
      di in red `"`error'duplicate "' `"entries for `name' fou
> nd"'

      }
      else di in red `"`error'"' `"duplicate entries for `eq':
> `name' found"'

      exit 507
      }
      else if !missing(`new'[1,`j']) {
      matrix `mat'[1,`i'] = `new'[1,`j']
      }
      }
-   else mat `fill'[1,`j'] = 1
=   else mat __00000C[1,1] = 1
-   mat `new'[1,`j'] = `mat'[1,`i']
=   mat __00000B[1,1] = __00000A[1,1]
-   }
-   else if "`skip'"=="" {
=   else if ""=="" {
      if "`eq'"=="_" {
      local spec : copy local name
      }
```

```
                          di in red `"'`error'extra parameter "' `"'`spec' found"' _
> n "specify skip option if necessary"
                          exit 111
                          }
                    - local i = `i' + 1
                    = local i = 1 + 1
                    - }
                    - while `i' <= `dim' {
                    = while 2 <= 9 {
                    - mat `x' = `mat'[1,`i'..`i']
                    = mat __00000D = __00000A[1,2..2]
                    - local eq : coleq `x'
                    = local eq : coleq __00000D
                    - local name : colname `x'
                    = local name : colname __00000D
                    - if "`eq'" == "/" {
                    = if "_" == "/" {
                      local spec "/`name'"
                      }
                    - else {
                    - local spec "`eq':`name'"
                    = local spec "_:cb_authors_ext"
                    - if (usubstr("`eq'",1,1) != "/") {
                    = if (usubstr("_",1,1) != "/") {
                    - local sspec "/`eq':`name'"
                    = local sspec "/_:cb_authors_ext"
                    - }
                    - }
                    - local oname
                    - local ospec
                    - capture _msparse `name', noomit
                    = capture _msparse cb_authors_ext, noomit
                    - if c(rc) == 0 {
                    - if r(omit) {
                      local oname `"'`r(stripe)'"'
                      local ospec "`eq':`oname'"
                      }
                    - }
                    - `vv' local j = colnumb(`new',`"'`spec'"')
                    = version 18: local j = colnumb(__00000B,`"'_:cb_authors_ex
> t"')
                    - if `j' == . & "`oname'" != "" {
                    = if 2 == . & "" != "" {
                      `vv' local j = colnumb(`new',`"'`ospec'"')
                      }
                    - if `j' == . & "`sspec'" != "" {
```

```
= if 2 == . & "/_:cb_authors_ext" != "" {
  `vv' local j = colnumb(`new',`"`sspec'"')
  }
- if `j'==. & `"`eq'"'=="_" & `"`eq1'"'!="" {
= if 2==. & `"_"'=="_" & `"piq_timing_max:"'!="" {
  `vv' local j = colnumb(`new',`"`eq1'`name'"')
  if `j' == . & "`oname'" != "" {
  `vv' local j = colnumb(`new',`"`eq1'`oname'"')
  }
  }
- if `j'!=. {
= if 2!=. {
- if `fill'[1,`j'] {
= if __00000C[1,2] {
  _ms_parse_parts `name'
  if !r(omit) {
  if "`eq'"=="_" {
  di in red `"`error'duplicate "' `"entries for `name' fou
> nd"'

  }
  else di in red `"`error'"' `"duplicate entries for `eq':
> `name' found"'

  exit 507
  }
  else if !missing(`new'[1,`j']) {
  matrix `mat'[1,`i'] = `new'[1,`j']
  }
  }
- else mat `fill'[1,`j'] = 1
= else mat __00000C[1,2] = 1
- mat `new'[1,`j'] = `mat'[1,`i']
= mat __00000B[1,2] = __00000A[1,2]
- }
- else if "`skip'"=="" {
= else if ""=="" {
  if "`eq'"=="_" {
  local spec : copy local name
  }
  di in red `"`error'extra parameter "' `"`spec' found"' _
> n "specify skip option if necessary"
  exit 111
  }
- local i = `i' + 1
= local i = 2 + 1
- }
- while `i' <= `dim' {
```

```
= while 3 <= 9 {
- mat `x' = `mat'[1,`i'..`i']
= mat __00000D = __00000A[1,3..3]
- local eq : coleq `x'
= local eq : coleq __00000D
- local name : colname `x'
= local name : colname __00000D
- if "`eq'" == "/" {
= if "_" == "/" {
  local spec "/`name'"
  }
- else {
- local spec "`eq':`name'"
= local spec "_:estimated"
- if (usubstr("`eq'",1,1) != "/") {
= if (usubstr("_",1,1) != "/") {
- local sspec "/`eq':`name'"
= local sspec "/_:estimated"
- }
- }
- local oname
- local ospec
- capture _msparse `name', noomit
= capture _msparse estimated, noomit
- if c(rc) == 0 {
- if r(omit) {
  local oname `"`r(stripe)'"'
  local ospec "`eq':`oname'"
  }
- }
- `vv' local j = colnumb(`new',`"`spec'"')
= version 18: local j = colnumb(__00000B,`"_:estimated"')
- if `j' == . & "`oname'" != "" {
= if 3 == . & "" != "" {
  `vv' local j = colnumb(`new',`"`ospec'"')
  }
- if `j' == . & "`sspec'" != "" {
= if 3 == . & "/_:estimated" != "" {
  `vv' local j = colnumb(`new',`"`sspec'"')
  }
- if `j'==. & `"`eq'"'=="_" & `"`eq1'"'!="" {
= if 3==. & `"_"'=="_" & `"piq_timing_max:"'!="" {
  `vv' local j = colnumb(`new',`"`eq1'`name'"')
  if `j' == . & "`oname'" != "" {
  `vv' local j = colnumb(`new',`"`eq1'`oname'"')
  }
```

```
                                      }
                              -   if `j'!=. {
                              =   if 3!=. {
                              -   if `fill'[1,`j'] {
                              =   if __00000C[1,3] {
                                  _ms_parse_parts `name'
                                  if !r(omit) {
                                  if "`eq'"=="_" {
                                  di in red `"`error'duplicate "' `"entries for `name' fou
> nd"'

                                  }
                                  else di in red `"`error'"' `"duplicate entries for `eq':
> `name' found"'

                                  exit 507
                                  }
                                  else if !missing(`new'[1,`j']) {
                                  matrix `mat'[1,`i'] = `new'[1,`j']
                                  }
                                  }
                              -   else mat `fill'[1,`j'] = 1
                              =   else mat __00000C[1,3] = 1
                              -   mat `new'[1,`j'] = `mat'[1,`i']
                              =   mat __00000B[1,3] = __00000A[1,3]
                              -   }
                              -   else if "`skip'"=="" {
                              =   else if ""=="" {
                                  if "`eq'"=="_" {
                                  local spec : copy local name
                                  }
                                  di in red `"`error'extra parameter "' `"`spec' found"' _
> n "specify skip option if necessary"
                                  exit 111
                                  }
                              -   local i = `i' + 1
                              =   local i = 3 + 1
                              -   }
                              -   while `i' <= `dim' {
                              =   while 4 <= 9 {
                              -   mat `x' = `mat'[1,`i'..`i']
                              =   mat __00000D = __00000A[1,4..4]
                              -   local eq : coleq `x'
                              =   local eq : coleq __00000D
                              -   local name : colname `x'
                              =   local name : colname __00000D
                              -   if "`eq'" == "/" {
                              =   if "_" == "/" {
```

```
        local spec "/`name'"
        }
-   else {
-   local spec "`eq':`name'"
=   local spec "_:est_late"
-   if (usubstr("`eq'",1,1) != "/") {
=   if (usubstr("_",1,1) != "/") {
-   local sspec "/`eq':`name'"
=   local sspec "/_:est_late"
-   }
-   }
-   local oname
-   local ospec
-   capture _msparse `name', noomit
=   capture _msparse est_late, noomit
-   if c(rc) == 0 {
-   if r(omit) {
    local oname `"`r(stripe)'"'
    local ospec "`eq':`oname'"
    }
-   }
-   `vv' local j = colnumb(`new',`"`spec'"')
=   version 18: local j = colnumb(__00000B,`"_:est_late"')
-   if `j' == . & "`oname'" != "" {
=   if 4 == . & "" != "" {
    `vv' local j = colnumb(`new',`"`ospec'"')
    }
-   if `j' == . & "`sspec'" != "" {
=   if 4 == . & "/_:est_late" != "" {
    `vv' local j = colnumb(`new',`"`sspec'"')
    }
-   if `j'==. & `"`eq'"'=="_" & `"`eq1'"'!="" {
=   if 4==. & `"_"'=="_" & `"piq_timing_max:"'!="" {
    `vv' local j = colnumb(`new',`"`eq1'`name'"')
    if `j' == . & "`oname'" != "" {
    `vv' local j = colnumb(`new',`"`eq1'`oname'"')
    }
    }
-   if `j'!=. {
=   if 4!=. {
-   if `fill'[1,`j'] {
=   if __00000C[1,4] {
    _ms_parse_parts `name'
    if !r(omit) {
    if "`eq'"=="_" {
    di in red `"`error'duplicate "' `"entries for `name' fou
```

```
> nd"'
                          }
                          else di in red `"`error'"' `"duplicate entries for `eq':
> `name' found"'
                          exit 507
                          }
                          else if !missing(`new'[1,`j']) {
                          matrix `mat'[1,`i'] = `new'[1,`j']
                          }
                          }
                        - else mat `fill'[1,`j'] = 1
                        = else mat __00000C[1,4] = 1
                        - mat `new'[1,`j'] = `mat'[1,`i']
                        = mat __00000B[1,4] = __00000A[1,4]
                        - }
                        - else if "`skip'"=="" {
                        = else if ""=="" {
                          if "`eq'"=="_" {
                          local spec : copy local name
                          }
                          di in red `"`error'extra parameter "' `"`spec' found"' _
> n "specify skip option if necessary"
                          exit 111
                          }
                        - local i = `i' + 1
                        = local i = 4 + 1
                        - }
                        - while `i' <= `dim' {
                        = while 5 <= 9 {
                        - mat `x' = `mat'[1,`i'..`i']
                        = mat __00000D = __00000A[1,5..5]
                        - local eq : coleq `x'
                        = local eq : coleq __00000D
                        - local name : colname `x'
                        = local name : colname __00000D
                        - if "`eq'" == "/" {
                        = if "_" == "/" {
                          local spec "/`name'"
                          }
                        - else {
                        - local spec "`eq':`name'"
                        = local spec "_:o.est_early"
                        - if (usubstr("`eq'",1,1) != "/") {
                        = if (usubstr("_",1,1) != "/") {
                        - local sspec "/`eq':`name'"
                        = local sspec "/_:o.est_early"
```

```
- }
- }
- local oname
- local ospec
- capture _msparse `name', noomit
= capture _msparse o.est_early, noomit
- if c(rc) == 0 {
- if r(omit) {
- local oname `"`r(stripe)'"'
= local oname `"est_early"'
- local ospec "`eq':`oname'"
= local ospec "_:est_early"
- }
- }
- `vv' local j = colnumb(`new',`"`spec'"')
= version 18: local j = colnumb(__00000B,`"_:o.est_early"'
> )

- if `j' == . & "`oname'" != "" {
= if 5 == . & "est_early" != "" {
  `vv' local j = colnumb(`new',`"`ospec'"')
  }
- if `j' == . & "`sspec'" != "" {
= if 5 == . & "/_:o.est_early" != "" {
  `vv' local j = colnumb(`new',`"`sspec'"')
  }
- if `j'==. & `"`eq'"'=="_" & `"`eq1'"'!="" {
= if 5==. & `"_"'=="_" & `"piq_timing_max:"'!="" {
  `vv' local j = colnumb(`new',`"`eq1'`name'"')
  if `j' == . & "`oname'" != "" {
  `vv' local j = colnumb(`new',`"`eq1'`oname'"')
  }
  }
- if `j'!=. {
= if 5!=. {
- if `fill'[1,`j'] {
= if __00000C[1,5] {
  _ms_parse_parts `name'
  if !r(omit) {
  if "`eq'"=="_" {
  di in red `"`error'duplicate "' `"entries for `name' fou
> nd"'

  }
  else di in red `"`error'"' `"duplicate entries for `eq':
> `name' found"'

  exit 507
  }
```

```
                    else if !missing(`new'[1,`j']) {
                    matrix `mat'[1,`i'] = `new'[1,`j']
                    }
                    }
            -   else mat `fill'[1,`j'] = 1
            =   else mat __00000C[1,5] = 1
            -   mat `new'[1,`j'] = `mat'[1,`i']
            =   mat __00000B[1,5] = __00000A[1,5]
            -   }
            -   else if "`skip'"=="" {
            =   else if ""=="" {
                    if "`eq'"=="_" {
                    local spec : copy local name
                    }
                    di in red `"`error'extra parameter "' `"`spec' found"' _
> n "specify skip option if necessary"
                    exit 111
                    }
            -   local i = `i' + 1
            =   local i = 5 + 1
            -   }
            -   while `i' <= `dim' {
            =   while 6 <= 9 {
            -   mat `x' = `mat'[1,`i'..`i']
            =   mat __00000D = __00000A[1,6..6]
            -   local eq : coleq `x'
            =   local eq : coleq __00000D
            -   local name : colname `x'
            =   local name : colname __00000D
            -   if "`eq'" == "/" {
            =   if "_" == "/" {
                    local spec "/`name'"
                    }
            -   else {
            -   local spec "`eq':`name'"
            =   local spec "_:wg_ndx_other"
            -   if (usubstr("`eq'",1,1) != "/") {
            =   if (usubstr("_",1,1) != "/") {
            -   local sspec "/`eq':`name'"
            =   local sspec "/_:wg_ndx_other"
            -   }
            -   }
            -   local oname
            -   local ospec
            -   capture _msparse `name', noomit
            =   capture _msparse wg_ndx_other, noomit
```

```
                              - if c(rc) == 0 {
                              - if r(omit) {
                                local oname `"`r(stripe)'"'
                                local ospec "`eq':`oname'"
                                }
                              - }
                              - `vv' local j = colnumb(`new',`"`spec'"')
                              = version 18: local j = colnumb(__00000B,`"_:wg_ndx_other"
> ')
                              - if `j' == . & "`oname'" != "" {
                              = if 6 == . & "" != "" {
                                `vv' local j = colnumb(`new',`"`ospec'"')
                                }
                              - if `j' == . & "`sspec'" != "" {
                              = if 6 == . & "/_:wg_ndx_other" != "" {
                                `vv' local j = colnumb(`new',`"`sspec'"')
                                }
                              - if `j'==. & `"`eq'"'=="_" & `"`eq1'"'!="" {
                              = if 6==. & `"_"'=="_" & `"piq_timing_max:"'!="" {
                                `vv' local j = colnumb(`new',`"`eq1'`name'"')
                                if `j' == . & "`oname'" != "" {
                                `vv' local j = colnumb(`new',`"`eq1'`oname'"')
                                }
                                }
                              - if `j'!=. {
                              = if 6!=. {
                              - if `fill'[1,`j'] {
                              = if __00000C[1,6] {
                                _ms_parse_parts `name'
                                if !r(omit) {
                                if "`eq'"=="_" {
                                di in red `"`error'duplicate "' `"entries for `name' fou
> nd"'

                                }
                                else di in red `"`error'"' `"duplicate entries for `eq':
> `name' found"'

                                exit 507
                                }
                                else if !missing(`new'[1,`j']) {
                                matrix `mat'[1,`i'] = `new'[1,`j']
                                }
                                }
                              - else mat `fill'[1,`j'] = 1
                              = else mat __00000C[1,6] = 1
                              - mat `new'[1,`j'] = `mat'[1,`i']
                              = mat __00000B[1,6] = __00000A[1,6]
```

```
  - }
  - else if "`skip'"=="" {
  = else if ""=="" {
    if "`eq'"=="_" {
    local spec : copy local name
    }
    di in red `"`error'extra parameter "' `"`spec' found"' _
> n "specify skip option if necessary"
    exit 111
    }
  - local i = `i' + 1
  = local i = 6 + 1
  - }
  - while `i' <= `dim' {
  = while 7 <= 9 {
  - mat `x' = `mat'[1,`i'..`i']
  = mat __00000D = __00000A[1,7..7]
  - local eq : coleq `x'
  = local eq : coleq __00000D
  - local name : colname `x'
  = local name : colname __00000D
  - if "`eq'" == "/" {
  = if "_" == "/" {
    local spec "/`name'"
    }
  - else {
  - local spec "`eq':`name'"
  = local spec "_:stky_pr_rotemberg"
  - if (usubstr("`eq'",1,1) != "/") {
  = if (usubstr("_",1,1) != "/") {
  - local sspec "/`eq':`name'"
  = local sspec "/_:stky_pr_rotemberg"
  - }
  - }
  - local oname
  - local ospec
  - capture _msparse `name', noomit
  = capture _msparse stky_pr_rotemberg, noomit
  - if c(rc) == 0 {
  - if r(omit) {
    local oname `"`r(stripe)'"'
    local ospec "`eq':`oname'"
    }
  - }
  - `vv' local j = colnumb(`new',`"`spec'"')
  = version 18: local j = colnumb(__00000B,`"_:stky_pr_rotem
```

```
> berg"')
                          - if `j' == . & "`oname'" != "" {
                          = if 7 == . & "" != "" {
                            `vv' local j = colnumb(`new',`"`ospec'"')
                            }
                          - if `j' == . & "`sspec'" != "" {
                          = if 7 == . & "/_:stky_pr_rotemberg" != "" {
                            `vv' local j = colnumb(`new',`"`sspec'"')
                            }
                          - if `j'==. & `"`eq'"'=="_" & `"`eq1'"'!="" {
                          = if 7==. & `"_"'=="_" & `"piq_timing_max:"'!="" {
                            `vv' local j = colnumb(`new',`"`eq1'`name'"')
                            if `j' == . & "`oname'" != "" {
                            `vv' local j = colnumb(`new',`"`eq1'`oname'"')
                            }
                            }
                          - if `j'!=. {
                          = if 7!=. {
                          - if `fill'[1,`j'] {
                          = if __00000C[1,7] {
                            _ms_parse_parts `name'
                            if !r(omit) {
                            if "`eq'"=="_" {
                            di in red `"`error'duplicate "' `"entries for `name' fou
> nd"'
                            }
                            else di in red `"`error'"' `"duplicate entries for `eq':
> `name' found"'
                            exit 507
                            }
                            else if !missing(`new'[1,`j']) {
                            matrix `mat'[1,`i'] = `new'[1,`j']
                            }
                            }
                          - else mat `fill'[1,`j'] = 1
                          = else mat __00000C[1,7] = 1
                          - mat `new'[1,`j'] = `mat'[1,`i']
                          = mat __00000B[1,7] = __00000A[1,7]
                          - }
                          - else if "`skip'"=="" {
                          = else if ""=="" {
                            if "`eq'"=="_" {
                            local spec : copy local name
                            }
                            di in red `"`error'extra parameter "' `"`spec' found"' _
> n "specify skip option if necessary"
```

```
        exit 111
        }
  - local i = `i' + 1
  = local i = 7 + 1
  - }
  - while `i' <= `dim' {
  = while 8 <= 9 {
  - mat `x' = `mat'[1,`i'..`i']
  = mat __00000D = __00000A[1,8..8]
  - local eq : coleq `x'
  = local eq : coleq __00000D
  - local name : colname `x'
  = local name : colname __00000D
  - if "`eq'" == "/" {
  = if "_" == "/" {
    local spec "/`name'"
    }
  - else {
  - local spec "`eq':`name'"
  = local spec "_:stky_pr_calvo"
  - if (usubstr("`eq'",1,1) != "/") {
  = if (usubstr("_",1,1) != "/") {
  - local sspec "/`eq':`name'"
  = local sspec "/_:stky_pr_calvo"
  - }
  - }
  - local oname
  - local ospec
  - capture _msparse `name', noomit
  = capture _msparse stky_pr_calvo, noomit
  - if c(rc) == 0 {
  - if r(omit) {
    local oname `"`r(stripe)'"'
    local ospec "`eq':`oname'"
    }
  - }
  - `vv' local j = colnumb(`new',`"`spec'"')
  = version 18: local j = colnumb(__00000B,`"_:stky_pr_calvo
> "')

  - if `j' == . & "`oname'" != "" {
  = if 8 == . & "" != "" {
    `vv' local j = colnumb(`new',`"`ospec'"')
    }
  - if `j' == . & "`sspec'" != "" {
  = if 8 == . & "/_:stky_pr_calvo" != "" {
    `vv' local j = colnumb(`new',`"`sspec'"')
```

```
                    }
  - if `j'==. & `"`eq'"'=="_" & `"`eq1'"'!="" {
  = if 8==. & `"_"'=="_" & `"piq_timing_max:"'!="" {
    `vv' local j = colnumb(`new',`"`eq1'`name'"')
    if `j' == . & "`oname'" != "" {
    `vv' local j = colnumb(`new',`"`eq1'`oname'"')
    }
    }
  - if `j'!=. {
  = if 8!=. {
  - if `fill'[1,`j'] {
  = if __00000C[1,8] {
    _ms_parse_parts `name'
    if !r(omit) {
    if "`eq'"=="_" {
    di in red `"`error'duplicate "' `"entries for `name' fou
> nd"'
    }
    else di in red `"`error'"' `"duplicate entries for `eq':
> `name' found"'
    exit 507
    }
    else if !missing(`new'[1,`j']) {
    matrix `mat'[1,`i'] = `new'[1,`j']
    }
    }
  - else mat `fill'[1,`j'] = 1
  = else mat __00000C[1,8] = 1
  - mat `new'[1,`j'] = `mat'[1,`i']
  = mat __00000B[1,8] = __00000A[1,8]
  - }
  - else if "`skip'"=="" {
  = else if ""=="" {
    if "`eq'"=="_" {
    local spec : copy local name
    }
    di in red `"`error'extra parameter "' `"`spec' found"' _
> n "specify skip option if necessary"
    exit 111
    }
  - local i = `i' + 1
  = local i = 8 + 1
  - }
  - while `i' <= `dim' {
  = while 9 <= 9 {
  - mat `x' = `mat'[1,`i'..`i']
```

```
= mat __00000D = __00000A[1,9..9]
- local eq : coleq `x'
= local eq : coleq __00000D
- local name : colname `x'
= local name : colname __00000D
- if "`eq'" == "/" {
= if "_" == "/" {
  local spec "/`name'"
  }
- else {
- local spec "`eq':`name'"
= local spec "_:_cons"
- if (usubstr("`eq'",1,1) != "/") {
= if (usubstr("_",1,1) != "/") {
- local sspec "/`eq':`name'"
= local sspec "/_:_cons"
- }
- }
- local oname
- local ospec
- capture _msparse `name', noomit
= capture _msparse _cons, noomit
- if c(rc) == 0 {
- if r(omit) {
  local oname `"`r(stripe)'"'
  local ospec "`eq':`oname'"
  }
- }
- `vv' local j = colnumb(`new',`"`spec'"')
= version 18: local j = colnumb(__00000B,`"_:_cons"')
- if `j' == . & "`oname'" != "" {
= if 9 == . & "" != "" {
  `vv' local j = colnumb(`new',`"`ospec'"')
  }
- if `j' == . & "`sspec'" != "" {
= if 9 == . & "/_:_cons" != "" {
  `vv' local j = colnumb(`new',`"`sspec'"')
  }
- if `j'==. & `"`eq'"'=="_" & `"`eq1'"'!="" {
= if 9==. & `"_"'=="_" & `"piq_timing_max:"'!="" {
  `vv' local j = colnumb(`new',`"`eq1'`name'"')
  if `j' == . & "`oname'" != "" {
  `vv' local j = colnumb(`new',`"`eq1'`oname'"')
  }
  }
- if `j'!=. {
```

```
= if 9!=. {
- if `fill'[1,`j'] {
= if __00000C[1,9] {
  _ms_parse_parts `name'
  if !r(omit) {
  if "`eq'"=="_" {
  di in red `"`error'duplicate "' `"entries for `name' fou
> nd"'
  }
  else di in red `"`error'"' `"duplicate entries for `eq':
> `name' found"'
  exit 507
  }
  else if !missing(`new'[1,`j']) {
  matrix `mat'[1,`i'] = `new'[1,`j']
  }
  }
- else mat `fill'[1,`j'] = 1
= else mat __00000C[1,9] = 1
- mat `new'[1,`j'] = `mat'[1,`i']
= mat __00000B[1,9] = __00000A[1,9]
- }
- else if "`skip'"=="" {
= else if ""=="" {
  if "`eq'"=="_" {
  local spec : copy local name
  }
  di in red `"`error'extra parameter "' `"`spec' found"' _
> n "specify skip option if necessary"
  exit 111
  }
- local i = `i' + 1
= local i = 9 + 1
- }
- while `i' <= `dim' {
= while 10 <= 9 {
  mat `x' = `mat'[1,`i'..`i']
  local eq : coleq `x'
  local name : colname `x'
  if "`eq'" == "/" {
  local spec "/`name'"
  }
  else {
  local spec "`eq':`name'"
  if (usubstr("`eq'",1,1) != "/") {
  local sspec "/`eq':`name'"
```

```
}
}
local oname
local ospec
capture _msparse `name', noomit
if c(rc) == 0 {
if r(omit) {
local oname `"`r(stripe)'"'
local ospec "`eq':`oname'"
}
}
`vv' local j = colnumb(`new',`"`spec'"')
if `j' == . & "`oname'" != "" {
`vv' local j = colnumb(`new',`"`ospec'"')
}
if `j' == . & "`sspec'" != "" {
`vv' local j = colnumb(`new',`"`sspec'"')
}
if `j'==. & `"`eq'"'=="_" & `"`eq1'"'!="" {
`vv' local j = colnumb(`new',`"`eq1'`name'"')
if `j' == . & "`oname'" != "" {
`vv' local j = colnumb(`new',`"`eq1'`oname'"')
}
}
if `j'!=. {
if `fill'[1,`j'] {
_ms_parse_parts `name'
if !r(omit) {
if "`eq'"=="_" {
di in red `"`error'duplicate "' `"entries for `name' fou
> nd"'
}
else di in red `"`error'"' `"duplicate entries for `eq':
> `name' found"'
exit 507
}
else if !missing(`new'[1,`j']) {
matrix `mat'[1,`i'] = `new'[1,`j']
}
}
else mat `fill'[1,`j'] = 1
mat `new'[1,`j'] = `mat'[1,`i']
}
else if "`skip'"=="" {
if "`eq'"=="_" {
local spec : copy local name
```

```
                        }
                        di in red `"'`error'extra parameter "' `"'`spec' found"' _
>  n "specify skip option if necessary"
                        exit 111
                        }
                        local i = `i' + 1
                        }
            – mat `fill' = `fill'*`fill''
            = mat __00000C = __00000C*__00000C'
            – sret clear
            – sret local k_fill = `fill'[1,1]
            = sret local k_fill = __00000C[1,1]
            – mat `mat' = `new'
            = mat __00000A = __00000B
            ─────────────────────────────────────────────────────
>  ────────────────────────────────── end _mkvec.ChkNames ──────────────
            – local fill `s(k_fill)'
            = local fill 9
            – }
            – }
            – }
            – else {
              local fill 0
              if "`update'"!="" {
              mat `mat' = `matin'
              }
              else if `"`colname'"'!="" {
              local dim : list sizeof colname
              mat `mat' = J(1,`dim',0)
              `vv' mat colnames `mat' = `colname'
              }
              else {
              di in red "from() must be specified"
              exit 198
              }
              }
            – sret clear
            – sret local copy `copy'
            = sret local copy
            – sret local skip `skip'
            = sret local skip
            – sret local k = colsof(matrix(`mat'))
            = sret local k = colsof(matrix(__00000A))
            – if "`fill'"!="" {
            = if "9"!="" {
            – sret local k_fill `fill'
```

```
                      = sret local k_fill 9
                      - }
                      - else sret local k_fill = colsof(matrix(`mat'))
                      = else sret local k_fill = colsof(matrix(__00000A))
                      - matrix rename `mat' `matout', replace
                      = matrix rename __00000A __000009, replace
                     ─────────────────────────────────────────────
>  ──────────────────────────────────────────  end _mkvec ────────────────
                      - }
                      - tempname bomit
                      - matrix `bomit' = J(1,`:list sizeof colna',0)
                      = matrix __00000A = J(1,9,0)
                      - matrix colna `bomit' = `colna'
                      = matrix colna __00000A =  piq_timing_max:ln_neq piq_timing_ma
>  x:cb_authors_ext piq_timing_max:estimated piq_timing_max:est_late piq_timing
>  _max:o.est_early piq_timing_max:wg_ndx_other piq_timing_max:stky_pr_rotember
>  g piq_timing_max:stky_pr_calvo piq_timing_max:_cons
                      - _ms_omit_info `bomit'
                      = _ms_omit_info __00000A
                      - if r(k_omit) | `:length local constraints' {
                      = if r(k_omit) | 0 {
                      - nobreak {
                      - capture noisily break {
                      - _b_post0 `colna'
                      = _b_post0  piq_timing_max:ln_neq piq_timing_max:cb_authors_ex
>  t piq_timing_max:estimated piq_timing_max:est_late piq_timing_max:o.est_earl
>  y piq_timing_max:wg_ndx_other piq_timing_max:stky_pr_rotemberg piq_timing_ma
>  x:stky_pr_calvo piq_timing_max:_cons
                     ─────────────────────────────────────────────
>  ──────────────────────────────────────────  begin _b_post0 ────────────
                      - version 11
                      - tempname b V
                      - local dim : list sizeof 0
                      - matrix `b' = J( 1,`dim',0)
                      = matrix __00000B = J( 1,9,0)
                      - matrix `V' = J(`dim',`dim',0)
                      = matrix __00000C = J(9,9,0)
                      - matrix colnames `b' = `0'
                      = matrix colnames __00000B = piq_timing_max:ln_neq piq_timin
>  g_max:cb_authors_ext piq_timing_max:estimated piq_timing_max:est_late piq_ti
>  ming_max:o.est_early piq_timing_max:wg_ndx_other piq_timing_max:stky_pr_rote
>  mberg piq_timing_max:stky_pr_calvo piq_timing_max:_cons
                      - matrix colnames `V' = `0'
                      = matrix colnames __00000C = piq_timing_max:ln_neq piq_timin
>  g_max:cb_authors_ext piq_timing_max:estimated piq_timing_max:est_late piq_ti
>  ming_max:o.est_early piq_timing_max:wg_ndx_other piq_timing_max:stky_pr_rote
```

```
> mberg piq_timing_max:stky_pr_calvo piq_timing_max:_cons
                  – matrix rownames `V' = `0'
                  = matrix rownames __00000C = piq_timing_max:ln_neq piq_timin
> g_max:cb_authors_ext piq_timing_max:estimated piq_timing_max:est_late piq_ti
> ming_max:o.est_early piq_timing_max:wg_ndx_other piq_timing_max:stky_pr_rote
> mberg piq_timing_max:stky_pr_calvo piq_timing_max:_cons
                  – ereturn post `b' `V'
                  = ereturn post __00000B __00000C
                  ────────────────────────────────────────────────────
> ────────────────────────────────────── end _b_post0 ──────────────────
                  – local clist : subinstr local constraints "," " ", all
                  – `vv' makecns `clist', `cnsnotes'
                  = version 18: makecns ,
                  ────────────────────────────────────────────────────
> ────────────────────────────────────── begin makecns ──────────────────
                  – if _caller() < 11 {
                    MakeCns `0'
                    exit
                    }
                  – _makecns `0'
                  = _makecns ,
                  ────────────────────────────────────────────────────
> ────────────────────────────────────── end makecns ──────────────────
                  – local constraints `"`r(clist)'"'
                  = local constraints `""'
                  – local k_autoCns = e(k_autoCns)
                  – tempname C
                  – capture matrix `C' = e(Cns)
                  = capture matrix __00000B = e(Cns)
                  – local rcc = c(rc)
                  – }
                  – local rc = c(rc)
                  – ereturn clear
                  – }
                  – if (`rc') exit `rc'
                  = if (0) exit 0
                  – if (`rcc') {
                  = if (0) {
                    local C
                    local k_autoCns
                    }
                  – }
                  – if `:length local constraints' {
                  = if 0 {
                    local lf0
                    }
```

```
                - local vce `vce' `robust' `cluster'
                = local vce   robust
                - if `:length local vce' {
                = if 6 {
                - _vce_parse, argoptlist(CLuster) optlist(OIM OPG Robust) old
>  : `wt', `vce'
                = _vce_parse, argoptlist(CLuster) optlist(OIM OPG Robust) old
>  : , robust
                _____
>  ─────────────────────────────────────── begin _vce_parse ───────────────────
                  - version 10
                  - _on_colon_parse `0'
                  = _on_colon_parse , argoptlist(CLuster) optlist(OIM OPG Robu
>  st) old : , robust
                _____
>  ─────────────────────────────────── begin _on_colon_parse ───────────────────
                  - version 8.2
                  - sreturn local before ""
                  - sreturn local after ""
                  - gettoken before after : 0, parse(":") bind match(par) qu
>  otes
                  - if "`par'" != "" {
                  = if "" != "" {
                    local before `"(`before')"'
                    }
                  - if `"`before'"' == ":" {
                  = if `", argoptlist(CLuster) optlist(OIM OPG Robust) old "
>  ' == ":" {
                    sreturn local after `"`after'"'
                    exit
                    }
                  - while `"`COLON'"' != ":" & `"`after'"' != "" {
                  = while `""' != ":" & `": , robust"' != "" {
                  - gettoken COLON after : after, parse(":") bind match(par)
>   quotes
                  - if "`par'" != "" {
                  = if "" != "" {
                    local before `before' (`COLON')
                    local COLON
                    }
                  - else if `"`COLON'"' != ":" {
                  = else if `":"' != ":" {
                    local before `"`before' `COLON'"'
                    local COLON
                    }
                  - }
```

```
                      – while `"'`COLON'"' != ":" & `"'`after'"' != "" {
                      = while `":"' != ":" & `" , robust"' != "" {
                        gettoken COLON after : after, parse(":") bind match(par)
>   quotes

                        if "`par'" != "" {
                        local before `before' (`COLON')
                        local COLON
                        }
                        else if `"`COLON'"' != ":" {
                        local before `"`before' `COLON'"'
                        local COLON
                        }
                        }
                      – if `"`COLON'"' != ":" {
                      = if `":"' != ":" {
                        di as err "'' found where ':' expected"
                        exit 198
                        }
                      – sreturn local before `"`before'"'
                      = sreturn local before `", argoptlist(CLuster) optlist(OIM
>   OPG Robust) old "'

                      – sreturn local after `"`after'"'
                      = sreturn local after `" , robust"'
                      ──────────────────────────────────────────────
>   ──────────────────────────────────── end _on_colon_parse ──────────────
                    – local 0 `"`s(before)'"'
                    = local 0 `", argoptlist(CLuster) optlist(OIM OPG Robust) ol
> d "'
                    – local user `"`s(after)'"'
                    = local user `" , robust"'
                    – syntax [varname(default=none)], [ OPTlist(namelist) ARGOPT
> list(namelist) PWallowed(namelist) OLD_is_ok NOARGOPT_is_ok ]
                    – local touse `varlist'
                    = local touse
                    – tempname o a
                    – .`o' = ._optlist.new
                    = .__00000C = ._optlist.new
                    – local optlist : list uniq optlist
                    – foreach name of local optlist {
                    – .`o'.addopt `name'
                    = .__00000C.addopt OIM
                      ──────────────────────────────────────────────
>   ──────────────────────────────────── begin _optlist.addopt ──────────────
                    – version 9
                    – syntax name(name=optspec) [, PASSthru]
                    – local mname = lower("`optspec'")
```

```
                = local mname = lower("OIM")
                - if "`passthru'" != "" {
                = if "" != "" {
                  local optspec `optspec'(passthru)
                  }
                - .options.Arrpush "`optspec'"
                = .options.Arrpush "OIM"
                - .names.Arrpush "`mname'"
                = .names.Arrpush "oim"
                ─────────────────────────────────────────
>  ─────────────────────────────────  end _optlist.addopt ───────────────
            - }
            - .`o'.addopt `name'
            = .__00000C.addopt OPG
                ─────────────────────────────────────────
>  ─────────────────────────────────  begin _optlist.addopt ─────────────
            - version 9
            - syntax name(name=optspec) [, PASSthru]
            - local mname = lower("`optspec'")
            = local mname = lower("OPG")
            - if "`passthru'" != "" {
            = if "" != "" {
              local optspec `optspec'(passthru)
              }
            - .options.Arrpush "`optspec'"
            = .options.Arrpush "OPG"
            - .names.Arrpush "`mname'"
            = .names.Arrpush "opg"
                ─────────────────────────────────────────
>  ─────────────────────────────────  end _optlist.addopt ───────────────
            - }
            - .`o'.addopt `name'
            = .__00000C.addopt Robust
                ─────────────────────────────────────────
>  ─────────────────────────────────  begin _optlist.addopt ─────────────
            - version 9
            - syntax name(name=optspec) [, PASSthru]
            - local mname = lower("`optspec'")
            = local mname = lower("Robust")
            - if "`passthru'" != "" {
            = if "" != "" {
              local optspec `optspec'(passthru)
              }
            - .options.Arrpush "`optspec'"
            = .options.Arrpush "Robust"
            - .names.Arrpush "`mname'"
```

```
                       = .names.Arrpush "robust"
                       ─────────────────────────────────────────
>  ─────────────────────────────────── end _optlist.addopt ──────────────
              − }
              − .`a' = ._optlist.new
              = .__00000D = ._optlist.new
              − local argoptlist : list uniq argoptlist
              − foreach name of local argoptlist {
              − .`a'.addopt `name'
              = .__00000D.addopt CLuster
                       ─────────────────────────────────────────
>  ─────────────────────────────────── begin _optlist.addopt ────────────
              − version 9
              − syntax name(name=optspec) [, PASSthru]
              − local mname = lower("`optspec'")
              = local mname = lower("CLuster")
              − if "`passthru'" != "" {
              = if "" != "" {
                local optspec `optspec'(passthru)
                }
              − .options.Arrpush "`optspec'"
              = .options.Arrpush "CLuster"
              − .names.Arrpush "`mname'"
              = .names.Arrpush "cluster"
                       ─────────────────────────────────────────
>  ─────────────────────────────────── end _optlist.addopt ──────────────
              − }
              − local OPTNAMES `"`.`o'.dumpnames'"'
                       ─────────────────────────────────────────
>  ─────────────────────────────────── begin _optlist.dumpnames ─────────
              − version 9
              − forval i = 1/`.names.arrnels' {
              = forval i = 1/3 {
              − local namelist `namelist' `.names[`i']'
              = local namelist  oim
              − }
              − local namelist `namelist' `.names[`i']'
              = local namelist oim opg
              − }
              − local namelist `namelist' `.names[`i']'
              = local namelist oim opg robust
              − }
              − local namelist : list uniq namelist
              − sreturn local namelist `"`namelist'"'
              = sreturn local namelist `"oim opg robust"'
              − class exit `"`namelist'"'
```

```
                       = class exit `"oim opg robust"'
                       ————————————————————————————————————————————————
> ———————————————————————————————————— end _optlist.dumpnames ———————————————
              = local OPTNAMES `"oim opg robust"'
              – local ARGOPTNAMES `"'`.`a'.dumpnames'"'
                       ————————————————————————————————————————————————
> ———————————————————————————————————— begin _optlist.dumpnames ——————————————
              – version 9
              – forval i = 1/`.names.arrnels' {
              = forval i = 1/1 {
              – local namelist `namelist' `.names[`i']'
              = local namelist  cluster
              – }
              – local namelist : list uniq namelist
              – sreturn local namelist `"`namelist'"'
              = sreturn local namelist `"cluster"'
              – class exit `"`namelist'"'
              = class exit `"cluster"'
                       ————————————————————————————————————————————————
> ———————————————————————————————————— end _optlist.dumpnames ————————————————
              = local ARGOPTNAMES `"cluster"'
              – local AND : list OPTNAMES & ARGOPTNAMES
              – if `:list sizeof AND' {
              = if 0 {
                di as err "vcetype '`:word 1 of `AND''' specified twice"
                exit 198
                }
              – local pwallowed : list uniq pwallowed
              – local pwlist robust cluster
              – foreach n of local pwallowed {
                local lc = lower("`n'")
                local pwlist `pwlist' `lc'
                }
              – if "`old_is_ok'" != "" {
              = if "old_is_ok" != "" {
              – local ROBUST robust
              – if `:list ROBUST in OPTNAMES' {
              = if 1 {
              – local robust Robust
              – }
              – local CLUSTER cluster
              – if `:list CLUSTER in ARGOPTNAMES' {
              = if 1 {
              – local cluster CLuster(varname)
              – }
              – }
```

```
                       - local 0 `"`user'"'
                       = local 0 `" , robust"'
                       - syntax [fw aw pw iw] [, VCE(string asis) `robust' `cluster
> ' ]
                       = syntax [fw aw pw iw] [, VCE(string asis) Robust CLuster(va
> rname) ]
                       - if `"`vce'"' != "" {
                       = if `""' != "" {
                         gettoken name args : vce, parse(" ,")
                         local args : list retok args
                         capture ParseVCE `o' `a' , `name'
                         if c(rc) {
                         di as err "vcetype {bf:`name'} not allowed"
                         exit 198
                         }
                         local name `r(vce)'
                         if "`weight'" == "pweight" & !`:list name in pwlist' {
                         di as err "pweights are not allowed with vce(`name')"
                         exit 198
                         }
                         return add
                         if `"`robust'"' != "" & !inlist("`name'","","robust","eim"
> ,"oim","cluster") {
                         opts_exclusive "`robust' vce(`name')"
                         }
                         if "`name'" == "cluster" {
                         if `"`args'"' == "" {
                         di as err "invalid vce(cluster) option"
                         exit 198
                         }
                         confirm var `args'
                         unab args : `args'
                         local markout `args'
                         if "`cluster'" != "" {
                         if !`:list args == cluster' {
                         di as err "options cluster() and vce(cluster) are in confl
> ict"
                         exit 100
                         }
                         }
                         }
                         else if "`cluster'" != "" & !inlist("`name'","eim","oim")
> {
                         opts_exclusive "cluster() vce(`name')"
                         }
                         if `"`args'"' != "" {
```

```
                        if ! `:list name in ARGOPTNAMES' {
                        di as err "invalid vce() option"
                        exit 198
                        }
                        if "`name'" == "hc2" {
                        confirm var `args'
                        unab args : `args'
                        local markout `args'
                        }
                        return local vceargs `"'`:list retok args'"'
                        }
                        else if `:list name in ARGOPTNAMES' {
                        if "`noargopt_is_ok'" == "" {
                        di as err "invalid vce() option"
                        exit 198
                        }
                        }
                        }
                    - else {
                    - if "`weight'" == "pweight" | "`robust'" != "" {
                    = if "" == "pweight" | "robust" != "" {
                    - local vce robust
                    - }
                    - if "`cluster'" != "" {
                    = if "" != "" {
                      local vce cluster
                      local args `cluster'
                      local markout `cluster'
                      }
                    - return local vce `"`vce'"'
                    = return local vce `"robust"'
                    - return local vceargs `"`args'"'
                    = return local vceargs `""'
                    - }
                    - if "`return(vce)'" != "" {
                    = if "robust" != "" {
                    - if `"`return(vceargs)'"' != "" {
                    = if `""' != "" {
                      local ss " "
                      }
                    - return local vceopt `"vce(`return(vce)'`ss'`return(vceargs
 > )')"'
                    = return local vceopt `"vce(robust)"'
                    - }
                    - if "`return(vce)'" == "cluster" {
                    = if "robust" == "cluster" {
```

```
                         return local cluster `return(vceargs)'
                       }
                 -  if inlist("`return(vce)'", "robust", "cluster") {
                 =  if inlist("robust", "robust", "cluster") {
                 -  return local robust robust
                 -  }
                 -  if "`touse'" != "" {
                 =  if "" != "" {
                    if "`markout'" != "" {
                    markout `touse' `markout', strok
                    }
                    }
                 ─────────────────────────────────────────────────────
  >  ───────────────────────────────────────────── end _vce_parse ──────────────
                 -  local vce `r(vce)'
                 =  local vce robust
                 -  }
                 -  else if "`weight'" == "pweight" {
                 =  else if "" == "pweight" {
                    local vce robust
                    }
                 -  if `:length local svy' {
                 =  if 0 {
                    local vce svy
                    }
                 -  if `"`vce'"' == "cluster" {
                 =  if `"robust"' == "cluster" {
                    local cluster `r(cluster)'
                    markout $ML_sample `cluster', strok
                    }
                 -  if `:length local group' {
                 =  if 0 {
                    markout $ML_sample `group', strok
                    global ML_group : copy local group
                    if bsubstr("`:type `group''",1,3) == "str" {
                    if `interactive' {
                    SetGlobalVar ML_grp : _MLgr
                    }
                    else {
                    global ML_grp : tempvar
                    if `"`moptobj'"' != "" {
                    global ML_grp `moptobj'$ML_grp
                    }
                    }
                    quietly egen $ML_grp = group(`group')
                    if ! `:length local cluster' {
```

```
                     local cluster : copy global ML_grp
                     }
                     }
                     else {
                     if ! `:length local cluster' {
                     local cluster : copy global ML_group
                     }
                     }
                     }
               - if "$ML_samp" != "$ML_sample" {
               = if "__000007" != "__000007" {
                     quietly replace $ML_samp = 0 if $ML_samp & $ML_sample == 0
                     }
               - if `:length local vce' == 0 {
               = if 6 == 0 {
                     if `"`technique'"' == "bhhh" {
                     local vce opg
                     }
                     else local vce oim
                     }
               - if inlist("`vce'", "robust", "cluster") & bsubstr("`evaltype
 > '",1,1) == "d" {
               = if inlist("robust", "robust", "cluster") & bsubstr("e2",1,1)
 >  == "d" {
                     local optname = cond("`svy'"=="","vce(`vce')","svy")
                     di as err "option `optname' is not allowed with evaltype `ev
 > altype'"
                     exit 198
                     }
               - if `:length local crittype' == 0 {
               = if 0 == 0 {
               - if inlist("`vce'", "cluster", "robust", "svy") {
               = if inlist("robust", "cluster", "robust", "svy") {
               - local crittype "log pseudolikelihood"
               - }
               - else local crittype "log likelihood"
               - }
               - global ML_waldtest `waldtest'
               = global ML_waldtest -1
               - if `:length local svy' | `:length local weight' {
               = if 0 | 0 {
                     if `interactive' {
                     SetGlobalVar ML_w : _MLw
                     }
                     else {
                     global ML_w : tempvar
```

```
        if `"`moptobj'"' != "" {
        global ML_w `moptobj'$ML_w
        }
        }
        }
—   if `:length local weight' {
=   if 0 {
        if `"`moptobj'"' != "" {
        cap drop $ML_w
        }
        quietly gen double $ML_w `exp' if $ML_samp
        local wtype `"`weight'"'
        local wexp `"`exp'"'
        global ML_wtyp : copy local wtype
        global ML_wexp : copy local wexp
        if "`wtype'" == "iweight" | "`svy'" != "" {
        local zeroweight zeroweight
        }
        }
—   if inlist("`vce'", "svy", "cluster") {
=   if inlist("robust", "svy", "cluster") {
        if `interactive' {
        SetGlobalVar ML_subv : _MLsu
        }
        else {
        global ML_subv : tempvar
        if `"`moptobj'"' != "" {
        global ML_subv `moptobj'$ML_subv
        }
        }
        }
—   quietly count if $ML_sample
=   quietly count if __000007
—   if r(N) == 0 {
        error 2000
        }
—   if `"`weight'"' != "" {
=   if `""' != "" {
        quietly count if $ML_sample & $ML_w != 0
        if r(N) == 0 {
        di in gr "all observation have zero weights"
        exit 2000
        }
        }
—   if `:length local lf0' {
=   if 20 {
```

```
- if `:list sizeof lf0' != 2 {
= if 2 != 2 {
  di as err "lf0(`lf0') invalid"
  exit 198
  }
- global ML_k0 : word 1 of `lf0'
= global ML_k0 : word 1 of 1 -401.5531151051299
- global ML_ll_0 : word 2 of `lf0'
= global ML_ll_0 : word 2 of 1 -401.5531151051299
- confirm integer number $ML_k0
= confirm integer number 1
- confirm number $ML_ll_0
= confirm number -401.5531151051299
- if $ML_k0 < 0 {
= if 1 < 0 {
  di as err "lf0(`lf0') invalid"
  exit 198
  }
- }
- if "`obs'" == "" {
= if "" == "" {
- if "`wtype'" != "fweight" {
= if "" != "fweight" {
- quietly count if $ML_sample
= quietly count if __000007
- local obs = r(N)
- }
- else {
  sum $ML_w if $ML_sample, mean
  local obs = r(sum)
  }
- }
- if `:length local iterid' {
= if 0 {
  local iterid = trim(bsubstr(`"`iterid'"',1,32))
  }
- if `:length local crittype' {
= if 20 {
- local crittype = trim(bsubstr(`"`crittype'"',1,32))
= local crittype = trim(bsubstr(`"log pseudolikelihood"',1,32)
> )

- }
- if `:length local derivscale' {
= if 0 {
  confirm matrix `derivscale'
  }
```

```
                     - if `:length local derivh' {
                   = if 0 {
                     confirm matrix `derivh'
                     }
                   - local l : strlen local deriv
                   - ParseUsemin, `deriv' len(`l')
                   = ParseUsemin,  len(0)
                     ─────────────────────────────────────────────
>  ──────────────────────────────── begin mopt.ParseUsemin ───────────────
                   - syntax [, LEN(integer 0) MIN1(string) NOMIN MIN]
                   - if `"`min1'"' != "" & `"`nomin'"' != "" {
                   = if `""' != "" & `""' != "" {
                     di as err "options min() and nomin are mutually exclusive"
                     exit 198
                     }
                   - if `"`min'"' != "" & `"`nomin'"' != "" {
                   = if `""' != "" & `""' != "" {
                     di as err "options min and nomin are mutually exclusive"
                     exit 198
                     }
                   - if (`"`min1'"' != "") {
                   = if (`""' != "") {
                     confirm matrix `min1'
                     local deriv `min1'
                     }
                   - else if (`"`min'"' != "") {
                   = else if (`""' != "") {
                     if (`len' > length(`"`min'"')) {
                     di as err "must specify a matrix of 2 columns in option mi
> n()"

                     exit 198
                     }
                     local deriv 1
                     }
                   - else {
                   - if (`len' > 0) {
                   = if (0 > 0) {
                     if ("`nomin'" == "") {
                     di as err "must specify a matrix of 2 columns in option mi
> n()"

                     exit 198
                     }
                     else if (`len' > length(`"`nomin'"')) {
                     di as err "options min() and nomin are mutually exclusive"
                     exit 198
                     }
```

```
                          else {
                          local deriv 0
                          }
                          }
                        − else {
                        − local deriv 0
                        − }
                        − }
                        − sreturn local deriv `deriv'
                        = sreturn local deriv 0
                      ─────────────────────────────────────────────
>  ──────────────────────────────── end mopt.ParseUsemin ──────────────
                      − local deriv = s(deriv)
                      − if `:length local gnwmatrix' {
                      = if 0 {
                        confirm matrix `gnwmatrix'
                        }
                      − `vv' mata: Mopt_model()
                      = version 18: mata: Mopt_model()
                      ─────────────────────────────────────────────
>  ──────────────────────────────── begin mopt_check_program ──────────────
                      − version 10
                      − args name
                      − capture confirm name `name'
                      = capture confirm name poiss_lf
                      − if c(rc) {
                        di as err "unrecognized command:   `name' invalid command
> name"

                        exit 199
                        }
                      − capture which `name'
                      = capture which poiss_lf
                      − if !c(rc) {
                      − exit
                      ─────────────────────────────────────────────
>  ──────────────────────────────── end mopt_check_program ──────────────
                    − global ML_stat model
                    − if !`interactive' {
                    = if !0 {
                    − `vv' MaxMin `maxmin', nooutput `score' `options' moptobj(`mo
> ptobj')
                    = version 18: MaxMin maximize, nooutput  search(off) moptobj()
                      ─────────────────────────────────────────────
>  ──────────────────────────────── begin mopt.MaxMin ──────────────
                      − local vv : di "version " string(_caller()) ":"
                      − version 12
```

```
                        - ChkMacros
                        ───────────────────────────────────────────
> ──────────────────────────────── begin mopt.ChkMacros ──────────────
                 - if "$ML_stat" != "model" {
                 = if "model" != "model" {
                   di as err "you must issue -ml model- first"
                   exit 198
                   }
                 - capture confirm var $ML_samp $ML_w $ML_subv
                 = capture confirm var __000007 __000007
                 - if c(rc) {
                   di as err "Since issuing the -ml model- statement, you h
> ave done something to drop" _n "temporary variables ml added to your data.
> You must start again."
                     Clear
                     exit 111
                     }
                   ───────────────────────────────────────────
> ──────────────────────────────── end mopt.ChkMacros ────────────────
                 - syntax name(name=maxmin) [, NEGH TOLerance(numlist max=1 >
> =0) LTOLerance(numlist max=1 >=0) NONRTOLerance NRTOLerance(numlist max=1 >=
> 0) QTOLerance(numlist max=1 >=0) GTOLerance(numlist max=1 >=0) ITERate(numli
> st max=1 >=0) NOTCONCAVE(numlist max=1 >=0) ndami DIFficult HALFSTEPonly DOO
> PT SEArch(name) Repeat(passthru) Bounds(string) SCore(string) noWARNing noCL
> EAR NOLOg LOg DOTs SHOWTOLerance SHOWNRtolerance SHOWSTEP TRace COEFDIffs GR
> ADient HESSian noSKIPline noOUTput Level(cilevel) moptobj(string) * ]
                 - if `:length local nrtolerance' {
                 = if 0 {
                   opts_exclusive "nrtolerance() `nonrtolerance'"
                   }
                 - if `:length local qtolerance' {
                 = if 0 {
                   opts_exclusive "qtolerance() `nonrtolerance'"
                   }
                 - opts_exclusive "`nonrtolerance' `shownrtolerance'"
                 = opts_exclusive " "
                   ───────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ──────────────
                 - version 8.2
                 - args opts optname errcode optslab
                 - local opts `opts'
                 = local opts
                 - local n 0
                 - while `"`opts'"' != "" {
                 = while `""' != "" {
                     local ++n
```

```
                    gettoken item`n' opts : opts, bind
                    }
                  — if `n' < 2 {
                  = if 0 < 2 {
                  — exit
                  _____
```

```
                — if `:length local shownrtolerance' {
                = if 0 {
                  local showtolerance showtolerance
                  }
                — if "$ML_preserve" != "no" {
                = if "no" != "no" {
                  if `:length local score' {
                  di as smcl as err "May not specify {bf:score()} option unl
> ess" _n "      a) estimation subsample is the entire data in memory, or" _n "
>      b) you specify option {bf:nopreserve} on {bf:ml model} statement (meani
> ng" _n "          your evaluation program explicitly restricts itself to obs"
> _n "          for which {bf:$}" "{bf:ML_samp==1}."
                  exit 198
                  }
                  preserve
                  local N = c(N)
                  quietly keep if $ML_sample
                  if (`N' != c(N)) {
                  mata: Mopt_init_regetviews()
                  }
                  }
                — if `:length local score' {
                = if 0 {
                  SetupScore `"$ML_evaltype"' `"`score'"' $ML_n $ML_dim
                  local scores "`s(scores)'"
                  }
                — _parse_iterlog, `nolog' `log'
                = _parse_iterlog,
                  _____
```

```
                — version 16
                — syntax [, NOLOG LOG]
                — if "`log'`nolog'" != "" {
                = if "" != "" {
                  opts_exclusive "`log' `nolog'"
                  }
                — else if "`c(iterlog)'" == "on" {
                = else if "on" == "on" {
                — local log log
```

```
            -   }
            -   else {
                local nolog nolog
                }
            -   sreturn local log `log'
            =   sreturn local log log
            -   sreturn local nolog `nolog'
            =   sreturn local nolog
          ──────────────────────────────────────────────
```
> ──────────────────────────────── end _parse_iterlog ────────────────

```
          -   local log "``s(nolog)'"
          =   local log ""
          -   local tropts `log' `dots' `showtolerance' `showstep' `trac
```
> e' `coefdiffs'
```
          =   local tropts
          -   if "`tropts'" != "nolog" {
          =   if "" != "nolog" {
          -   local tropts `tropts' `gradient' `hessian'
          =   local tropts
          -   if "`skipline'" == "" {
          =   if "" == "" {
          -   if "`iterate'" != "0" | `:length local tropts' {
          =   if "" != "0" | 0 {
          -   di

          -   }
          -   }
          -   }
          -   else {
              local gradient
              local hessian
              local nolog nolog
              }
          -   if "`search'" != "off" & "`iterate'" != "0" {
          =   if "off" != "off" & "" != "0" {
              if "`search'" == "quietly" {
              local sopts nolog
              }
              else {
              if `:length local tropts' {
              if "`tropts'" != "nolog" {
              local sopts trace
              }
              else local sopts nolog
              }
              }
```

```
                        if "`search'" == "norescale" {
                        local sopts `sopts' norescale
                        }
                        Search `bounds', nopreserve `sopts' `repeat' `maxmin'
                        }
                 - tempname value b V iV
                 - `vv' mata: Mopt_maxmin()
                 = version 18: mata: Mopt_maxmin()
                        ─────────────────────────────────────────────────────────
> ─────────────────────────────────────── begin poiss_lf ───────────────
                 - version 6
                 - args todo b lnf g H score
                 - tempvar xb
                 - mleval `xb' = `b'
                 = mleval __00000R = __00000L
                 - mlsum `lnf' = -exp(`xb') + `xb'*$ML_y1 - lngamma($ML_y1+
> 1)
                 = mlsum __00000M = -exp(__00000R) + __00000R*piq_timing_ma
> x - lngamma(piq_timing_max+1)
                 - if `todo' == 0 | `lnf'==. {
                 = if 2 == 0 | __00000M==. {
                   exit
                   }
                 - qui replace `score' = $ML_y1 - exp(`xb') if $ML_samp
                 = qui replace __00000P = piq_timing_max - exp(__00000R) if
> __000007
                 - $ML_ec mlvecsum `lnf' `g' = `score'
                 = * mlvecsum __00000M __00000N = __00000P
                 - if `todo' == 1 | `lnf'==. {
                 = if 2 == 1 | __00000M==. {
                   exit
                   }
                 - mlmatsum `lnf' `H' = exp(`xb')
                 = mlmatsum __00000M __00000O = exp(__00000R)
                        ─────────────────────────────────────────────────────────
> ─────────────────────────────────────── end poiss_lf ────────────────
Iteration 0:   Log pseudolikelihood = -273.04877
                        ─────────────────────────────────────────────────────────
> ─────────────────────────────────────── begin poiss_lf ──────────────
                 - version 6
                 - args todo b lnf g H score
                 - tempvar xb
                 - mleval `xb' = `b'
                 = mleval __00000R = __00000L
                 - mlsum `lnf' = -exp(`xb') + `xb'*$ML_y1 - lngamma($ML_y1+
> 1)
```

```
                  = mlsum __00000M = -exp(__00000R) + __00000R*piq_timing_ma
> x - lngamma(piq_timing_max+1)
                  - if `todo' == 0 | `lnf'==. {
                  = if 0 == 0 | __00000M==. {
                  - exit
                  _____
```

> ── end poiss_lf ───────────────

```
                  _____
```

> ── begin poiss_lf ─────────────

```
                  - version 6
                  - args todo b lnf g H score
                  - tempvar xb
                  - mleval `xb' = `b'
                  = mleval __00000R = __00000L
                  - mlsum `lnf' = -exp(`xb') + `xb'*$ML_y1 - lngamma($ML_y1+
> 1)
                  = mlsum __00000M = -exp(__00000R) + __00000R*piq_timing_ma
> x - lngamma(piq_timing_max+1)
                  - if `todo' == 0 | `lnf'==. {
                  = if 0 == 0 | __00000M==. {
                  - exit
                  _____
```

> ── end poiss_lf ───────────────

```
                  _____
```

> ── begin poiss_lf ─────────────

```
                  - version 6
                  - args todo b lnf g H score
                  - tempvar xb
                  - mleval `xb' = `b'
                  = mleval __00000R = __00000L
                  - mlsum `lnf' = -exp(`xb') + `xb'*$ML_y1 - lngamma($ML_y1+
> 1)
                  = mlsum __00000M = -exp(__00000R) + __00000R*piq_timing_ma
> x - lngamma(piq_timing_max+1)
                  - if `todo' == 0 | `lnf'==. {
                  = if 2 == 0 | __00000M==. {
                    exit
                    }
                  - qui replace `score' = $ML_y1 - exp(`xb') if $ML_samp
                  = qui replace __00000P = piq_timing_max - exp(__00000R) if
> __000007
                  - $ML_ec mlvecsum `lnf' `g' = `score'
                  = * mlvecsum __00000M __00000N = __00000P
                  - if `todo' == 1 | `lnf'==. {
                  = if 2 == 1 | __00000M==. {
                    exit
```

Friday, January 10, 2025 at 11:33 AM   Page 457

```
                           }
                         - mlmatsum `lnf' `H' = exp(`xb')
                         = mlmatsum __00000M __000000 = exp(__00000R)
                         _____

>  ─────────────────────────────────────────── end poiss_lf ──────────────
Iteration 1:   Log pseudolikelihood = −272.32625
                         _____

>  ─────────────────────────────────────────── begin poiss_lf ────────────
                         - version 6
                         - args todo b lnf g H score
                         - tempvar xb
                         - mleval `xb' = `b'
                         = mleval __00000R = __00000L
                         - mlsum `lnf' = −exp(`xb') + `xb'*$ML_y1 − lngamma($ML_y1+
> 1)
                         = mlsum __00000M = −exp(__00000R) + __00000R*piq_timing_ma
> x − lngamma(piq_timing_max+1)
                         - if `todo' == 0 | `lnf'==. {
                         = if 0 == 0 | __00000M==. {
                         - exit
                         _____

>  ─────────────────────────────────────────── end poiss_lf ──────────────
                         _____

>  ─────────────────────────────────────────── begin poiss_lf ────────────
                         - version 6
                         - args todo b lnf g H score
                         - tempvar xb
                         - mleval `xb' = `b'
                         = mleval __00000R = __00000L
                         - mlsum `lnf' = −exp(`xb') + `xb'*$ML_y1 − lngamma($ML_y1+
> 1)
                         = mlsum __00000M = −exp(__00000R) + __00000R*piq_timing_ma
> x − lngamma(piq_timing_max+1)
                         - if `todo' == 0 | `lnf'==. {
                         = if 0 == 0 | __00000M==. {
                         - exit
                         _____

>  ─────────────────────────────────────────── end poiss_lf ──────────────
                         _____

>  ─────────────────────────────────────────── begin poiss_lf ────────────
                         - version 6
                         - args todo b lnf g H score
                         - tempvar xb
                         - mleval `xb' = `b'
                         = mleval __00000R = __00000L
                         - mlsum `lnf' = −exp(`xb') + `xb'*$ML_y1 − lngamma($ML_y1+
```

```
> 1)
                      = mlsum __00000M = -exp(__00000R) + __00000R*piq_timing_ma
> x - lngamma(piq_timing_max+1)
                      - if `todo' == 0 | `lnf'==. {
                      = if 2 == 0 | __00000M==. {
                        exit
                        }
                      - qui replace `score' = $ML_y1 - exp(`xb') if $ML_samp
                      = qui replace __00000P = piq_timing_max - exp(__00000R) if
> __000007
                      - $ML_ec mlvecsum `lnf' `g' = `score'
                      = * mlvecsum __00000M __00000N = __00000P
                      - if `todo' == 1 | `lnf'==. {
                      = if 2 == 1 | __00000M==. {
                        exit
                        }
                      - mlmatsum `lnf' `H' = exp(`xb')
                      = mlmatsum __00000M __000000 = exp(__00000R)
                      ─────────────────────────────────────────────────

> ─────────────────────────────────────── end poiss_lf ──────────────
Iteration 2:   Log pseudolikelihood = −272.32551
                      ─────────────────────────────────────────────────
> ─────────────────────────────────────── begin poiss_lf ────────────
                      - version 6
                      - args todo b lnf g H score
                      - tempvar xb
                      - mleval `xb' = `b'
                      = mleval __00000R = __00000L
                      - mlsum `lnf' = -exp(`xb') + `xb'*$ML_y1 - lngamma($ML_y1+
> 1)
                      = mlsum __00000M = -exp(__00000R) + __00000R*piq_timing_ma
> x - lngamma(piq_timing_max+1)
                      - if `todo' == 0 | `lnf'==. {
                      = if 0 == 0 | __00000M==. {
                      - exit
                      ─────────────────────────────────────────────────

> ─────────────────────────────────────── end poiss_lf ──────────────
                      ─────────────────────────────────────────────────
> ─────────────────────────────────────── begin poiss_lf ────────────
                      - version 6
                      - args todo b lnf g H score
                      - tempvar xb
                      - mleval `xb' = `b'
                      = mleval __00000R = __00000L
                      - mlsum `lnf' = -exp(`xb') + `xb'*$ML_y1 - lngamma($ML_y1+
> 1)
```

```
                        = mlsum __00000M = -exp(__00000R) + __00000R*piq_timing_ma
> x - lngamma(piq_timing_max+1)
                        - if `todo' == 0 | `lnf'==. {
                        = if 0 == 0 | __00000M==. {
                        - exit
                        _____
>  ─────────────────────────────────────────── end poiss_lf ───────────────
                        _____
>  ─────────────────────────────────────────── begin poiss_lf ──────────────
                        - version 6
                        - args todo b lnf g H score
                        - tempvar xb
                        - mleval `xb' = `b'
                        = mleval __00000R = __00000L
                        - mlsum `lnf' = -exp(`xb') + `xb'*$ML_y1 - lngamma($ML_y1+
> 1)
                        = mlsum __00000M = -exp(__00000R) + __00000R*piq_timing_ma
> x - lngamma(piq_timing_max+1)
                        - if `todo' == 0 | `lnf'==. {
                        = if 2 == 0 | __00000M==. {
                          exit
                          }
                        - qui replace `score' = $ML_y1 - exp(`xb') if $ML_samp
                        = qui replace __00000P = piq_timing_max - exp(__00000R) if
>  __000007
                        - $ML_ec mlvecsum `lnf' `g' = `score'
                        = * mlvecsum __00000M __00000N = __00000P
                        - if `todo' == 1 | `lnf'==. {
                        = if 2 == 1 | __00000M==. {
                          exit
                          }
                        - mlmatsum `lnf' `H' = exp(`xb')
                        = mlmatsum __00000M __000000 = exp(__00000R)
                        _____
>  ─────────────────────────────────────────── end poiss_lf ───────────────
Iteration 3:   Log pseudolikelihood = -272.32551
                        _____
>  ─────────────────────────────────────────── begin mopt_post ─────────────
                        - args b V C wgt touse depvar
                        - if `:length local touse' {
                        = if 8 {
                        - tempname esamp
                        - quietly gen byte `esamp' = `touse'
                        = quietly gen byte __00000U = __000007
                        - }
                        - ereturn post `b' `V' `C' `wgt', esample(`esamp') depname
```

```
> (`depvar') buildfvinfo
                        = ereturn post __00000R __00000S __00000T [], esample(__00
> 000U) depname(piq_timing_max) buildfvinfo
                        ─────────────────────────────────────────────

> ─────────────────────────────────────── end mopt_post ───────────────
                    – ereturn scalar k_eq_model = abs($ML_waldtest)
                    = ereturn scalar k_eq_model = abs(−1)
                    – if `:length global ML_ll_0' {
                    = if 18 {
                    – ereturn scalar ll_0 = $ML_ll_0
                    = ereturn scalar ll_0 = −401.5531151051299
                    – if `:length global ML_rank0' {
                    = if 0 {
                      ereturn scalar rank0 = $ML_rank0
                      ereturn scalar df_m = e(rank) − $ML_rank0
                      }
                    – else ereturn scalar df_m = e(rank) − $ML_k0
                    = else ereturn scalar df_m = e(rank) − 1
                    – }
                    – if !`:length global ML_ll_0' | inlist(e(vce), "robust", "c
> luster", "linearized") {
                    = if !18 | inlist(e(vce), "robust", "cluster", "linearized")
>  {
                    – if "$ML_svy" == "" {
                    = if "" == "" {
                    – _prefix_model_test, minimum
                        ─────────────────────────────────────────────

> ──────────────────────────────── begin _prefix_model_test ───────────────
                    – version 9
                    – syntax [name(name=cmd)] [, svy noADJust noSVYadjust MINi
> mum ]
                    – if (inlist("`cmd'","asmixlogit","cmmixlogit","cmxtmixlog
> it")) {
                    = if (inlist("","asmixlogit","cmmixlogit","cmxtmixlogit"))
>  {
                      _asmixtest, `svy' `adjust' `svyadjust'
                      exit
                      }
                    – local K = 1
                    – if "`e(k_eq_model)'" != "" {
                    = if "1" != "" {
                    – capture confirm integer number `e(k_eq_model)'
                    = capture confirm integer number 1
                    – if ! c(rc) {
                    – local K = e(k_eq_model)
                    – }
```

```
- }
- if "`e(k_eq_model_skip)'" != "" {
= if "" != "" {
  capture confirm integer number `e(k_eq_model_skip)'
  if ! c(rc) {
  local skip = e(k_eq_model_skip)
  }
  }
- ereturn local df_m
- ereturn local F
- ereturn local chi2
- ereturn local chi2type
- ereturn local p
- if (`K' == 0) {
= if (1 == 0) {
  exit
  }
- forval i = 1/`K' {
= forval i = 1/1 {
- if !`:list i in skip' {
= if !0 {
- local spec "`spec' ([#`i'])"
= local spec " ([#1])"
- }
- }
- tempname cns omit
- capture matrix `cns' = get(Cns)
= capture matrix __00000U = get(Cns)
- if (c(rc)) local cns
- if "`cns'" != "" {
= if "__00000U" != "" {
- local k_autoCns = e(k_autoCns)
- if missing(`k_autoCns') {
= if missing(1) {
  local k_autoCns 0
  }
- if rowsof(`cns') == `k_autoCns' {
= if rowsof(__00000U) == 1 {
- local cns
- }
- }
- if "`svy'" != "" & "`adjust'`svyadjust'" != "" {
= if "" != "" & "" != "" {
  local adjust nosvyadjust
  }
- else local adjust
```

```
                   - _ms_omit_info e(b), nocons
                   - matrix `omit' = r(omit)
                   = matrix __00000V = r(omit)
                   - capture test `spec', `adjust'
                   = capture test  ([#1]),
                 ─────────────────────────────────────────
> ───────────────────────────────────── begin test ──────────────
                   - if "`e(cmd)'" == "anova" | "`e(cmd)'" == "manova" {
                   = if "mopt" == "anova" | "mopt" == "manova" {
                     AnovaTestChooser `0'
                     return add
                     exit
                     }
                   - if "`e(cmd)'" == "mixed" {
                   = if "mopt" == "mixed" {
                     MixedTestChooser `0'
                     return add
                     exit
                     }
                   - if _caller() < 8 {
                     _test `0'
                     return add
                     exit
                     }
                   - is_svy
                 ─────────────────────────────────────────
> ───────────────────────────────────── begin is_svy ──────────────
                   - version 8
                   - syntax [, Regression]
                   - if `"`e(prefix)'"' == "svy" {
                   = if `""' == "svy" {
                     return scalar is_svy = 1
                     }
                   - else if "`regression'" == "" {
                   = else if "" == "" {
                   - return scalar is_svy = ("`e(N_psu)'" != "")
                   = return scalar is_svy = ("" != "")
                   - }
                   - else {
                     capt mat list e(b)
                     local rc = _rc
                     return scalar is_svy = ("`e(N_psu)'" != "") & (`rc'
> == 0)

                     }
                 ─────────────────────────────────────────
> ───────────────────────────────────── end is_svy ──────────────
```

```
                         ─ local is_svy = r(is_svy)
                         ─ if replay() & `is_svy' == 0 {
                         = if replay() & 0 == 0 {
                           _test `0'
                           return add
                           exit
                           }
                         ─ version 8
                         ─ WaldTest `is_svy' `0'
                         = WaldTest 0 ([#1]),
                           ────────────────────────────────────────────

 > ──────────────────────────────── begin test.WaldTest ──────────────
                         ─ gettoken is_svy 0 : 0
                         ─ if "`is_svy'" == "1" {
                         = if "0" == "1" {
                           if "`e(complete)'" == "available" {
                           di as err `"must run svy command with "complete" "'
 > "option before using this command"
                           exit 301
                           }
                           }
                         ─ gettoken tok : 0, parse(" (,") bind
                         ─ local single single
                         ─ local zero `"`0'"'
                         = local zero `" ([#1]), "'
                         ─ if `"`tok'"' == "(" {
                         = if `"("' == "(" {
                         ─ local single
                         ─ while `"`tok'"' == "(" {
                         = while `"("' == "(" {
                         ─ gettoken tok 0 : 0, parse(" (,") match(paren) bind
                         ─ local eqns `"`eqns' `"`tok'"'"'
                         = local eqns `" `"[#1]"'"'
                         ─ gettoken tok : 0, parse(" (,") bind
                         ─ }
                         ─ while `"`tok'"' == "(" {
                         = while `","' == "(" {
                           gettoken tok 0 : 0, parse(" (,") match(paren) bind
                           local eqns `"`eqns' `"`tok'"'"'
                           gettoken tok : 0, parse(" (,") bind
                           }
                         ─ if `"`tok'"' != "," & `"`tok'"' != "" {
                         = if `","' != "," & `","' != "" {
                           local single single
                           }
                         ─ }
```

```
                              - if "`single'"=="single" {
                              = if ""=="single" {
                                local eqns
                                local 0 `"`zero'"'
                                while `"`tok'"' != "" & `"`tok'"' != "," {
                                gettoken tok 0 : 0, parse(" ,") bind
                                local eqns `"`eqns' `tok'"'
                                gettoken tok : 0, parse(" ,") bind
                                }
                                local eqns `"`"`eqns'"'"'
                                }
                              - syntax [, Accumulate noSVYadjust common CONStant MIN
> imum Mtest Mtest2(passthru) noTest COEF matvlc(passthru) DF(numlist max=1 >0
> ) ]
                              - if "`df'" != "" {
                              = if "" != "" {
                                local dof = `df'
                                }
                              - else if "`e(df_r)'" !="" {
                              = else if "" !="" {
                                local dof = e(df_r)
                                }
                              - else {
                              - local dof = .
                              - }
                              - if `"`mtest'`mtest2'"' != "" {
                              = if `""' != "" {
                                if inlist("`e(cmd)'", "svymean", "svytotal", "svyrat
> io") {
                                di as err `"mtest option not allowed after `e(cmd)'"
> '
                                exit 301
                                }
                                _mtest syntax, `mtest' `mtest2'
                                local mtmethod `r(method)'
                                }
                              - if "`mtmethod'" != "" {
                              = if "" != "" {
                                if "`test'" != "" {
                                di as err "options mtest and notest may not be combi
> ned"
                                exit 198
                                }
                                if "`accumulate'" != "" {
                                di as err "options mtest and accumulate may not be c
> ombined"
```

```
                                    exit 198
                                    }
                                    }
                      - if `is_svy' {
                      = if 0 {
                                    if `"`e(cmd)'"' == "margins" {
                                    local vce `"`e(model_vce)'"'
                                    }
                                    else local vce `"`e(vce)'"'
                                    if inlist(`"`vce'"', "bootstrap", "sdr") {
                                    if missing(`dof') {
                                    local svyadjust nosvyadjust
                                    }
                                    }
                                    }
                      - if !`is_svy' & "`svyadjust'" != "" {
                      = if !0 & "" != "" {
                                    di as err "option nosvyadjust is allowed only with s
> vy data"
                                    exit 198
                                    }
                      - local svy_adjust = `is_svy' & "`svyadjust'" == ""
                      = local svy_adjust = 0 & "" == ""
                      - if `svy_adjust' & missing(`dof') & (missing(e(N_psu)
> ) | missing(e(N_strata))) {
                      = if 0 & missing(.) & (missing(e(N_psu)) | missing(e(N
> _strata))) {
                                    di as err "impossible to adjust p-values"
                                    exit 198
                                    }
                      - if `is_svy' & `"`test'"' == "" {
                      = if 0 & `""'' == "" {
                                    if "`svyadjust'" == "" {
                                    di _n as txt "Adjusted Wald test"
                                    }
                                    else di _n as txt "Unadjusted Wald test"
                                    }
                      - local tmp : subinstr local eqns "===" "", all count(
> local nch)
                      - if `nch' > 0 {
                      = if 0 > 0 {
                                    di as err "=== invalid operator"
                                    exit 198
                                    }
                      - local eqns : subinstr local eqns "==" "=", all
                      - ExpandExpns `"`eqns'"' "`common'" "`constant'"
```

```
                      = ExpandExpns `" `"[#1]"'"' "" ""
                      ─────────────────────────────────────────────────
>  ──────────────────────────────── begin test.ExpandExpns ───────────────
                      − args expns common constant
                      − gettoken exp expns : expns
                      − while `"`exp'"' != "" {
                      = while `"[#1]"' != "" {
                      − Expand `"`exp'"' "`common'" "`constant'"
                      = Expand `"[#1]"' "" ""
                      ─────────────────────────────────────────────────
>  ──────────────────────────────────── begin test.Expand ───────────────
                      − args exp common constant
                      − local junk : subinstr local exp "=" "=", count(l
> ocal nch) all

                      − if `nch' <= 1 {
                      = if 0 <= 1 {
                      − return local explist `"`"`exp'"'"'
                      = return local explist `"`"[#1]"'"'
                      − return local nexp 1
                      − exit
                      ─────────────────────────────────────────────────
>  ─────────────────────────────────────── end test.Expand ───────────────
                      − local explist `"`explist' `r(explist)'"'
                      = local explist `" `"[#1]"'"'
                      − local nexp = `nexp' + `r(nexp)'
                      = local nexp =  + 1
                      − gettoken exp expns : expns
                      − }
                      − while `"`exp'"' != "" {
                      = while `""' != "" {
                        Expand `"`exp'"' "`common'" "`constant'"
                        local explist `"`explist' `r(explist)'"'
                        local nexp = `nexp' + `r(nexp)'
                        gettoken exp expns : expns
                        }
                      − return local explist `"`explist'"'
                      = return local explist `" `"[#1]"'"'
                      − return local nexp `nexp'
                      = return local nexp 1
                      ─────────────────────────────────────────────────
>  ─────────────────────────────────── end test.ExpandExpns ───────────────
                      − local explist `"`r(explist)'"'
                      = local explist `" `"[#1]"'"'
                      − local nexp `r(nexp)'
                      = local nexp 1
                      − local acc `accumulate'
```

```
                         = local acc
                         – foreach exp of local explist {
                         – quietly _test `exp' , `acc' `common' `constant' note
      > st
                         = quietly _test [#1] ,      notest
                         – local acc acc
                         – }
                         – if "`test'" == "notest" {
                         = if "" == "notest" {
                           _test , notest
                           exit
                           }
                         – quietly _test , `matvlc'
                         = quietly _test ,
                         – if `dof' < . {
                         = if . < . {
                           local testtype F
                           tempname F df1 df2 p drop
                           if "`r(F)'" != "" {
                           scalar `F' = r(F)
                           }
                           else {
                           scalar `F' = r(chi2)/r(df)
                           }
                           scalar `df1' = r(df)
                           scalar `df2' = `dof'
                           scalar `p' = Ftail(`df1', `df2', `F')
                           scalar `drop' = r(drop)
                           }
                         – else {
                         – local testtype chi2
                         – tempname chi2 df1 p drop
                         – scalar `chi2' = r(chi2)
                         = scalar __00000W = r(chi2)
                         – scalar `df1' = r(df)
                         = scalar __00000X = r(df)
                         – scalar `p' = r(p)
                         = scalar __00000Y = r(p)
                         – scalar `drop' = r(drop)
                         = scalar __00000Z = r(drop)
                         – }
                         – local i 1
                         – while "`r(dropped_`i')'" != "" {
                         = while "5" != "" {
                         – local dropped_`i' `r(dropped_`i')'
                         = local dropped_1 5
```

```
-  local ++i
-  }
-  while "`r(dropped_`i')'" != "" {
=  while "" != "" {
   local dropped_`i' `r(dropped_`i')'
   local ++i
   }
-  if `svy_adjust' {
=  if 0 {
   if "`df'" != "" {
   local svy_d = `df'
   }
   else if !missing(e(df_r)) {
   local svy_d = e(df_r)
   }
   else local svy_d = e(N_psu)-e(N_strata)
   if missing(`svy_d') {
   di as err "internal error in adjustment for svy"
   exit 10001
   }
   if "`testtype'" == "F" {
   scalar `F' = ((`svy_d'-`df1'+1)/`svy_d') * `F'
   }
   else {
   tempname F df2
   scalar `F' = ((`svy_d'-`df1'+1)/(`svy_d'*`df1')) * `
```
> chi2'
```
   }
   scalar `df2' = `svy_d' - `df1' + 1
   if `df2' < 0 {
   scalar `F' = .
   }
   scalar `p' = Ftail(`df1', `df2', `F')
   local testtype F
   }
-  if "`mtmethod'" != "" {
=  if "" != "" {
   tempname R r Rr V b VR tm Wald
   mat `V' = e(V)
   mat `b' = e(b)
   mat `Rr' = get(Rr)
   local nb = rowsof(`V')
   local nr = rowsof(`Rr')
   mat `R' = `Rr'[1...,1..`nb']
   mat `VR' = `R'*`V'*`R''
   mat `r' = `R'*`b'' - `Rr'[1...,`=`nb'+1']
```

```
                              mat `Wald' = `r''*syminv(`VR')*`r'
                              mat `tm' = J(`nr', 3, .)
                              mat colnames `tm' = `testtype' df p
                              forvalues it = 1 / `nr' {
                              mat `Wald' = `r'[`it',1]^2 / `VR'[`it',`it']
                              mat `tm'[`it',1] = `Wald'[1,1]
                              mat `tm'[`it',2] = 1
                              if `svy_adjust' {
                              mat `tm'[`it',3] = Ftail(1,`svy_d',`tm'[`it',1])
                              }
                              else if "`testtype'" == "chi2" {
                              mat `tm'[`it',3] = chi2tail(1,`tm'[`it',1])
                              }
                              else {
                              mat `tm'[`it',3] = Ftail(1,`df2',`tm'[`it',1])
                              }
                              }
                              if "`mtmethod'" != "noadjust" {
                              _mtest adjust `tm', mtest(`mtmethod') pindex(3) appe
> nd
                              mat `tm' = r(result)
                              local pindex 4
                              }
                              else local pindex 3
                              }
                          - _test, notest
                          - local i 1
                          - while "`dropped_`i''" != "" {
                          = while "5" != "" {
                          - di as txt "        Constraint `dropped_`i'' dropped"
                          = di as txt "        Constraint 5 dropped"
                          - local ++i
                          - }
                          - while "`dropped_`i''" != "" {
                          = while "" != "" {
                            di as txt "        Constraint `dropped_`i'' dropped"
                            local ++i
                            }
                          - if "`mtmethod'" == "" {
                          = if "" == "" {
                          - di
                          - if "`testtype'" == "chi2" {
                          = if "chi2" == "chi2" {
                          - di as txt _col(12) "chi2(" %3.0f `df1' ") =" as res
> %8.2f `chi2'
                          = di as txt _col(12) "chi2(" %3.0f __00000X ") =" as r
```

```
> es %8.2f __00000W
                            - di as txt _col(10) "Prob > chi2 =  " as res %8.4f `p
> '
                            = di as txt _col(10) "Prob > chi2 =  " as res %8.4f __
> 00000Y
                            - }
                            - else {
                              di as txt "        F(" %3.0f `df1' "," %6.0f `df2' ")
>  =" as res %8.2f `F'
                              di as txt _col(13) "Prob > F =" as res %10.4f `p'
                              }
                            - }
                            - else {
                              local nexp = rowsof(`tm')
                              local nc = colsof(`tm')
                              if "`testtype'" == "F" {
                              local d "F(df,`='`df2''')"
                              local dip "p > F"
                              }
                              else {
                              local d chi2
                              local dip "p > chi2"
                              }
                              di
                              di as txt "{hline 7}{c TT}{hline 30}"
                              di as txt "        {c |}{ralign 12:`d'}     df{ralign
>  11:`dip'}"
                              di as txt "{hline 7}{c  +}{hline 30}"
                              forvalues it = 1 / `nexp' {
                              di as txt "   (`it') {c |}" as res _col(12) %9.2f `t
> m'[`it',1] _col(22) %6.0f `tm'[`it',2] _col(33) %6.4f `tm'[`it',`pindex'] as
>  txt "*"
                              }
                              di as txt "{hline 7}{c +}{hline 30}"
                              di as txt "   All {c |}" as res _col(12) %9.2f ``tes
> ttype'' _col(22) %6.0f `df1' _col(33) %6.4f `p'
                              di as txt "{hline 7}{c BT}{hline 30}"
                              _mtest footer 1 "`mtmethod'" "* "
                              }
                            - if "`coef'" != "" {
                            = if "" != "" {
                              Table
                              }
                            - return scalar p = `p'
                            = return scalar p = __00000Y
                            - return scalar df = `df1'
```

```
                         = return scalar df = __00000X
                         – if "`testtype'" == "F" {
                         = if "chi2" == "F" {
                           return scalar F = `F'
                           return scalar df_r = `df2'
                           }
                         – else return scalar chi2 = `chi2'
                         = else return scalar chi2 = __00000W
                         – return scalar drop = `drop'
                         = return scalar drop = __00000Z
                         – local i 1
                         – while "`dropped_`i''" != "" {
                         = while "5" != "" {
                         – return scalar dropped_`i' = `dropped_`i''
                         = return scalar dropped_1 = 5
                         – local ++i
                         – }
                         – while "`dropped_`i''" != "" {
                         = while "" != "" {
                           return scalar dropped_`i' = `dropped_`i''
                           local ++i
                           }
                         – if "`mtmethod'" != "" {
                         = if "" != "" {
                           return matrix mtest `tm'
                           return local mtmethod `mtmethod'
                           }
                        ─────────────────────────────────────
> ─────────────────────────────────────── end test.WaldTest ──────────────
                 – return add
                        ─────────────────────────────────────
> ──────────────────────────────────────── end test ──────────────
              – if !c(rc) {
              – if `:length local minimum' {
              = if 7 {
              – quietly test, min
                        ─────────────────────────────────────
> ──────────────────────────────────────── begin test ──────────────
              – if "`e(cmd)'" == "anova" | "`e(cmd)'" == "manova" {
              = if "mopt" == "anova" | "mopt" == "manova" {
                AnovaTestChooser `0'
                return add
                exit
                }
              – if "`e(cmd)'" == "mixed" {
              = if "mopt" == "mixed" {
```

```
                             MixedTestChooser `0'
                             return add
                             exit
                             }
                          - if _caller() < 8 {
                             _test `0'
                             return add
                             exit
                             }
                          - is_svy
                          ──────────────────────────────────────────
>  ──────────────────────────────────────── begin is_svy ──────────────
                          - version 8
                          - syntax [, Regression]
                          - if `"`e(prefix)'"' == "svy" {
                          = if `""' == "svy" {
                             return scalar is_svy = 1
                             }
                          - else if "`regression'" == "" {
                          = else if "" == "" {
                          - return scalar is_svy = ("`e(N_psu)'" != "")
                          = return scalar is_svy = ("" != "")
                          - }
                          - else {
                             capt mat list e(b)
                             local rc = _rc
                             return scalar is_svy = ("`e(N_psu)'" != "") & (`rc'
>  == 0)

                             }
                          ──────────────────────────────────────────
>  ──────────────────────────────────────── end is_svy ──────────────
                          - local is_svy = r(is_svy)
                          - if replay() & `is_svy' == 0 {
                          = if replay() & 0 == 0 {
                          - _test `0'
                          = _test , min
                          - return add
                          - exit
                          ──────────────────────────────────────────
>  ──────────────────────────────────────── end test ──────────────
                       - }
                       - ereturn scalar df_m = r(df)
                       - local drop = r(drop)
                       - if `drop' {
                       = if 1 {
                       - local drop 0
```

```
- local i 1
- local idrop `"'`r(dropped_`i')'"'
= local idrop `"5"'
- while "`idrop'" != "" {
= while "5" != "" {
- if !`omit'[1,`idrop'] {
= if !__00000V[1,5] {
  local ++drop
  }
- local ++i
- local idrop `"'`r(dropped_`i')'"'
= local idrop `""'
- }
- while "`idrop'" != "" {
= while "" != "" {
  if !`omit'[1,`idrop'] {
  local ++drop
  }
  local ++i
  local idrop `"'`r(dropped_`i')'"'
  }
- }
- if `drop' == 0 | "`cns'" != "" {
= if 0 == 0 | "" != "" {
- if !missing(e(df_r)) {
  ereturn scalar F = r(F)
  }
- else {
- ereturn scalar chi2 = r(chi2)
- ereturn local chi2type Wald
- }
- ereturn scalar p = r(p)
- }
- else {
  if !missing(e(df_r)) {
  ereturn scalar F = .
  }
  else {
  ereturn scalar chi2 = .
  ereturn local chi2type Wald
  }
  ereturn scalar p = .
  }
- }
- else {
  if missing(e(df_r)) {
```

```
                              ereturn local chi2type Wald
                              }
                              ereturn scalar df_m = 0
                              }
                    ───────────────────────────────────────────────
  > ──────────────────────────────── end _prefix_model_test ──────────────
                  - }
                  - else {
                    _prefix_model_test, $ML_svy $ML_noadj
                    }
                  - }
                  - else if `:length global ML_ll_0' {
                  = else if 18 {
                    if `"`maxmin'"' == "minimize" {
                    ereturn scalar chi2 = -2*(e(ll)-e(ll_0))
                    }
                    else {
                    ereturn scalar chi2 = 2*(e(ll)-e(ll_0))
                    }
                    ereturn scalar p = chi2tail(e(df_m), e(chi2))
                    ereturn local chi2type "LR"
                    }
                  - if `:length global ML_wexp' {
                  = if 0 {
                    ereturn local wtype `"$ML_wtyp"'
                    ereturn local wexp `"$ML_wexp"'
                    }
                  - if `:length global ML_group' {
                  = if 0 {
                    ereturn local group `"$ML_group"'
                    if `"`e(clustvar)'"' == "$ML_grp" & "$ML_grp" != "" {
                    ereturn local clustvar `"$ML_group"'
                    }
                    }
                  - ereturn local cmd "ml"
                  - if `:length local score' {
                  = if 0 {
                    mata: Mopt_score(0)
                    ereturn local scorevars `scores'
                    }
                  - if "$ML_preserve" != "no" {
                  = if "no" != "no" {
                    restore
                    if "`e(prefix)'" == "svy" & e(N_strata_omit) {
                    tempname v
                    quietly _svy2 $ML_sample if $ML_sample, type(total) svy v(
```

```
> `v') subpop(`e(subpop)') touse($ML_sample)
                }
                ereturn repost, esample($ML_sample)
                }
            - if `"`moptobj'"' != "" {
            = if `""' != "" {
              local clear noclear
              }
            - if !`:length local clear' {
            = if !0 {
            - Clear
```

```
            - syntax [, NOTANOPTION]
            - capture drop $ML_w
            = capture drop __000007
            - capture drop $ML_samp
            = capture drop __000007
            - capture drop $ML_sample
            = capture drop __000007
            - capture drop $ML_subv
            = capture drop
            - capture drop $ML_grp
            = capture drop
            - mata: Mopt_drop_external()
            - macro drop ML_*
```

```
          - }
          - else {
            capture confirm var $ML_sample
            if c(rc) {
            quietly gen byte $ML_sample = e(sample)
            }
            }
          - if `:length local output' == 0 {
          = if 8 == 0 {
            Display, level(`level') `options'
            }
```

```
        - }
```

```
      - if c(rc) {
        local rc = c(rc)
```

```
              Clear
              exit `rc'
              }
            - exit
          ─────────────────────────────────────────────────
>  ──────────────────────────────────────── end mopt ──────────────
        - exit
        ─────────────────────────────────────────────────────
>  ──────────────────────────────────────── end ml ───────────────
          - if "`score'" != "" {
          = if "" != "" {
            label var `scvar' "Score index from poisson"
            rename `scvar' `score'
            est local scorevars `score'
            }
          - est scalar r2_p = 1 - e(ll)/e(ll_0)
          - est hidden local gof "poiss_g"
          - est local offset "`offvar'"
          = est local offset ""
          - est local offset1
          - est local estat_cmd "poisson_estat"
          - est hidden local marginsderiv default N IR
          - est local predict "poisso_p"
          - est local cmd "poisson"
          - global S_E_ll = e(ll)
          - global S_E_ll0 `e(ll_0)'
          = global S_E_ll0 -401.5531151051299
          - global S_E_chi2 = e(chi2)
          - global S_E_mdf = e(df_m)
          - global S_E_pr2 `e(r2_p)'
          = global S_E_pr2 .3218194476450796
          - global S_E_nobs = e(N)
          - global S_E_tdf = e(N)
          - global S_E_off `e(offset)'
          = global S_E_off
          - global S_E_depv `e(depvar)'
          = global S_E_depv piq_timing_max
          - global S_E_cmd `e(cmd)'
          = global S_E_cmd poisson
          - if "`display'"=="" {
          = if "nodisplay"=="" {
            Display, `irr' level(`level') `diopts'
            }
          - error `e(rc)'
          = error 0
          ─────────────────────────────────────────────────────
```

```
>  ─────────────────────────────────────── end poisson.Estimate ───────────────────
        ─ version 10: ereturn local cmdline `"poisson `0'"'
        = version 10: ereturn local cmdline `"poisson piq_timing_max ln_neq cb
>  _authors_ext estimated est_late o.est_early wg_ndx_other stky_pr_rotemberg s
>  tky_pr_calvo [] if __000000, nodisplay    robust"'
        ───────────────────────────────────────────────────────────────────────

>  ────────────────────────────────────────────────── end poisson ────────────────
        ─ tempname bp
        ─ mat `bp' = e(b)
        = mat __000002 = e(b)
        ─ if "`lrtest'"=="" {
        = if "nolrtest"=="" {
          tempname llp
          scalar `llp' = e(ll)
          }
        ─ }
        ─ else if `"`from'"'=="" {
        = else if `""'=="" {
          `vvpoi' capture poisson `y' `xvars' [`weight'`exp'] if `touse', `offop
>  t' `constan' iter(1)
          tempname bp
          mat `bp' = e(b)
          }
        ─ if "`constan'"=="" & `"`from'"'=="" {
        = if ""=="" & `""'=="" {
        ─ if "`offset'"!="" {
        = if ""!="" {
          SolveC `y' `offset' [`weight'`exp'] if `touse', mean(`mean')
          local c = r(_cons)
          }
        ─ else local c = ln(`mean')
        = else local c = ln(__000001)
        ─ tempname b0 ll0
        ─ if `c'<. {
        = if 1.12358520959949<. {
        ─ mat `b0' = (`c', 0)
        = mat __000003 = (1.12358520959949, 0)
        ─ }
        ─ else mat `b0' = (0, 0)
        = else mat __000003 = (0, 0)
        ─ mat colnames `b0' = `y':_cons ln`parm':_cons
        = mat colnames __000003 = piq_timing_max:_cons lnalpha:_cons
        ─ if "`weight'"=="aweight" {
        = if ""=="aweight" {
          local wt `"[aw`exp']"'
          }
```

```
    - else if "`weight'"!="" {
    = else if ""!="" {
      local wt `"[iw`exp']"'
      }
    - `nohead' di in gr _n "Fitting constant-only model:"
    =  di in gr _n "Fitting constant-only model:"

Fitting constant-only model:
    - `vv' ml model `mm' `prog' (`yname': `y'=, `constan' `offopt') /ln`parm
> ' if `touse' `wt', collinear missing max nooutput nopreserve wald(0) init(`b
> 0', copy) search(off) `mlopts' `robust' nocnsnotes `negh'
    = version 18: ml model e2 nbreg_lf (piq_timing_max: piq_timing_max=,  )
> /lnalpha if __000000 , collinear missing max nooutput nopreserve wald(0) ini
> t(__000003, copy) search(off)  robust nocnsnotes negh
           ──────────────────────────────────────────────────────
> ──────────────────────────────────────────── begin ml ──────────────────
        - if _caller()>=11 {
        - mopt `0'
        = mopt model e2 nbreg_lf (piq_timing_max: piq_timing_max=,  ) /lnalpha
>  if __000000 , collinear missing max nooutput nopreserve wald(0) init(__0000
> 03, copy) search(off)  robust nocnsnotes negh
           ──────────────────────────────────────────────────────
> ──────────────────────────────────────────── begin mopt ──────────────────
          - local vv : di "version " string(_caller()) ":"
          - version 12
          - gettoken subcmd 0 : 0, parse(" ,")
          - local lcmd : length local subcmd
          - if "`subcmd'" == "clear" {
          = if "model" == "clear" {
            Clear
            exit
            }
          - if `"`subcmd'"' == "hold" {
          = if `"model"' == "hold" {
            ml_hold `0'
            exit
            }
          - if `"`subcmd'"' == "unhold" {
          = if `"model"' == "unhold" {
            ml_unhold `0'
            exit
            }
          - if "`subcmd'" == "score" {
          = if "model" == "score" {
            if _caller() > 12 {
            `vv' Score `0'
```

```
  }
  else {
  Score `0'
  }
  exit
  }
- if "`subcmd'" == "count" {
= if "model" == "count" {
  Count `0'
  exit
  }
- if "`subcmd'" == "trace" {
= if "model" == "trace" {
  Trace `0'
  exit
  }
- if "`subcmd'" == bsubstr("graph",1,max(2,`lcmd')) {
= if "model" == bsubstr("graph",1,max(2,5)) {
  Graph `0'
  exit
  }
- if "`subcmd'" == "init" {
= if "model" == "init" {
  Interactive 0
  `vv' Init `0'
  exit
  }
- if "`subcmd'" == bsubstr("maximize",1,max(3,`lcmd')) {
= if "model" == bsubstr("maximize",1,max(3,5)) {
  Interactive 1
  `vv' MaxMin maximize `0'
  exit
  }
- if "`subcmd'" == bsubstr("minimize",1,max(3,`lcmd')) {
= if "model" == bsubstr("minimize",1,max(3,5)) {
  Interactive 1
  `vv' MaxMin minimize `0'
  exit
  }
- if "`subcmd'" == bsubstr("display",1,max(2,`lcmd')) {
= if "model" == bsubstr("display",1,max(2,5)) {
  Display `0'
  exit
  }
- if "`subcmd'" == bsubstr("footnote",1,max(4,`lcmd')) {
= if "model" == bsubstr("footnote",1,max(4,5)) {
```

```
              ml_footnote `0'
              exit
              }
          ─ if "`subcmd'" == "," {
          = if "model" == "," {
            Display, `0'
            exit
            }
          ─ if "`subcmd'" == bsubstr("model",1,max(3,`lcmd')) {
          = if "model" == bsubstr("model",1,max(3,5)) {
          ─ `vv' capture noi Model `0'
          = version 18: capture noi Model  e2 nbreg_lf (piq_timing_max: piq_ti
> ming_max=,  ) /lnalpha if __000000 , collinear missing max nooutput nopreser
> ve wald(0) init(__000003, copy) search(off)  robust nocnsnotes negh
              ─────────────────────────────────────────────────────────
> ──────────────────────────────────────────── begin mopt.Model ───────────────
          ─ local version = string(_caller())
          ─ local vv : di "version `version':"
          = local vv : di "version 18:"
          ─ version 12
          ─ syntax anything(id="model" name=spec) [if] [in] [fw aw pw iw] [,
>  BRACKET COLlinear MISSing CONTinue lf0(string) INIT(string) CONSTraints(str
> ing) noCNSNOTEs VCE(passthru) NEGH NOPREserve TECHnique(string) ITERID(strin
> g) CRITtype(string) OBS(numlist max=1 >0) TItle(string) WALDtest(integer −1)
>  SVY SUBpop(string) SRSsubpop noSVYadjust SCore(passthru) noOUTput noSCVARS
> GROUP(varname) ITERPROLOG(string) DERIVPROLOG(string) DERIVH(string) DERIVSC
> ALE(string) DERIV(string) nrderiv GNWMATrix(string) KAUXiliary(numlist int >
> =0) MAXimize MINimize USERinfo(namelist) PUPDATED Robust CLuster(passthru) m
> optobj(string) USEVIEWS ∗ ]
          ─ if `"`moptobj'"' == "" {
          = if `""' == "" {
          ─ Clear
              ─────────────────────────────────────────────────────────
> ──────────────────────────────────────────── begin mopt.Clear ───────────────
          ─ syntax [, NOTANOPTION]
          ─ capture drop $ML_w
          = capture drop
          ─ capture drop $ML_samp
          = capture drop
          ─ capture drop $ML_sample
          = capture drop
          ─ capture drop $ML_subv
          = capture drop
          ─ capture drop $ML_grp
          = capture drop
          ─ mata: Mopt_drop_external()
```

```
            – macro drop ML_*
            ─────────────────────────────────────────────────────────────
>  ─────────────────────────────────────── end mopt.Clear ───────────────
            – }
            – local maxmin `minimize' `maximize'
            = local maxmin  maximize
            – opts_exclusive "`maxmin'"
            = opts_exclusive "maximize"
            ─────────────────────────────────────────────────────────────
>  ──────────────────────────────── begin opts_exclusive ────────────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts maximize
            – local n 0
            – while `"`opts'"' != "" {
            = while `"maximize"' != "" {
            – local ++n
            – gettoken item`n' opts : opts, bind
            = gettoken item1 opts : opts, bind
            – }
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 1 < 2 {
            – exit
            ─────────────────────────────────────────────────────────────
>  ───────────────────────────────── end opts_exclusive ─────────────────
            – if `:length local maxmin' {
            = if 8 {
            – local interactive 0
            – }
            – else local interactive 1
            – _get_diparmopts, diparmopts(`options') soptions syntaxonly
            = _get_diparmopts, diparmopts(search(off)) soptions syntaxonly
            ─────────────────────────────────────────────────────────────
>  ──────────────────────────────── begin _get_diparmopts ───────────────
            – if _caller() < 8.2 {
              _get_diparmopts_8 `0'
              exit
              }
            – version 9
            – local version : di "version " string(_caller()) ":"
```

```
              − syntax [, diparmopts(string asis) EXECute soptions bottom plus
>  SYNTAXonly * ]
              − local goptions `options'
              = local goptions
              − SpliceGlobals junk , `goptions'
              = SpliceGlobals junk ,
              ────────────────────────────────────────────────────────────────
> ───────────────────────── begin _get_diparmopts.SpliceGlobals ───────────────
              − syntax name(id="macro name" name=c_diparm) [, diparm(string
> asis) Level(cilevel) dof(passthru) syntaxonly ]
              − if `"`dof'"' == "" & `"`e(df_r)'"' != "" {
              = if `""' == "" & `""' != "" {
                capture confirm integer number `e(df_r)'
                if !c(rc) {
                local gdof dof(`e(df_r)')
                }
                capture
                }
              − else local gdof `"`dof'"'
              = else local gdof `""'
              − local glevel `level'
              = local glevel 95
              − local lopt level(`glevel')
              = local lopt level(95)
              − if (`"`diparm'"' == "") exit
              = if (`""' == "") exit
              ────────────────────────────────────────────────────────────────
> ────────────────────────── end _get_diparmopts.SpliceGlobals ────────────────
              − local 0 `", `diparmopts'"'
              = local 0 `", search(off)"'
              − local diparmopts
              − local k 0
              − syntax [, diparm(string asis) * ]
              − while `"`diparm'"' != "" {
              = while `""' != "" {
                local ++k
                local single 1
                local after
                capture _on_colon_parse `diparm'
                if !c(rc) {
                local single 0
                local diparm `"`s(before)'"'
                local after `"`s(after)'"'
                }
                capture
                SpliceGlobals diparm , diparm(`diparm') `syntaxonly' `goptions
```

> '

```
              local diparm`k' `"'`diparm'"'
              local diparmopts `"'`diparmopts' : `diparm'"'
              if `single' | `"`:list retok after'"' == "" {
              local 0 `", `options'"'
              syntax [, diparm(string asis) * ]
              }
              else {
              local diparm `"'`after'"'
              }
              }
      - if `"'`soptions'"' == "" {
      = if `"soptions"' == "" {
        syntax [, diparm(string asis) ]
        }
      - if ("`execute'" == "") {
      = if ("" == "") {
      - sreturn clear
      - sreturn local options `"'`options'"'
      = sreturn local options `"search(off)"'
      - sreturn local diparm `"'`diparmopts'"'
      = sreturn local diparm `""'
      - forval i = 1/`k' {
      = forval i = 1/0 {
        sreturn local diparm`i' `"'`diparm`i''"'
        }
      - sreturn local k `k'
      = sreturn local k 0
      - exit
        ─────────────────────────────────────────
```

> ───────────────────────────────── end _get_diparmopts ─────────────

```
      - forval k = 1/`s(k)' {
      = forval k = 1/0 {
        local diparm`k' `"'`s(diparm`k')'"'
        }
      - local ndiparm `s(k)'
      = local ndiparm 0
      - local options `"'`s(options)'"'
      = local options `"search(off)"'
      - if `interactive' & `:length local options' {
      = if 0 & 11 {
        local 0 , `options'
        syntax [, NOTANOPTION]
        }
      - if `:length local nopreserve' | `:length local score' {
      = if 10 | 0 {
```

```
                    – global ML_preserve no
                    – }
                    – else global ML_preserve yes
                    – gettoken evaltype spec : spec
                    – confirm name `evaltype'
                    = confirm name e2
                    – gettoken evaluator spec : spec
                    – global ML_evaltype : copy local evaltype
                    – if `:length local srssubpop' {
                    = if 0 {
                      local 0 , srssubpop
                      syntax [, NONOPTION]
                      exit 198
                      }
                    – if `:length local subpop' {
                    = if 0 {
                      local svy svy
                      }
                    – if `:length local svy' {
                    = if 0 {
                      opts_exclusive "`vce' `svy'" vce
                      if `:length local weight' {
                      di as err "svy option not allowed with weights"
                      exit 198
                      }
                      global ML_noadj : copy local svyadjust
                      }
                    – global ML_svy : copy local svy
                    – if _caller() >= 15 & c(userversion) >= 15 {
                    – local fparm ", freeparm"
                    – }
                    – local eqspec : copy local spec
                    – local ieq 0
                    – while `:length local eqspec' {
                    = while 46 {
                    – local ++ieq
                    – gettoken eq eqspec : eqspec, bind
                    – if bsubstr(trim("`eq'"),1,1) == "/" {
                    = if bsubstr(trim("(piq_timing_max: piq_timing_max=,   )"),1,1) ==
> "/" {

                      local eq = bsubstr(trim("`eq'"),2,.)
                      local spec : subinstr local spec "/`eq'" `"("`eq'":`fparm')"', w
> ord

                      }
                    – else {
                    – gettoken p1 p2 : eq, parse("()")
```

```
              - local p2 = trim(`"`p2'"')
              = local p2 = trim(`"piq_timing_max: piq_timing_max=,   )"')
              - if bsubstr("`p2'",1,1) == "," {
              = if bsubstr("piq_timing_max: piq_timing_max=,   )",1,1) == "," {
                gettoken comma p2 : p2, parse(",")
                local p2 = trim(`"`p2'"')
                }
              - if `"`p1'`p2'"' == "()" {
              = if `"(piq_timing_max: piq_timing_max=,   )"' == "()" {
                local spec : subinstr local spec "`eq'" "(eq`ieq':)", word
                }
              - }
              - }
              - while `:length local eqspec' {
              = while 9 {
              - local ++ieq
              - gettoken eq eqspec : eqspec, bind
              - if bsubstr(trim("`eq'"),1,1) == "/" {
              = if bsubstr(trim("/lnalpha"),1,1) == "/" {
              - local eq = bsubstr(trim("`eq'"),2,.)
              = local eq = bsubstr(trim("/lnalpha"),2,.)
              - local spec : subinstr local spec "/`eq'" `"("`eq'":`fparm')"', w
> ord
              = local spec : subinstr local spec "/lnalpha" `"("lnalpha":, freep
> arm)"', word
              - }
              - else {
                gettoken p1 p2 : eq, parse("()")
                local p2 = trim(`"`p2'"')
                if bsubstr("`p2'",1,1) == "," {
                gettoken comma p2 : p2, parse(",")
                local p2 = trim(`"`p2'"')
                }
                if `"`p1'`p2'"' == "()" {
                local spec : subinstr local spec "`eq'" "(eq`ieq':)", word
                }
                }
              - }
              - while `:length local eqspec' {
              = while 0 {
                local ++ieq
                gettoken eq eqspec : eqspec, bind
                if bsubstr(trim("`eq'"),1,1) == "/" {
                local eq = bsubstr(trim("`eq'"),2,.)
                local spec : subinstr local spec "/`eq'" `"("`eq'":`fparm')"', w
> ord
```

```
                }
                else {
                gettoken p1 p2 : eq, parse("()")
                local p2 = trim(`"'`p2'"')
                if bsubstr("`p2'",1,1) == "," {
                gettoken comma p2 : p2, parse(",")
                local p2 = trim(`"'`p2'"')
                }
                if `"'`p1'`p2'"' == "()" {
                local spec : subinstr local spec "`eq'" "(eq`ieq':)", word
                }
                }
                }
        - if `interactive' {
        = if 0 {
                SetGlobalVar ML_sample : _MLtua
                }
        - else {
        - global ML_sample : tempvar
        - if `"'`moptobj'"' != "" {
        = if `""' != "" {
                global ML_sample `moptobj'$ML_sample
                }
        - }
        - if `"'moptobj'"' != "" {
        = if `""' != "" {
                cap drop $ML_sample
                }
        - `vv' mark $ML_sample `if' `in' [`weight'`exp'], `zeroweight'
        = version 18: mark __000005 if __000000   [],
        - tempname eqlist
        - .`eqlist' = ._eqlist.new, eqopts(NOCONStant FREEParm) eqargopts(
> OFFset EXPosure) noneedvarlist numdepvars(0) needequal
        = .__000006 = ._eqlist.new, eqopts(NOCONStant FREEParm) eqargopts(
> OFFset EXPosure) noneedvarlist numdepvars(0) needequal
                -class {
                -instance:
                -        array         n_depvars
                -        string        needequal
                -        string        noneedvarlist
                -        string        wtypes
                -        string        collinear
                -        string        nocons
                -        string        nocons_ignore
                -        double        n_eq
                -        string        gl_if
```

```
         –          string         gl_in
         –          string         gl_wgt
         –          string         gl_options
         –          _optlist       eq_opts_allowed
          –class {
          –instance:
          –          array options    = {}
          –          array names      = {}
          –}
         –          array          eq_list
         –          _optlist       mark_opts
         –          array          mark_list
         –          array          mark_name
         –          _optlist       smark_opts
         –          array          smark_list
         –          array          smark_name
         –          _optlist       rmcoll_opts
         –          array          rmcoll_list
         –          array          rmcoll_name
         –          _optlist       rmdcoll_opts
         –          array          rmdcoll_list
         –          array          rmdcoll_name
         –}
         ─────────────────────────────────────────────
> ──────────────────────────────── begin _eqlist.new ─────────────
         – version 9.2
         – ._init
         ─────────────────────────────────────────────
> ──────────────────────────────── begin _eqlist._init ─────────────
         – version 9.2
         – .n_eq = 0
         – .gl_if = ""
         – .gl_in = ""
         – .gl_wgt = ""
         – .gl_options = ""
         – .eq_list = {}
         ─────────────────────────────────────────────
> ──────────────────────────────── end _eqlist._init ─────────────
         – ._setup `0'
         = ._setup , eqopts(NOCONStant FREEParm) eqargopts(OFFset EXPosur
> e) noneedvarlist numdepvars(0) needequal
         ─────────────────────────────────────────────
> ──────────────────────────────── begin _eqlist._setup ─────────────
         – version 9.2
         – .mark_list = {}
         – .mark_name = {}
```

```
                   – .mark_opts.reset
                  ─────────────────────────────────────────────
>  ──────────────────────────────────── begin _optlist.reset ──────────
                  – version 9
                  – .options = {}
                  – .names = {}
                  ─────────────────────────────────────────────
>  ──────────────────────────────────── end _optlist.reset ────────────
                  – .smark_list = {}
                  – .smark_name = {}
                  – .smark_opts.reset
                  ─────────────────────────────────────────────
>  ──────────────────────────────────── begin _optlist.reset ──────────
                  – version 9
                  – .options = {}
                  – .names = {}
                  ─────────────────────────────────────────────
>  ──────────────────────────────────── end _optlist.reset ────────────
                  – .rmcoll_list = {}
                  – .rmcoll_name = {}
                  – .rmcoll_opts.reset
                  ─────────────────────────────────────────────
>  ──────────────────────────────────── begin _optlist.reset ──────────
                  – version 9
                  – .options = {}
                  – .names = {}
                  ─────────────────────────────────────────────
>  ──────────────────────────────────── end _optlist.reset ────────────
                  – .rmdcoll_list = {}
                  – .rmdcoll_name = {}
                  – .rmdcoll_opts.reset
                  ─────────────────────────────────────────────
>  ──────────────────────────────────── begin _optlist.reset ──────────
                  – version 9
                  – .options = {}
                  – .names = {}
                  ─────────────────────────────────────────────
>  ──────────────────────────────────── end _optlist.reset ────────────
                  – syntax [, EQopts(namelist) EQARGopts(namelist) noNEEDVARLIST
>  COMMONopts(string asis) MARKopts(namelist) SMARKopts(namelist) RMCOLLopts(n
>  amelist) RMDCOLLopts(namelist) NUMDEPvars(numlist integer >=0) NEEDEQUAL WTY
>  PES(string) IGNORENOCONS ]
                  – .eq_opts_allowed.reset
                  ─────────────────────────────────────────────
>  ──────────────────────────────────── begin _optlist.reset ──────────
                  – version 9
```

```
           − .options = {}
           − .names = {}
           ──────────────────────────────────────────────────
> ───────────────────────────────────────  end _optlist.reset  ───────────────
           − foreach opt of local eqopts {
           − .eq_opts_allowed.addopt `opt'
           = .eq_opts_allowed.addopt NOCONStant
           ──────────────────────────────────────────────────
> ───────────────────────────────────────  begin _optlist.addopt  ─────────────
           − version 9
           − syntax name(name=optspec) [, PASSthru]
           − local mname = lower("`optspec'")
           = local mname = lower("NOCONStant")
           − if "`passthru'" != "" {
           = if "" != "" {
             local optspec `optspec'(passthru)
             }
           − .options.Arrpush "`optspec'"
           = .options.Arrpush "NOCONStant"
           − .names.Arrpush "`mname'"
           = .names.Arrpush "noconstant"
           ──────────────────────────────────────────────────
> ───────────────────────────────────────  end _optlist.addopt  ───────────────
           − }
           − .eq_opts_allowed.addopt `opt'
           = .eq_opts_allowed.addopt FREEParm
           ──────────────────────────────────────────────────
> ───────────────────────────────────────  begin _optlist.addopt  ─────────────
           − version 9
           − syntax name(name=optspec) [, PASSthru]
           − local mname = lower("`optspec'")
           = local mname = lower("FREEParm")
           − if "`passthru'" != "" {
           = if "" != "" {
             local optspec `optspec'(passthru)
             }
           − .options.Arrpush "`optspec'"
           = .options.Arrpush "FREEParm"
           − .names.Arrpush "`mname'"
           = .names.Arrpush "freeparm"
           ──────────────────────────────────────────────────
> ───────────────────────────────────────  end _optlist.addopt  ───────────────
           − }
           − foreach opt of local eqargopts {
           − .eq_opts_allowed.addopt `opt', passthru
           = .eq_opts_allowed.addopt OFFset, passthru
```

```
 − version 9
 − syntax name(name=optspec) [, PASSthru]
 − local mname = lower("`optspec'")
 = local mname = lower("OFFset")
 − if "`passthru'" != "" {
 = if "passthru" != "" {
 − local optspec `optspec'(passthru)
 = local optspec OFFset(passthru)
 − }
 − .options.Arrpush "`optspec'"
 = .options.Arrpush "OFFset(passthru)"
 − .names.Arrpush "`mname'"
 = .names.Arrpush "offset"
```

```
 − }
 − .eq_opts_allowed.addopt `opt', passthru
 = .eq_opts_allowed.addopt EXPosure, passthru
```

```
 − version 9
 − syntax name(name=optspec) [, PASSthru]
 − local mname = lower("`optspec'")
 = local mname = lower("EXPosure")
 − if "`passthru'" != "" {
 = if "passthru" != "" {
 − local optspec `optspec'(passthru)
 = local optspec EXPosure(passthru)
 − }
 − .options.Arrpush "`optspec'"
 = .options.Arrpush "EXPosure(passthru)"
 − .names.Arrpush "`mname'"
 = .names.Arrpush "exposure"
```

```
 − }
 − local i 0
 − foreach opt of local markopts {
   .mark_opts.addopt `opt', passthru
   }
 − local i 0
 − foreach opt of local smarkopts {
   .smark_opts.addopt `opt', passthru
   }
```

```
                    – local i 0
                    – foreach opt of local rmcollopts {
                      .rmcoll_opts.addopt `opt', passthru
                      }
                    – local i 0
                    – foreach opt of local rmdcollopts {
                      .rmdcoll_opts.addopt `opt', passthru
                      }
                    – .n_depvars.Arrdropall
                    – if "`numdepvars'" != "" {
                    = if "0" != "" {
                    – foreach ndep of local numdepvars {
                    – .n_depvars.Arrpush `ndep'
                    = .n_depvars.Arrpush 0
                    – }
                    – }
                    – else .n_depvars.Arrpush 1
                    – .needequal = "`needequal'"
                    = .needequal = "needequal"
                    – .wtypes = "`wtypes'"
                    = .wtypes = ""
                    – .noneedvarlist = "`needvarlist'"
                    = .noneedvarlist = "noneedvarlist"
                    – .nocons_ignore = "`ignorenocons'"
                    = .nocons_ignore = ""
                    ─────────────────────────────────────────
  > ───────────────────────────────── end _eqlist._setup ─────────────
                    ─────────────────────────────────────────
  > ───────────────────────────────── end _eqlist.new ──────────────
              – .`eqlist'.parse `spec'
              = .__000006.parse  (piq_timing_max: piq_timing_max=,  ) ("lnalpha"
  > :, freeparm)
                    ─────────────────────────────────────────
  > ───────────────────────────────── begin _eqlist.parse ─────────────
              – version 9.2
              – ._init
                    ─────────────────────────────────────────
  > ───────────────────────────────── begin _eqlist._init ─────────────
              – version 9.2
              – .n_eq = 0
              – .gl_if = ""
              – .gl_in = ""
              – .gl_wgt = ""
              – .gl_options = ""
              – .eq_list = {}
                    ─────────────────────────────────────────
```

```
> ───────────────────────────── end _eqlist._init ─────────────
       – local MARKOPTLIST `"'`.mark_opts.dumpoptions'"'
                    ──────────────────────────────────────────────

> ───────────────────────── begin _optlist.dumpoptions ────────────
       – version 9
       – forval i = 1/`.options.arrnels' {
       = forval i = 1/0 {
         local optlist `optlist' `.options[`i']'
         }
       – local optlist : list uniq optlist
       – sreturn local optlist `"'`optlist'"'
       = sreturn local optlist `""'
       – class exit `"'`optlist'"'
       = class exit `""'
                    ──────────────────────────────────────────────

> ───────────────────────── end _optlist.dumpoptions ────────────
       = local MARKOPTLIST `""'
       – local SMARKOPTLIST `"'`.smark_opts.dumpoptions'"'
                    ──────────────────────────────────────────────

> ───────────────────────── begin _optlist.dumpoptions ────────────
       – version 9
       – forval i = 1/`.options.arrnels' {
       = forval i = 1/0 {
         local optlist `optlist' `.options[`i']'
         }
       – local optlist : list uniq optlist
       – sreturn local optlist `"'`optlist'"'
       = sreturn local optlist `""'
       – class exit `"'`optlist'"'
       = class exit `""'
                    ──────────────────────────────────────────────

> ───────────────────────── end _optlist.dumpoptions ────────────
       = local SMARKOPTLIST `""'
       – local RMCOLLOPTLIST `"'`.rmcoll_opts.dumpoptions'"'
                    ──────────────────────────────────────────────

> ───────────────────────── begin _optlist.dumpoptions ────────────
       – version 9
       – forval i = 1/`.options.arrnels' {
       = forval i = 1/0 {
         local optlist `optlist' `.options[`i']'
         }
       – local optlist : list uniq optlist
       – sreturn local optlist `"'`optlist'"'
       = sreturn local optlist `""'
       – class exit `"'`optlist'"'
       = class exit `""'
```

> ─── end _optlist.dumpoptions ───────────────────
```
              = local RMCOLLOPTLIST `""'
              – local RMDCOLLOPTLIST `"'`.rmdcoll_opts.dumpoptions'"'
```
> ─── begin _optlist.dumpoptions ───────────────────
```
              – version 9
              – forval i = 1/`.options.arrnels' {
              = forval i = 1/0 {
                local optlist `optlist' `.options[`i']'
                }
              – local optlist : list uniq optlist
              – sreturn local optlist `"'`optlist'"'
              = sreturn local optlist `""'
              – class exit `"'`optlist'"'
              = class exit `""'
```
> ─── end _optlist.dumpoptions ───────────────────
```
              = local RMDCOLLOPTLIST `""'
              – _parse expand EQ GL : 0, gweight common( `MARKOPTLIST' `SMARKO
> PTLIST' `RMCOLLOPTLIST' `RMDCOLLOPTLIST' COLlinear )
              = _parse expand EQ GL : 0, gweight common(     COLlinear )
              – if `EQ_n' == 0 & "`.noneedvarlist'" == "" {
              = if 2 == 0 & "noneedvarlist" == "" {
                syntax varlist
                }
              – local rebind = `EQ_n' == 1
              = local rebind = 2 == 1
              – if `rebind' {
              = if 0 {
                tokenize `"`0'"', parse(",()[]")
                local rebind = `"`1'"' != "(" & `"`2'"' == "("
                }
              – if `rebind' {
              = if 0 {
                while `:length local 0' {
                gettoken tok 0 : 0, parse(" ,") bind match(par)
                if "`par'" == "(" {
                gettoken nxt : 0
                local nxt = substr(`"`nxt'"',1,1)
                if inlist(`"`nxt'"', "#", "|") {
                local ZERO `"`ZERO' (`tok')"'
                }
                else {
                local ZERO `"(`ZERO') (`tok') `0'"'
                local 0
```

```
                }
                }
                else if inlist("`tok'", "if", "in", ",") {
                local ZERO `"(`ZERO') `tok' `0'"'
                local 0
                }
                else if inlist(substr(`"`tok'"',1,1), "#", "|") {
                local ZERO `"`ZERO'`tok'"'
                }
                else {
                local ZERO `"`ZERO' `tok'"'
                }
                }
                _parse expand EQ GL : ZERO, gweight common( `MARKOPTLIST' `SMA
> RKOPTLIST' `RMCOLLOPTLIST' `RMDCOLLOPTLIST' COLlinear )
                }
            - forval i = 1/`EQ_n' {
            = forval i = 1/2 {
            - if `i' <= `.n_depvars.arrnels' {
            = if 1 <= 1 {
            - local ndep = `.n_depvars[`i']'
            = local ndep = 0
            - }
            - .eq_list[`i'] = ._eqspec.new, numdepvars(`ndep') `.needequal'
> `.noneedvarlist' wtypes(`.wtypes') `.nocons_ignore'
            = .eq_list[1] = ._eqspec.new, numdepvars(0) needequal noneedvarl
> ist wtypes()
                -class {
                -instance:
                -       double  n_depvars
                -       double  needequal
                -       double  needvarlist
                -       string  wtypes
                -       string  name
                -       string  depvars
                -       double  hasequal
                -       string  indepvars
                -       string  other_markvars
                -       double  nocons
                -       double  nocons_ignore
                -       string  offset
                -       double  exposure
                -       double  freeparm
                -       string  if
                -       string  in
                -       string  wgt
```

```
                    –         string  options
                    –}
                    ─────────────────────────────────────────────
>  ──────────────────────────────────── begin _eqspec.new ───────────────
                    – version 9.2
                    – syntax [, NUMDEPvars(numlist integer >=0 max=1) NEEDEQUAL no
>  NEEDVARLIST WTYPES(string) IGNORENOCONS ]
                    – .n_depvars = 1
                    – if `:list sizeof numdepvars' {
                    = if 1 {
                    – .n_depvars = `numdepvars'
                    = .n_depvars = 0
                    – }
                    – .needequal = ("`needequal'" != "")
                    = .needequal = ("needequal" != "")
                    – .needvarlist = ("`needvarlist'" == "")
                    = .needvarlist = ("noneedvarlist" == "")
                    – .nocons_ignore = ("`ignorenocons'" != "")
                    = .nocons_ignore = ("" != "")
                    – .wtypes = "`wtypes'"
                    = .wtypes = ""
                    ─────────────────────────────────────────────
>  ──────────────────────────────────── end _eqspec.new ─────────────────
                  – .eq_list[`i'].parse `.eq_opts_allowed.objkey':`EQ_`i''
                  = .eq_list[1].parse __key(600002b58dc0):piq_timing_max: piq_timi
>  ng_max=
                    ─────────────────────────────────────────────
>  ──────────────────────────────────── begin _eqspec.parse ─────────────
                    – version 9.2
                    – _on_colon_parse `0'
                    = _on_colon_parse __key(600002b58dc0):piq_timing_max: piq_timi
>  ng_max=
                    ─────────────────────────────────────────────
>  ──────────────────────────────────── begin _on_colon_parse ───────────
                    – version 8.2
                    – sreturn local before ""
                    – sreturn local after ""
                    – gettoken before after : 0, parse(":") bind match(par) quot
>  es
                    – if "`par'" != "" {
                    = if "" != "" {
                      local before `"(`before')"'
                      }
                    – if `"`before'"' == ":" {
                    = if `"__key(600002b58dc0)"' == ":" {
                      sreturn local after `"`after'"'
```

Friday, January 10, 2025 at 11:33 AM   Page 496

```
                        exit
                        }
                  – while `"`COLON'"' != ":" & `"`after'"' != "" {
                  = while `""' != ":" & `":piq_timing_max: piq_timing_max="' !
> = "" {
                  – gettoken COLON after : after, parse(":") bind match(par) q
> uotes
                  – if "`par'" != "" {
                  = if "" != "" {
                    local before `before' (`COLON')
                    local COLON
                    }
                  – else if `"`COLON'"' != ":" {
                  = else if `":"' != ":" {
                    local before `"`before' `COLON'"'
                    local COLON
                    }
                  – }
                  – while `"`COLON'"' != ":" & `"`after'"' != "" {
                  = while `":"' != ":" & `"piq_timing_max: piq_timing_max="' !
> = "" {
                    gettoken COLON after : after, parse(":") bind match(par) q
> uotes
                    if "`par'" != "" {
                    local before `before' (`COLON')
                    local COLON
                    }
                    else if `"`COLON'"' != ":" {
                    local before `"`before' `COLON'"'
                    local COLON
                    }
                    }
                  – if `"`COLON'"' != ":" {
                  = if `":"' != ":" {
                    di as err "'' found where ':' expected"
                    exit 198
                    }
                  – sreturn local before `"`before'"'
                  = sreturn local before `"__key(600002b58dc0)"'
                  – sreturn local after `"`after'"'
                  = sreturn local after `"piq_timing_max: piq_timing_max="'
                    ───────────────────────────────────────────────────────
>  ─────────────────────────────────────── end _on_colon_parse ───────────
                – local ol `s(before)'
                = local ol __key(600002b58dc0)
                – if `:list sizeof ol' {
```

```
              = if 1 {
              - local OPTLIST `"`.`ol'.dumpoptions'"'
                ─────────────────────────────────────────────────────
> ──────────────────────────────── begin _optlist.dumpoptions ──────────────
              - version 9
              - forval i = 1/`.options.arrnels' {
              = forval i = 1/4 {
              - local optlist `optlist' `.options[`i']'
              = local optlist  NOCONStant
              - }
              - local optlist `optlist' `.options[`i']'
              = local optlist NOCONStant FREEParm
              - }
              - local optlist `optlist' `.options[`i']'
              = local optlist NOCONStant FREEParm OFFset(passthru)
              - }
              - local optlist `optlist' `.options[`i']'
              = local optlist NOCONStant FREEParm OFFset(passthru) EXPosur
> e(passthru)
              - }
              - local optlist : list uniq optlist
              - sreturn local optlist `"`optlist'"'
              = sreturn local optlist `"NOCONStant FREEParm OFFset(passthr
> u) EXPosure(passthru)"'
              - class exit `"`optlist'"'
              = class exit `"NOCONStant FREEParm OFFset(passthru) EXPosure
> (passthru)"'
                ─────────────────────────────────────────────────────
> ──────────────────────────────── end _optlist.dumpoptions ──────────────
            = local OPTLIST `"NOCONStant FREEParm OFFset(passthru) EXPosur
> e(passthru)"'
              - local OPTNAMES `"`.`ol'.dumpnames'"'
                ─────────────────────────────────────────────────────
> ──────────────────────────────── begin _optlist.dumpnames ──────────────
              - version 9
              - forval i = 1/`.names.arrnels' {
              = forval i = 1/4 {
              - local namelist `namelist' `.names[`i']'
              = local namelist  noconstant
              - }
              - local namelist `namelist' `.names[`i']'
              = local namelist noconstant freeparm
              - }
              - local namelist `namelist' `.names[`i']'
              = local namelist noconstant freeparm offset
              - }
```

```
                    – local namelist `namelist' `.names[`i']'
                    = local namelist noconstant freeparm offset exposure
                    – }
                    – local namelist : list uniq namelist
                    – sreturn local namelist `"`namelist'"'
                    = sreturn local namelist `"noconstant freeparm offset exposu
> re"'

                    – class exit `"`namelist'"'
                    = class exit `"noconstant freeparm offset exposure"'
                    ─────────────────────────────────────────────────────────
>  ───────────────────────────────── end _optlist.dumpnames ───────────────
                = local OPTNAMES `"noconstant freeparm offset exposure"'
                – local NOCONS constant noconstant
                – if `"`:list NOCONS & OPTNAMES'"' == "" {
                = if `"noconstant"' == "" {
                  local NOCONS noCONStant
                  }
                – else local NOCONS
                – }
                – local 0 `"`s(after)'"'
                = local 0 `"piq_timing_max: piq_timing_max="'
                – if `"`.wtypes'"' != "" {
                = if `""' != "" {
                  local wgt "[`.wtypes']"
                  }
                – syntax [anything(equalok)] [if] [in] `wgt' [, `OPTLIST' `NOC
> ONS' *]
                = syntax [anything(equalok)] [if] [in]  [, NOCONStant FREEParm
>  OFFset(passthru) EXPosure(passthru)  *]
                – local HOLDIF `"`if'"'
                = local HOLDIF `""'
                – local HOLDIN `"`in'"'
                = local HOLDIN `""'
                – if "`wgt'" != "" & "`weight'" != "" {
                = if "" != "" & "" != "" {
                  local HOLDWGT `"[`weight'`exp']"'
                  }
                – gettoken NAME REST : anything, parse(":")
                – if trim("`NAME'") == ":" {
                = if trim("piq_timing_max") == ":" {
                  di as err "nothing found where equation name expected"
                  exit 198
                  }
                – if `:list sizeof REST' {
                = if 2 {
                – if strpos(`"`NAME'"', ":") {
```

```
=  if strpos(`"piq_timing_max"', ":") {
   capture _msparse `NAME'
   if c(rc) {
   di as err "{bf:`NAME'} invalid equation specification"
   exit 198
   }
   }
-  else {
-  ._confirm_eqname `NAME'
=  ._confirm_eqname piq_timing_max
```
───

> ─────────────────────── begin _eqspec._confirm_eqname ───────────────────

```
-  version 9.2
-  capture confirm number `0'
=  capture confirm number piq_timing_max
-  if (! c(rc)) exit
-  local hasdot = strpos(`"`0'"',".")
=  local hasdot = strpos(`"piq_timing_max"',".")
-  if `hasdot' {
=  if 0 {
   syntax varname(ts)
   exit
   }
-  capture syntax name(id="equation name")
-  if (! c(rc)) exit
```
───

> ─────────────────────── end _eqspec._confirm_eqname ───────────────────

```
-  }
-  local NAME : list retok NAME
-  gettoken COLON anything : REST, parse(":")
-  }
-  else {
   local NAME
   }
-  gettoken DEPVARS REST : anything, parse("=") bind
-  if "`DEPVARS'" == "=" {
=  if "piq_timing_max" == "=" {
   local REST : copy local anything
   local DEPVARS
   }
-  if (`:length local DEPVARS' == 0 & `.n_depvars') {
=  if (14 == 0 & 0) {
   di as err "nothing found where depvar expected"
   exit 198
   }
-  if `"`REST'"' == "" {
```

```
                 = if `"="' == "" {
                   if 0`.needequal' {
                   if `.needvarlist' | (`:length local DEPVARS' != 0 & `.n_depv
> ars') {
                   di as err "equal sign required to separate depvars from inde
> pvars"
                   exit 198
                   }
                   }
                   local DEPVARS
                   local n_deps : list sizeof anything
                   if `n_deps' != 0 | `.needvarlist' {
                   if `n_deps' < `.n_depvars' {
                   error 102
                   }
                   forval j = 1/`.n_depvars' {
                   gettoken YY anything : anything
                   local DEPVARS `DEPVARS' `YY'
                   }
                   local INDEPVARS : list retok anything
                   }
                   loca hasequal 0
                   }
                 - else {
                 - gettoken EQ INDEPVARS : REST, parse("=") bind
                 - local hasequal 1
                 - }
                 - if `:list sizeof DEPVARS' {
                 = if 1 {
                 - _fv_check_depvar `DEPVARS'
                 = _fv_check_depvar piq_timing_max
                 - tsunab DEPVARS : `DEPVARS'
                 = tsunab DEPVARS : piq_timing_max
                   ───────────────────────────────────────────────
> ──────────────────────────────────────── begin tsunab ──────────────
                 - version 6
                 - gettoken user 0: 0, parse(" :")
                 - gettoken colon 0: 0, parse(" :")
                 - if `"`colon'"' != ":" { error 198 }
                 = if `":"' != ":" { error 198 }
                 - syntax [varlist(ts default=empty)] [, MIN(integer 1) MAX(i
> nteger 32000) NAME(string)]
                 - c_local `user' `varlist'
                 = c_local DEPVARS piq_timing_max
                 - local n : word count `varlist'
                 = local n : word count piq_timing_max
```

```
                          – if `n'>=`min' & `n'<=`max' { exit }
                          = if 1>=1 & 1<=32000 { exit }
                          ────────────────────────────────────────────────
> ──────────────────────────────────────── end tsunab ──────────────
                      – }
                    – if `:list sizeof INDEPVARS' {
                    = if 0 {
                      fvunab INDEPVARS : `INDEPVARS'
                      }
                    – if inlist("noconstant", "`noconstant'", "`constant'") {
                    = if inlist("noconstant", "", "") {
                      if "`INDEPVARS'" == "" & ! `.nocons_ignore' {
                      di as err "independent variables are required when option no
> constant is specified"
                      exit 102
                      }
                      if "`NOCONS'" != "" {
                      local options `options' noconstant
                      }
                      local NOCONS 1
                      }
                    – else local NOCONS 0
                    – if `"`offset'`exposure'"' != "" {
                    = if `""' != "" {
                      ._check_offset, `offset' `exposure'
                      local OFFSET "`s(offset)'"
                      local EXPOSURE = ("`exposure'" != "")
                      local OTHER `s(offset)'
                      }
                    – else local EXPOSURE 0
                    – local FREEPARM = `"`freeparm'"' != ""
                    = local FREEPARM = `""' != ""
                    – local OPTIONS
                    – local SPACE
                    – foreach OPTNAME of local OPTNAMES {
                    – if `"``OPTNAME''"' != "" {
                    = if `""' != "" {
                      local OPTIONS `"`OPTIONS'`SPACE'``OPTNAME''"'
                      local SPACE " "
                      }
                    – }
                    – if `"``OPTNAME''"' != "" {
                    = if `""' != "" {
                      local OPTIONS `"`OPTIONS'`SPACE'``OPTNAME''"'
                      local SPACE " "
                      }
```

```
    - }
    - if `"``OPTNAME''"' != "" {
    = if `""' != "" {
      local OPTIONS `"`OPTIONS'`SPACE'``OPTNAME''"'
      local SPACE " "
      }
    - }
    - if `"``OPTNAME''"' != "" {
    = if `""' != "" {
      local OPTIONS `"`OPTIONS'`SPACE'``OPTNAME''"'
      local SPACE " "
      }
    - }
    - if `"`options'"' != "" {
    = if `""' != "" {
      local OPTIONS `"`OPTIONS'`SPACE'`options'"'
      }
    - .name = `"`NAME'"'
    = .name = `"piq_timing_max"'
    - .depvars = `"`DEPVARS'"'
    = .depvars = `"piq_timing_max"'
    - .hasequal = `hasequal'
    = .hasequal = 1
    - .indepvars = `"`:list retok INDEPVARS'"'
    = .indepvars = `""'
    - .other_markvars = `"`:list retok OTHER'"'
    = .other_markvars = `""'
    - .nocons = `NOCONS'
    = .nocons = 0
    - .if = `"`HOLDIF'"'
    = .if = `""'
    - .in = `"`HOLDIN'"'
    = .in = `""'
    - .wgt = `"`HOLDWGT'"'
    = .wgt = `""'
    - .offset = `"`OFFSET'"'
    = .offset = `""'
    - .exposure = `EXPOSURE'
    = .exposure = 0
    - .freeparm = `FREEPARM'
    = .freeparm = 0
    - .options = `"`OPTIONS'"'
    = .options = `""'
      ─────────────────────────────────────────────────
>  ───────────────────────────────── end _eqspec.parse ─────────────
    - }
```

```
            - if `i' <= `.n_depvars.arrnels' {
            = if 2 <= 1 {
              local ndep = `.n_depvars[`i']'
              }
            - .eq_list[`i'] = ._eqspec.new, numdepvars(`ndep') `.needequal'
> `.noneedvarlist' wtypes(`.wtypes') `.nocons_ignore'
            = .eq_list[2] = ._eqspec.new, numdepvars(0) needequal noneedvarl
> ist wtypes()
              ─────────────────────────────────────────────────────────
> ───────────────────────────────────── begin _eqspec.new ──────────────
            - version 9.2
            - syntax [, NUMDEPvars(numlist integer >=0 max=1) NEEDEQUAL no
> NEEDVARLIST WTYPES(string) IGNORENOCONS ]
            - .n_depvars = 1
            - if `:list sizeof numdepvars' {
            = if 1 {
            - .n_depvars = `numdepvars'
            = .n_depvars = 0
            - }
            - .needequal = ("`needequal'" != "")
            = .needequal = ("needequal" != "")
            - .needvarlist = ("`needvarlist'" == "")
            = .needvarlist = ("noneedvarlist" == "")
            - .nocons_ignore = ("`ignorenocons'" != "")
            = .nocons_ignore = ("" != "")
            - .wtypes = "`wtypes'"
            = .wtypes = ""
              ─────────────────────────────────────────────────────────
> ───────────────────────────────────── end _eqspec.new ────────────────
            - .eq_list[`i'].parse `.eq_opts_allowed.objkey':`EQ_`i''
            = .eq_list[2].parse __key(600002b58dc0):"lnalpha":, freeparm
              ─────────────────────────────────────────────────────────
> ───────────────────────────────────── begin _eqspec.parse ────────────
            - version 9.2
            - _on_colon_parse `0'
            = _on_colon_parse __key(600002b58dc0):"lnalpha":, freeparm
              ─────────────────────────────────────────────────────────
> ───────────────────────────────────── begin _on_colon_parse ──────────
            - version 8.2
            - sreturn local before ""
            - sreturn local after ""
            - gettoken before after : 0, parse(":") bind match(par) quot
> es
            - if "`par'" != "" {
            = if "" != "" {
              local before `"(`before')"'
```

```
                        }
                   – if `"`before'"' == ":" {
                   = if `"__key(600002b58dc0)"' == ":" {
                     sreturn local after `"`after'"'
                     exit
                     }
                   – while `"`COLON'"' != ":" & `"`after'"' != "" {
                   = while `""' != ":" & `":"lnalpha":, freeparm"' != "" {
                   – gettoken COLON after : after, parse(":") bind match(par) q
> uotes

                   – if "`par'" != "" {
                   = if "" != "" {
                     local before `before' (`COLON')
                     local COLON
                     }
                   – else if `"`COLON'"' != ":" {
                   = else if `":"' != ":" {
                     local before `"`before' `COLON'"'
                     local COLON
                     }
                   – }
                   – while `"`COLON'"' != ":" & `"`after'"' != "" {
                   = while `":"' != ":" & `""lnalpha":, freeparm"' != "" {
                     gettoken COLON after : after, parse(":") bind match(par) q
> uotes

                     if "`par'" != "" {
                     local before `before' (`COLON')
                     local COLON
                     }
                     else if `"`COLON'"' != ":" {
                     local before `"`before' `COLON'"'
                     local COLON
                     }
                     }
                   – if `"`COLON'"' != ":" {
                   = if `":"' != ":" {
                     di as err "'' found where ':' expected"
                     exit 198
                     }
                   – sreturn local before `"`before'"'
                   = sreturn local before `"__key(600002b58dc0)"'
                   – sreturn local after `"`after'"'
                   = sreturn local after `""lnalpha":, freeparm"'
                     ───────────────────────────────────────────────────
> ──────────────────────────────── end _on_colon_parse ─────────────
                   – local ol `s(before)'
```

```
                      = local ol __key(600002b58dc0)
                      - if `:list sizeof ol' {
                      = if 1 {
                      - local OPTLIST `"`.`ol'.dumpoptions'"'
                      ─────────────────────────────────────────────────────
>  ───────────────────────────────── begin _optlist.dumpoptions ───────────────
                      - version 9
                      - forval i = 1/`.options.arrnels' {
                      = forval i = 1/4 {
                      - local optlist `optlist' `.options[`i']'
                      = local optlist  NOCONStant
                      - }
                      - local optlist `optlist' `.options[`i']'
                      = local optlist NOCONStant FREEParm
                      - }
                      - local optlist `optlist' `.options[`i']'
                      = local optlist NOCONStant FREEParm OFFset(passthru)
                      - }
                      - local optlist `optlist' `.options[`i']'
                      = local optlist NOCONStant FREEParm OFFset(passthru) EXPosur
> e(passthru)
                      - }
                      - local optlist : list uniq optlist
                      - sreturn local optlist `"`optlist'"'
                      = sreturn local optlist `"NOCONStant FREEParm OFFset(passthr
> u) EXPosure(passthru)"'
                      - class exit `"`optlist'"'
                      = class exit `"NOCONStant FREEParm OFFset(passthru) EXPosure
> (passthru)"'
                      ─────────────────────────────────────────────────────
>  ───────────────────────────────── end _optlist.dumpoptions ─────────────────
                 = local OPTLIST `"NOCONStant FREEParm OFFset(passthru) EXPosur
> e(passthru)"'
                      - local OPTNAMES `"`.`ol'.dumpnames'"'
                      ─────────────────────────────────────────────────────
>  ───────────────────────────────── begin _optlist.dumpnames ─────────────────
                      - version 9
                      - forval i = 1/`.names.arrnels' {
                      = forval i = 1/4 {
                      - local namelist `namelist' `.names[`i']'
                      = local namelist  noconstant
                      - }
                      - local namelist `namelist' `.names[`i']'
                      = local namelist noconstant freeparm
                      - }
                      - local namelist `namelist' `.names[`i']'
```

```
                        = local namelist noconstant freeparm offset
                        - }
                        - local namelist `namelist' `.names[`i']'
                        = local namelist noconstant freeparm offset exposure
                        - }
                        - local namelist : list uniq namelist
                        - sreturn local namelist `"`namelist'"'
                        = sreturn local namelist `"noconstant freeparm offset exposu
> re"'

                        - class exit `"`namelist'"'
                        = class exit `"noconstant freeparm offset exposure"'
                        ─────────────────────────────────────────────────────
> ─────────────────────────────── end _optlist.dumpnames ──────────────
                    = local OPTNAMES `"noconstant freeparm offset exposure"'
                    - local NOCONS constant noconstant
                    - if `"`:list NOCONS & OPTNAMES'"' == "" {
                    = if `"noconstant"' == "" {
                      local NOCONS noCONStant
                      }
                    - else local NOCONS
                    - }
                    - local 0 `"`s(after)'"'
                    = local 0 `""lnalpha":, freeparm"'
                    - if `"`.wtypes'"' != "" {
                    = if `""' != "" {
                      local wgt "[`.wtypes']"
                      }
                    - syntax [anything(equalok)] [if] [in] `wgt' [, `OPTLIST' `NOC
> ONS' *]
                    = syntax [anything(equalok)] [if] [in]  [, NOCONStant FREEParm
>  OFFset(passthru) EXPosure(passthru)  *]
                    - local HOLDIF `"`if'"'
                    = local HOLDIF `""'
                    - local HOLDIN `"`in'"'
                    = local HOLDIN `""'
                    - if "`wgt'" != "" & "`weight'" != "" {
                    = if "" != "" & "" != "" {
                      local HOLDWGT `"[`weight'`exp']"'
                      }
                    - gettoken NAME REST : anything, parse(":")
                    - if trim("`NAME'") == ":" {
                    = if trim("lnalpha") == ":" {
                      di as err "nothing found where equation name expected"
                      exit 198
                      }
                    - if `:list sizeof REST' {
```

```
           = if 1 {
           − if strpos(`"`NAME'"', ":") {
           = if strpos(`"lnalpha"', ":") {
             capture _msparse `NAME'
             if c(rc) {
             di as err "{bf:`NAME'} invalid equation specification"
             exit 198
             }
             }
           − else {
           − ._confirm_eqname `NAME'
           = ._confirm_eqname lnalpha
             ─────────────────────────────────────────────
 > ──────────────────────────── begin _eqspec._confirm_eqname ────────────
           − version 9.2
           − capture confirm number `0'
           = capture confirm number lnalpha
           − if (! c(rc)) exit
           − local hasdot = strpos(`"`0'"',".")
           = local hasdot = strpos(`"lnalpha"',".")
           − if `hasdot' {
           = if 0 {
             syntax varname(ts)
             exit
             }
           − capture syntax name(id="equation name")
           − if (! c(rc)) exit
             ─────────────────────────────────────────────
 > ──────────────────────────── end _eqspec._confirm_eqname ──────────────
           − }
           − local NAME : list retok NAME
           − gettoken COLON anything : REST, parse(":")
           − }
           − else {
             local NAME
             }
           − gettoken DEPVARS REST : anything, parse("=") bind
           − if "`DEPVARS'" == "=" {
           = if "" == "=" {
             local REST : copy local anything
             local DEPVARS
             }
           − if (`:length local DEPVARS' == 0 & `.n_depvars') {
           = if (0 == 0 & 0) {
             di as err "nothing found where depvar expected"
             exit 198
```

```
                        }
         -  if `"'`REST'"'' == "" {
         =  if `""'' == "" {
         -  if 0`.needequal' {
         =  if 01 {
         -  if `.needvarlist' | (`:length local DEPVARS' != 0 & `.n_depv
>  ars') {
         =  if 0 | (0 != 0 & 0) {
            di as err "equal sign required to separate depvars from inde
>  pvars"

            exit 198
            }
         -  }
         -  local DEPVARS
         -  local n_deps : list sizeof anything
         -  if `n_deps' != 0 | `.needvarlist' {
         =  if 0 != 0 | 0 {
            if `n_deps' < `.n_depvars' {
            error 102
            }
            forval j = 1/`.n_depvars' {
            gettoken YY anything : anything
            local DEPVARS `DEPVARS' `YY'
            }
            local INDEPVARS : list retok anything
            }
         -  loca hasequal 0
         -  }
         -  else {
            gettoken EQ INDEPVARS : REST, parse("=") bind
            local hasequal 1
            }
         -  if `:list sizeof DEPVARS' {
         =  if 0 {
            _fv_check_depvar `DEPVARS'
            tsunab DEPVARS : `DEPVARS'
            }
         -  if `:list sizeof INDEPVARS' {
         =  if 0 {
            fvunab INDEPVARS : `INDEPVARS'
            }
         -  if inlist("noconstant", "`noconstant'", "`constant'") {
         =  if inlist("noconstant", "", "") {
            if "`INDEPVARS'" == "" & ! `.nocons_ignore' {
            di as err "independent variables are required when option no
>  constant is specified"
```

```
          exit 102
          }
          if "`NOCONS'" != "" {
          local options `options' noconstant
          }
          local NOCONS 1
          }
-  else local NOCONS 0
-  if `"`offset'`exposure'"' != "" {
=  if `""' != "" {
          ._check_offset, `offset' `exposure'
          local OFFSET "`s(offset)'"
          local EXPOSURE = ("`exposure'" != "")
          local OTHER `s(offset)'
          }
-  else local EXPOSURE 0
-  local FREEPARM = `"`freeparm'"' != ""
=  local FREEPARM = `"freeparm"' != ""
-  local OPTIONS
-  local SPACE
-  foreach OPTNAME of local OPTNAMES {
-  if `"``OPTNAME''"' != "" {
=  if `""' != "" {
          local OPTIONS `"`OPTIONS'`SPACE'``OPTNAME''"'
          local SPACE " "
          }
-  }
-  if `"``OPTNAME''"' != "" {
=  if `"freeparm"' != "" {
-  local OPTIONS `"`OPTIONS'`SPACE'``OPTNAME''"'
=  local OPTIONS `"freeparm"'
-  local SPACE " "
-  }
-  }
-  if `"``OPTNAME''"' != "" {
=  if `""' != "" {
          local OPTIONS `"`OPTIONS'`SPACE'``OPTNAME''"'
          local SPACE " "
          }
-  }
-  if `"``OPTNAME''"' != "" {
=  if `""' != "" {
          local OPTIONS `"`OPTIONS'`SPACE'``OPTNAME''"'
          local SPACE " "
          }
-  }
```

```
          - if `"'`options'"' != "" {
          = if `""' != "" {
            local OPTIONS `"'`OPTIONS''SPACE''options'"'
            }
          - .name = `"'`NAME'"'
          = .name = `"lnalpha"'
          - .depvars = `"'`DEPVARS'"'
          = .depvars = `""'
          - .hasequal = `hasequal'
          = .hasequal = 0
          - .indepvars = `"'`:list retok INDEPVARS'"'
          = .indepvars = `""'
          - .other_markvars = `"'`:list retok OTHER'"'
          = .other_markvars = `""'
          - .nocons = `NOCONS'
          = .nocons = 0
          - .if = `"'`HOLDIF'"'
          = .if = `""'
          - .in = `"'`HOLDIN'"'
          = .in = `""'
          - .wgt = `"'`HOLDWGT'"'
          = .wgt = `""'
          - .offset = `"'`OFFSET'"'
          = .offset = `""'
          - .exposure = `EXPOSURE'
          = .exposure = 0
          - .freeparm = `FREEPARM'
          = .freeparm = 1
          - .options = `"'`OPTIONS'"'
          = .options = `"freeparm"'
          ──────────────────────────────────────────────────
>  ─────────────────────────────────── end _eqspec.parse ──────────────
        - }
        - local MARKOPTLIST `"'`.mark_opts.dumpoptions'"'
          ──────────────────────────────────────────────────
>  ───────────────────────────── begin _optlist.dumpoptions ──────────────
        - version 9
        - forval i = 1/`.options.arrnels' {
        = forval i = 1/0 {
          local optlist `optlist' `.options[`i']'
          }
        - local optlist : list uniq optlist
        - sreturn local optlist `"'`optlist'"'
        = sreturn local optlist `""'
        - class exit `"'`optlist'"'
        = class exit `""'
```

```
> ─────────────────────────────────── end _optlist.dumpoptions ──────────────
              = local MARKOPTLIST `""'
              ─ local MARKOPTNAMES `"'`.mark_opts.dumpnames'"'
              ─────────────────────────────────────────────────────────────
> ──────────────────────────────────── begin _optlist.dumpnames ─────────────
              ─ version 9
              ─ forval i = 1/`.names.arrnels' {
              = forval i = 1/0 {
                local namelist `namelist' `.names[`i']'
                }
              ─ local namelist : list uniq namelist
              ─ sreturn local namelist `"'`namelist'"'
              = sreturn local namelist `""'
              ─ class exit `"'`namelist'"'
              = class exit `""'
              ─────────────────────────────────────────────────────────────
> ──────────────────────────────────── end _optlist.dumpnames ──────────────
              = local MARKOPTNAMES `""'
              ─ local OPTLIST1 : subinstr local MARKOPTLIST "(passthru)" "(str
> ing asis)", all
              ─ local SMARKOPTLIST `"'`.smark_opts.dumpoptions'"'
              ─────────────────────────────────────────────────────────────
> ──────────────────────────────────── begin _optlist.dumpoptions ─────────────
              ─ version 9
              ─ forval i = 1/`.options.arrnels' {
              = forval i = 1/0 {
                local optlist `optlist' `.options[`i']'
                }
              ─ local optlist : list uniq optlist
              ─ sreturn local optlist `"'`optlist'"'
              = sreturn local optlist `""'
              ─ class exit `"'`optlist'"'
              = class exit `""'
              ─────────────────────────────────────────────────────────────
> ──────────────────────────────────── end _optlist.dumpoptions ──────────────
              = local SMARKOPTLIST `""'
              ─ local SMARKOPTNAMES `"'`.smark_opts.dumpnames'"'
              ─────────────────────────────────────────────────────────────
> ──────────────────────────────────── begin _optlist.dumpnames ─────────────
              ─ version 9
              ─ forval i = 1/`.names.arrnels' {
              = forval i = 1/0 {
                local namelist `namelist' `.names[`i']'
                }
              ─ local namelist : list uniq namelist
```

```
            – sreturn local namelist `"`namelist'"'
            = sreturn local namelist `""'
            – class exit `"`namelist'"'
            = class exit `""'
            ─────────────────────────────────────────
>  ────────────────────────── end _optlist.dumpnames ──────────────
            = local SMARKOPTNAMES `""'
            – local OPTLIST1s : subinstr local SMARKOPTLIST "(passthru)" "(s
> tring asis)", all
            – local RMCOLLOPTLIST `"`.rmcoll_opts.dumpoptions'"'
            ─────────────────────────────────────────
>  ───────────────────────── begin _optlist.dumpoptions ──────────────
            – version 9
            – forval i = 1/`.options.arrnels' {
            = forval i = 1/0 {
              local optlist `optlist' `.options[`i']'
              }
            – local optlist : list uniq optlist
            – sreturn local optlist `"`optlist'"'
            = sreturn local optlist `""'
            – class exit `"`optlist'"'
            = class exit `""'
            ─────────────────────────────────────────
>  ───────────────────────── end _optlist.dumpoptions ──────────────
            = local RMCOLLOPTLIST `""'
            – local RMCOLLOPTNAMES `"`.rmcoll_opts.dumpnames'"'
            ─────────────────────────────────────────
>  ───────────────────────── begin _optlist.dumpnames ──────────────
            – version 9
            – forval i = 1/`.names.arrnels' {
            = forval i = 1/0 {
              local namelist `namelist' `.names[`i']'
              }
            – local namelist : list uniq namelist
            – sreturn local namelist `"`namelist'"'
            = sreturn local namelist `""'
            – class exit `"`namelist'"'
            = class exit `""'
            ─────────────────────────────────────────
>  ────────────────────────── end _optlist.dumpnames ──────────────
            = local RMCOLLOPTNAMES `""'
            – local OPTLIST2 : subinstr local RMCOLLOPTLIST "(passthru)" "(s
> tring asis)", all
            – local RMDCOLLOPTLIST `"`.rmdcoll_opts.dumpoptions'"'
            ─────────────────────────────────────────
>  ───────────────────────── begin _optlist.dumpoptions ──────────────
```

```
              – version 9
              – forval i = 1/`.options.arrnels' {
              = forval i = 1/0 {
                local optlist `optlist' `.options[`i']'
                }
              – local optlist : list uniq optlist
              – sreturn local optlist `"`optlist'"'
              = sreturn local optlist `""'
              – class exit `"`optlist'"'
              = class exit `""'
              ─────────────────────────────────────────────────
> ─────────────────────────────── end _optlist.dumpoptions ────────────
              = local RMDCOLLOPTLIST `""'
              – local RMDCOLLOPTNAMES `"`.rmdcoll_opts.dumpnames'"'
              ─────────────────────────────────────────────────
> ─────────────────────────────── begin _optlist.dumpnames ────────────
              – version 9
              – forval i = 1/`.names.arrnels' {
              = forval i = 1/0 {
                local namelist `namelist' `.names[`i']'
                }
              – local namelist : list uniq namelist
              – sreturn local namelist `"`namelist'"'
              = sreturn local namelist `""'
              – class exit `"`namelist'"'
              = class exit `""'
              ─────────────────────────────────────────────────
> ─────────────────────────────── end _optlist.dumpnames ──────────────
              = local RMDCOLLOPTNAMES `""'
              – local OPTLIST3 : subinstr local RMDCOLLOPTLIST "(passthru)" "(
> string asis)", all
              – local 0 `", `GL_op'"'
              = local 0 `", "'
              – syntax [, `OPTLIST1' `OPTLIST1s' `OPTLIST2' `OPTLIST3' COLline
> ar noCONStant * ]
              = syntax [,     COLlinear noCONStant * ]
              – local GL_op `"`options'"'
              = local GL_op `""'
              – if `"`collinear'"' != "" {
              = if `""' != "" {
                local GL_op `"`GL_op' `collinear'"'
                .collinear = "`collinear'"
                }
              – if `"`constant'"' != "" {
              = if `""' != "" {
                local GL_op `"`GL_op' `constant'"'
```

```
            .nocons = "`constant'"
            }
- local I 0
- foreach OPT of local MARKOPTNAMES {
  if `:list sizeof `OPT'' {
  .mark_list[`++I'] = ._eqspec.new, numdep(0) wtypes(`.wtypes')
  .mark_list[`I'].parse "" : ``OPT''
  .mark_name.Arrpush "`OPT'"
  }
  }
- local I 0
- foreach OPT of local SMARKOPTNAMES {
  if `:list sizeof `OPT'' {
  .smark_list[`++I'] = ._eqspec.new, numdep(0) wtypes(`.wtypes')
  .smark_list[`I'].parse "" : ``OPT''
  .smark_name.Arrpush "`OPT'"
  }
  }
- local I 0
- foreach OPT of local RMCOLLOPTNAMES {
  if `:list sizeof `OPT'' {
  .rmcoll_list[`++I'] = ._eqspec.new, numdep(0) wtypes(`.wtypes'
> )

  .rmcoll_list[`I'].parse "" : ``OPT''
  .rmcoll_name.Arrpush "`OPT'"
  }
  }
- local I 0
- foreach OPT of local RMDCOLLOPTNAMES {
  if `:list sizeof `OPT'' {
  .rmdcoll_list[`++I'] = ._eqspec.new, wtypes(`.wtypes')
  .rmdcoll_list[`I'].parse "" : ``OPT''
  .rmdcoll_name.Arrpush "`OPT'"
  }
  }
- .n_eq = `EQ_n'
= .n_eq = 2
- .gl_if = `"`GL_if'"'
= .gl_if = `""'
- .gl_in = `"`GL_in'"'
= .gl_in = `""'
- .gl_wgt = `"`GL_wt'"'
= .gl_wgt = `""'
- .gl_options = `"`:list retok GL_op'"'
= .gl_options = `""'
```

```
– if "`subpop'" != "" & "`missing'" == "" {
= if "" != "" & "missing" == "" {
  if `interactive' {
  SetGlobalVar ML_samp : _MLtu
  }
  else {
  global ML_samp : tempvar
  if `"`moptobj'"' != "" {
  global ML_samp `moptobj'$ML_samp
  }
  }
  tempvar markuse
  _svy_setup $ML_sample $ML_samp, svy subpop(`subpop')
  quietly gen byte `markuse' = $ML_samp
  }
– else global ML_samp $ML_sample
= else global ML_samp __000005
– if "`collinear'" == "" {
= if "collinear" == "" {
  .`eqlist'.rmcoll $ML_samp, replace `missing'
  }
– else if "`missing'" == "" {
= else if "missing" == "" {
  .`eqlist'.markout $ML_samp, replace
  }
– if "$ML_samp" != "$ML_sample" {
= if "__000005" != "__000005" {
  `vv' quietly replace $ML_sample = 0 if `markuse' & !$ML_samp
  drop `markuse'
  }
– local eq_n = `.`eqlist'.eq count'
```

```
– version 9.2
– args item idx
– if "`item'" == "count" {
= if "count" == "count" {
– sreturn local value `"`.n_eq'"'
= sreturn local value `"2"'
– class exit `"`s(value)'"'
= class exit `"2"'
```

```
= local eq_n = 2
– global ML_n : copy local eq_n
```

```
               - global ML_dim = `.`eqlist'.dim'
               ────────────────────────────────────────────────────
> ──────────────────────────────────────── begin _eqlist.dim ──────────────
               - version 9.2
               - syntax
               - local neq = `.eq count'
               ────────────────────────────────────────────────────
> ──────────────────────────────────────── begin _eqlist.eq ──────────────
                 - version 9.2
                 - args item idx
                 - if "`item'" == "count" {
                 = if "count" == "count" {
                 - sreturn local value `"`.n_eq'"'
                 = sreturn local value `"2"'
                 - class exit `"`s(value)'"'
                 = class exit `"2"'
                 ────────────────────────────────────────────────────
> ──────────────────────────────────────── end _eqlist.eq ──────────────
               = local neq = 2
               - forval i = 1/`neq' {
               = forval i = 1/2 {
               - local xvarsi `"`.eq indepvars `i''"'
               ────────────────────────────────────────────────────
> ──────────────────────────────────────── begin _eqlist.eq ──────────────
                 - version 9.2
                 - args item idx
                 - if "`item'" == "count" {
                 = if "indepvars" == "count" {
                   sreturn local value `"`.n_eq'"'
                   class exit `"`s(value)'"'
                   }
                 - else if 0 < `idx' & `idx' <= `.n_eq' {
                 = else if 0 < 1 & 1 <= 2 {
                 - .eq_list[`idx'].item `item'
                 = .eq_list[1].item indepvars
                 ────────────────────────────────────────────────────
> ──────────────────────────────────────── begin _eqspec.item ──────────────
                 - version 9.2
                 - args item
                 - ._check_eq_item_name item, `item'
                 = ._check_eq_item_name item, indepvars
                 ────────────────────────────────────────────────────
> ──────────────────────────── begin _eqspec._check_eq_item_name ──────────
                   - version 9.2
                   - capture syntax name(name=c_item) [, NAME DEPvars INDEPva
> rs IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
```

```
                    – if c(rc) error 198
                    – if `:list sizeof other' {
                    = if 0 {
                      local other other_markvars
                      }
                    – local item `name' `depvars' `indepvars' `if' `in' `wgt'
> `other' `nocons' `offset' `exposure' `freeparm' `options'
                    = local item    indepvars
                    – if `:list sizeof item' != 1 {
                    = if 1 != 1 {
                      error 198
                      }
                    – c_local `c_item' `item'
                    = c_local item indepvars
                    ─────────────────────────────────────────────
> ───────────────────────── end _eqspec._check_eq_item_name ───────────
                  – local value `"`.`item''"'
                  = local value `""'
                  – sreturn local value `"`value'"'
                  = sreturn local value `""'
                  – class exit `"`value'"'
                  = class exit `""'
                    ─────────────────────────────────────────────
> ─────────────────────────────────────── end _eqspec.item ───────────
                  – class exit `"`s(value)'"'
                  = class exit `""'
                    ─────────────────────────────────────────────
> ─────────────────────────────────────── end _eqlist.eq ───────────
              = local xvarsi `""'
              – local noconsi `"`.eq nocons `i''"'
                    ─────────────────────────────────────────────
> ─────────────────────────────────────── begin _eqlist.eq ───────────
              – version 9.2
              – args item idx
              – if "`item'" == "count" {
              = if "nocons" == "count" {
                sreturn local value `"`.n_eq'"'
                class exit `"`s(value)'"'
                }
              – else if 0 < `idx' & `idx' <= `.n_eq' {
              = else if 0 < 1 & 1 <= 2 {
              – .eq_list[`idx'].item `item'
              = .eq_list[1].item nocons
                    ─────────────────────────────────────────────
> ─────────────────────────────────────── begin _eqspec.item ───────────
              – version 9.2
```

```
                   – args item
                   – ._check_eq_item_name item, `item'
                   = ._check_eq_item_name item, nocons
                   ─────────────────────────────────────────────
> ───────────────────────── begin _eqspec._check_eq_item_name ─────────────
                   – version 9.2
                   – capture syntax name(name=c_item) [, NAME DEPvars INDEPva
> rs IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
                   – if c(rc) error 198
                   – if `:list sizeof other' {
                   = if 0 {
                     local other other_markvars
                     }
                   – local item `name' `depvars' `indepvars' `if' `in' `wgt'
> `other' `nocons' `offset' `exposure' `freeparm' `options'
                   = local item        nocons
                   – if `:list sizeof item' != 1 {
                   = if 1 != 1 {
                     error 198
                     }
                   – c_local `c_item' `item'
                   = c_local item nocons
                   ─────────────────────────────────────────────
> ───────────────────────── end _eqspec._check_eq_item_name ───────────────
                   – local value `"`.`item''"'
                   = local value `"0"'
                   – sreturn local value `"`value'"'
                   = sreturn local value `"0"'
                   – class exit `"`value'"'
                   = class exit `"0"'
                   ─────────────────────────────────────────────
> ─────────────────────────────────────── end _eqspec.item ───────────────
                 – class exit `"`s(value)'"'
                 = class exit `"0"'
                   ─────────────────────────────────────────────
> ─────────────────────────────────────── end _eqlist.eq ─────────────
               = local noconsi `"0"'
               – local dim = `dim' + `:list sizeof xvarsi'
               = local dim =  + 0
               – if "`noconsi'" == "0" {
               = if "0" == "0" {
               – local ++dim
               – }
               – }
               – local xvarsi `"`.eq indepvars `i''"'
                   ─────────────────────────────────────────────
```

```
> ─────────────────────────────────────── begin _eqlist.eq ──────────────
                 – version 9.2
                 – args item idx
                 – if "`item'" == "count" {
                 = if "indepvars" == "count" {
                   sreturn local value `"`.n_eq'"'
                   class exit `"`s(value)'"'
                   }
                 – else if 0 < `idx' & `idx' <= `.n_eq' {
                 = else if 0 < 2 & 2 <= 2 {
                 – .eq_list[`idx'].item `item'
                 = .eq_list[2].item indepvars
                 ────────────────────────────────────────────────────────

> ─────────────────────────────────────── begin _eqspec.item ────────────
                 – version 9.2
                 – args item
                 – ._check_eq_item_name item, `item'
                 = ._check_eq_item_name item, indepvars
                 ────────────────────────────────────────────────────────

> ────────────────────────────── begin _eqspec._check_eq_item_name ──────
                 – version 9.2
                 – capture syntax name(name=c_item) [, NAME DEPvars INDEPva
> rs IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
                 – if c(rc) error 198
                 – if `:list sizeof other' {
                 = if 0 {
                   local other other_markvars
                   }
                 – local item `name' `depvars' `indepvars' `if' `in' `wgt'
> `other' `nocons' `offset' `exposure' `freeparm' `options'
                 = local item   indepvars
                 – if `:list sizeof item' != 1 {
                 = if 1 != 1 {
                   error 198
                   }
                 – c_local `c_item' `item'
                 = c_local item indepvars
                 ────────────────────────────────────────────────────────

> ────────────────────────────── end _eqspec._check_eq_item_name ────────
                 – local value `"`.`item''"'
                 = local value `""'
                 – sreturn local value `"`value'"'
                 = sreturn local value `""'
                 – class exit `"`value'"'
                 = class exit `""'
                 ────────────────────────────────────────────────────────
```

```
> ──────────────────────────────────────── end _eqspec.item ──────────────
              – class exit `"`s(value)'"'
              = class exit `""'
              ────────────────────────────────────────────────────────────────
> ──────────────────────────────────────── end _eqlist.eq ────────────────
            = local xvarsi `""'
            – local noconsi `"`.eq nocons `i''"'
              ────────────────────────────────────────────────────────────────
> ──────────────────────────────────────── begin _eqlist.eq ──────────────
              – version 9.2
              – args item idx
              – if "`item'" == "count" {
              = if "nocons" == "count" {
                sreturn local value `"`.n_eq'"'
                class exit `"`s(value)'"'
                }
              – else if 0 < `idx' & `idx' <= `.n_eq' {
              = else if 0 < 2 & 2 <= 2 {
              – .eq_list[`idx'].item `item'
              = .eq_list[2].item nocons
              ────────────────────────────────────────────────────────────────
> ──────────────────────────────────────── begin _eqspec.item ────────────
              – version 9.2
              – args item
              – ._check_eq_item_name item, `item'
              = ._check_eq_item_name item, nocons
              ────────────────────────────────────────────────────────────────
> ──────────────────────────────────── begin _eqspec._check_eq_item_name ──────
                – version 9.2
                – capture syntax name(name=c_item) [, NAME DEPvars INDEPva
> rs IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
                – if c(rc) error 198
                – if `:list sizeof other' {
                = if 0 {
                  local other other_markvars
                  }
                – local item `name' `depvars' `indepvars' `if' `in' `wgt'
> `other' `nocons' `offset' `exposure' `freeparm' `options'
                = local item        nocons
                – if `:list sizeof item' != 1 {
                = if 1 != 1 {
                  error 198
                  }
                – c_local `c_item' `item'
                = c_local item nocons
                ──────────────────────────────────────────────────────────────
```

```
>  ────────────────────────── end _eqspec._check_eq_item_name ──────────────
              – local value `"`.`item''"'
              = local value `"0"'
              – sreturn local value `"`value'"'
              = sreturn local value `"0"'
              – class exit `"`value'"'
              = class exit `"0"'
              ────────────────────────────────────────────────────
>  ──────────────────────────────────── end _eqspec.item ──────────────
              – class exit `"`s(value)'"'
              = class exit `"0"'
              ────────────────────────────────────────────────────
>  ──────────────────────────────────── end _eqlist.eq ──────────────
              = local noconsi `"0"'
              – local dim = `dim' + `:list sizeof xvarsi'
              = local dim = 1 + 0
              – if "`noconsi'" == "0" {
              = if "0" == "0" {
              – local ++dim
              – }
              – }
              – sreturn local value `"`dim'"'
              = sreturn local value `"2"'
              – class exit `"`s(value)'"'
              = class exit `"2"'
              ────────────────────────────────────────────────────
>  ──────────────────────────────────── end _eqlist.dim ──────────────
              = global ML_dim = 2
              – forval i = 1/`eq_n' {
              = forval i = 1/2 {
              – local depvars `.`eqlist'.eq depvars `i''
              ────────────────────────────────────────────────────
>  ──────────────────────────────────── begin _eqlist.eq ──────────────
              – version 9.2
              – args item idx
              – if "`item'" == "count" {
              = if "depvars" == "count" {
                sreturn local value `"`.n_eq'"'
                class exit `"`s(value)'"'
                }
              – else if 0 < `idx' & `idx' <= `.n_eq' {
              = else if 0 < 1 & 1 <= 2 {
              – .eq_list[`idx'].item `item'
              = .eq_list[1].item depvars
              ────────────────────────────────────────────────────
>  ──────────────────────────────────── begin _eqspec.item ──────────────
```

```
                   – version 9.2
                   – args item
                   – ._check_eq_item_name item, `item'
                   = ._check_eq_item_name item, depvars
                   ──────────────────────────────────────────────
> ─────────────────────── begin _eqspec._check_eq_item_name ──────────────
                   – version 9.2
                   – capture syntax name(name=c_item) [, NAME DEPvars INDEPvars
>  IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
                   – if c(rc) error 198
                   – if `:list sizeof other' {
                   = if 0 {
                     local other other_markvars
                     }
                   – local item `name' `depvars' `indepvars' `if' `in' `wgt' `o
> ther' `nocons' `offset' `exposure' `freeparm' `options'
                   = local item  depvars
                   – if `:list sizeof item' != 1 {
                   = if 1 != 1 {
                     error 198
                     }
                   – c_local `c_item' `item'
                   = c_local item depvars
                   ──────────────────────────────────────────────
> ────────────────────── end _eqspec._check_eq_item_name ──────────────
                   – local value `"`.`item''"'
                   = local value `"piq_timing_max"'
                   – sreturn local value `"`value'"'
                   = sreturn local value `"piq_timing_max"'
                   – class exit `"`value'"'
                   = class exit `"piq_timing_max"'
                   ──────────────────────────────────────────────
> ──────────────────────────────── end _eqspec.item ──────────────
               – class exit `"`s(value)'"'
               = class exit `"piq_timing_max"'
               ──────────────────────────────────────────────
> ──────────────────────────────────── end _eqlist.eq ──────────────
             = local depvars piq_timing_max
             – local eq `.`eqlist'.eq name `i''
             ──────────────────────────────────────────────
> ──────────────────────────────────── begin _eqlist.eq ──────────────
             – version 9.2
             – args item idx
             – if "`item'" == "count" {
             = if "name" == "count" {
               sreturn local value `"`.n_eq'"'
```

```
              class exit `"`s(value)'"'
              }
       – else if 0 < `idx' & `idx' <= `.n_eq' {
       = else if 0 < 1 & 1 <= 2 {
       – .eq_list[`idx'].item `item'
       = .eq_list[1].item name
       ─────────────────────────────────────────────
>  ───────────────────────────── begin _eqspec.item ────────────────
       – version 9.2
       – args item
       – ._check_eq_item_name item, `item'
       = ._check_eq_item_name item, name
       ─────────────────────────────────────────────
>  ──────────────────────── begin _eqspec._check_eq_item_name ────────────
       – version 9.2
       – capture syntax name(name=c_item) [, NAME DEPvars INDEPvars
>  IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
       – if c(rc) error 198
       – if `:list sizeof other' {
       = if 0 {
         local other other_markvars
         }
       – local item `name' `depvars' `indepvars' `if' `in' `wgt' `o
> ther' `nocons' `offset' `exposure' `freeparm' `options'
       = local item name
       – if `:list sizeof item' != 1 {
       = if 1 != 1 {
         error 198
         }
       – c_local `c_item' `item'
       = c_local item name
       ─────────────────────────────────────────────
>  ──────────────────────── end _eqspec._check_eq_item_name ────────────
       – local value `"`.`item''"'
       = local value `"piq_timing_max"'
       – sreturn local value `"`value'"'
       = sreturn local value `"piq_timing_max"'
       – class exit `"`value'"'
       = class exit `"piq_timing_max"'
       ─────────────────────────────────────────────
>  ───────────────────────────────── end _eqspec.item ─────────────
       – class exit `"`s(value)'"'
       = class exit `"piq_timing_max"'
       ─────────────────────────────────────────────
>  ───────────────────────────────── end _eqlist.eq ─────────────
     = local eq piq_timing_max
```

```
        − if !`:length local eq' {
        = if !14 {
          local eq eq`i'
          }
        − if `:list eq in eqnames' {
        = if 0 {
          di as err "equation '`eq'' multiply defined"
          exit 110
          }
        − local eqnames `eqnames' `eq'
        = local eqnames  piq_timing_max
        − fvexpand `.`eqlist'.eq indepvars `i'' if $ML_samp
          ─────────────────────────────────────────────────
```

> ───────────────────────────────── begin _eqlist.eq ─────────────

```
        − version 9.2
        − args item idx
        − if "`item'" == "count" {
        = if "indepvars" == "count" {
          sreturn local value `"`.n_eq'"'
          class exit `"`s(value)'"'
          }
        − else if 0 < `idx' & `idx' <= `.n_eq' {
        = else if 0 < 1 & 1 <= 2 {
        − .eq_list[`idx'].item `item'
        = .eq_list[1].item indepvars
          ─────────────────────────────────────────────────
```

> ───────────────────────────────── begin _eqspec.item ─────────────

```
        − version 9.2
        − args item
        − ._check_eq_item_name item, `item'
        = ._check_eq_item_name item, indepvars
          ─────────────────────────────────────────────────
```

> ───────────────────────── begin _eqspec._check_eq_item_name ─────────────

```
          − version 9.2
          − capture syntax name(name=c_item) [, NAME DEPvars INDEPvars
>  IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
          − if c(rc) error 198
          − if `:list sizeof other' {
          = if 0 {
            local other other_markvars
            }
          − local item `name' `depvars' `indepvars' `if' `in' `wgt' `o
> ther' `nocons' `offset' `exposure' `freeparm' `options'
          = local item    indepvars
          − if `:list sizeof item' != 1 {
          = if 1 != 1 {
```

```
                        error 198
                        }
                      – c_local `c_item' `item'
                      = c_local item indepvars
```
———
> ————————————————————— end _eqspec._check_eq_item_name ———————
```
              – local value `"`.`item''"'
              = local value `""'
              – sreturn local value `"`value'"'
              = sreturn local value `""'
              – class exit `"`value'"'
              = class exit `""'
```
———
> ——————————————————————————————————————— end _eqspec.item ————————
```
              – class exit `"`s(value)'"'
              = class exit `""'
```
———
> ———————————————————————————————————— end _eqlist.eq ————————
```
            = fvexpand  if __000005
            – if "`r(tsops)'" == "true" {
            = if "" == "true" {
              global ML_preserve no
              }
            – local eq_rhs`i' `"`r(varlist)'"'
            = local eq_rhs1 `""'
            – local eq_nocons`i' `.`eqlist'.eq nocons `i''
```
———
> ——————————————————————————————————— begin _eqlist.eq ————————
```
              – version 9.2
              – args item idx
              – if "`item'" == "count" {
              = if "nocons" == "count" {
                sreturn local value `"`.n_eq'"'
                class exit `"`s(value)'"'
                }
              – else if 0 < `idx' & `idx' <= `.n_eq' {
              = else if 0 < 1 & 1 <= 2 {
              – .eq_list[`idx'].item `item'
              = .eq_list[1].item nocons
```
———
> ———————————————————————————————————— begin _eqspec.item ————————
```
              – version 9.2
              – args item
              – ._check_eq_item_name item, `item'
              = ._check_eq_item_name item, nocons
```
———

```
> ———————————————————— begin _eqspec._check_eq_item_name ————————
              – version 9.2
              – capture syntax name(name=c_item) [, NAME DEPvars INDEPvars
>  IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
              – if c(rc) error 198
              – if `:list sizeof other' {
              = if 0 {
                local other other_markvars
                }
              – local item `name' `depvars' `indepvars' `if' `in' `wgt' `o
> ther' `nocons' `offset' `exposure' `freeparm' `options'
              = local item        nocons
              – if `:list sizeof item' != 1 {
              = if 1 != 1 {
                error 198
                }
              – c_local `c_item' `item'
              = c_local item nocons
              ————————————————————————————————————————————————
> ———————————————————— end _eqspec._check_eq_item_name ————————————
            – local value `"`.`item''"'
            = local value `"0"'
            – sreturn local value `"`value'"'
            = sreturn local value `"0"'
            – class exit `"`value'"'
            = class exit `"0"'
            ————————————————————————————————————————————————
> ———————————————————————————————————— end _eqspec.item ————————
          – class exit `"`s(value)'"'
          = class exit `"0"'
            ————————————————————————————————————————————————
> ———————————————————————————————————— end _eqlist.eq ————————
        = local eq_nocons1 0
        – local eq_offset`i' `.`eqlist'.eq offset `i''
            ————————————————————————————————————————————————
> ———————————————————————————————————— begin _eqlist.eq ————————
        – version 9.2
        – args item idx
        – if "`item'" == "count" {
        = if "offset" == "count" {
          sreturn local value `"`.n_eq'"'
          class exit `"`s(value)'"'
          }
        – else if 0 < `idx' & `idx' <= `.n_eq' {
        = else if 0 < 1 & 1 <= 2 {
        – .eq_list[`idx'].item `item'
```

```
              = .eq_list[1].item offset
              ─────────────────────────────────────────────────
>  ──────────────────────────────────── begin _eqspec.item ────────────────
              – version 9.2
              – args item
              – ._check_eq_item_name item, `item'
              = ._check_eq_item_name item, offset
              ─────────────────────────────────────────────────
>  ─────────────────────────── begin _eqspec._check_eq_item_name ──────────────
              – version 9.2
              – capture syntax name(name=c_item) [, NAME DEPvars INDEPvars
>  IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
              – if c(rc) error 198
              – if `:list sizeof other' {
              = if 0 {
                local other other_markvars
                }
              – local item `name' `depvars' `indepvars' `if' `in' `wgt' `o
> ther' `nocons' `offset' `exposure' `freeparm' `options'
              = local item         offset
              – if `:list sizeof item' != 1 {
              = if 1 != 1 {
                error 198
                }
              – c_local `c_item' `item'
              = c_local item offset
              ─────────────────────────────────────────────────
>  ──────────────────────────── end _eqspec._check_eq_item_name ──────────────
              – local value `"`.`item''"'
              = local value `""'
              – sreturn local value `"`value'"'
              = sreturn local value `""'
              – class exit `"`value'"'
              = class exit `""'
              ─────────────────────────────────────────────────
>  ──────────────────────────────────── end _eqspec.item ────────────────
              – class exit `"`s(value)'"'
              = class exit `""'
              ─────────────────────────────────────────────────
>  ──────────────────────────────────── end _eqlist.eq ────────────────
            = local eq_offset1
            – local eq_exposure`i' `.`eqlist'.eq exposure `i''
              ─────────────────────────────────────────────────
>  ──────────────────────────────────── begin _eqlist.eq ────────────────
              – version 9.2
              – args item idx
```

```
              – if "`item'" == "count" {
              = if "exposure" == "count" {
                sreturn local value `"`.n_eq'"'
                class exit `"`s(value)'"'
                }
              – else if 0 < `idx' & `idx' <= `.n_eq' {
              = else if 0 < 1 & 1 <= 2 {
              – .eq_list[`idx'].item `item'
              = .eq_list[1].item exposure
              ─────────────────────────────────────────────
>  ──────────────────────────────── begin _eqspec.item ───────────────
              – version 9.2
              – args item
              – ._check_eq_item_name item, `item'
              = ._check_eq_item_name item, exposure
              ─────────────────────────────────────────────
>  ──────────────────────────── begin _eqspec._check_eq_item_name ──────────
              – version 9.2
              – capture syntax name(name=c_item) [, NAME DEPvars INDEPvars
>   IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
              – if c(rc) error 198
              – if `:list sizeof other' {
              = if 0 {
                local other other_markvars
                }
              – local item `name' `depvars' `indepvars' `if' `in' `wgt' `o
> ther' `nocons' `offset' `exposure' `freeparm' `options'
              = local item           exposure
              – if `:list sizeof item' != 1 {
              = if 1 != 1 {
                error 198
                }
              – c_local `c_item' `item'
              = c_local item exposure
              ─────────────────────────────────────────────
>  ──────────────────────────── end _eqspec._check_eq_item_name ──────────
              – local value `"`.`item''"'
              = local value `"0"'
              – sreturn local value `"`value'"'
              = sreturn local value `"0"'
              – class exit `"`value'"'
              = class exit `"0"'
              ─────────────────────────────────────────────
>  ──────────────────────────────── end _eqspec.item ───────────────
              – class exit `"`s(value)'"'
              = class exit `"0"'
```

```
> ─────────────────────────────────────────────────────────────────
> ──────────────────────────────────── end _eqlist.eq ─────────────
            = local eq_exposure1 0
            - local eq_freeparm`i' `.`eqlist'.eq freeparm `i''
              ─────────────────────────────────────────────────────
> ─────────────────────────────────── begin _eqlist.eq ────────────
            – version 9.2
            – args item idx
            – if "`item'" == "count" {
            = if "freeparm" == "count" {
              sreturn local value `"'`.n_eq'"'
              class exit `"'`s(value)'"'
              }
            – else if 0 < `idx' & `idx' <= `.n_eq' {
            = else if 0 < 1 & 1 <= 2 {
            – .eq_list[`idx'].item `item'
            = .eq_list[1].item freeparm
              ─────────────────────────────────────────────────────
> ─────────────────────────────────── begin _eqspec.item ──────────
            – version 9.2
            – args item
            – ._check_eq_item_name item, `item'
            = ._check_eq_item_name item, freeparm
              ─────────────────────────────────────────────────────
> ────────────────────────────── begin _eqspec._check_eq_item_name ─
              – version 9.2
              – capture syntax name(name=c_item) [, NAME DEPvars INDEPvars
>  IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
              – if c(rc) error 198
              – if `:list sizeof other' {
              = if 0 {
                local other other_markvars
                }
              – local item `name' `depvars' `indepvars' `if' `in' `wgt' `o
> ther' `nocons' `offset' `exposure' `freeparm' `options'
              = local item              freeparm
              – if `:list sizeof item' != 1 {
              = if 1 != 1 {
                error 198
                }
              – c_local `c_item' `item'
              = c_local item freeparm
                ───────────────────────────────────────────────────
> ────────────────────────────── end _eqspec._check_eq_item_name ──
            – local value `"'`.`item''"'
            = local value `"0"'
```

```
                    – sreturn local value `"`value'"'
                    = sreturn local value `"0"'
                    – class exit `"`value'"'
                    = class exit `"0"'
                    ─────────────────────────────────────────
>  ─────────────────────────────  end _eqspec.item  ────────────────
                    – class exit `"`s(value)'"'
                    = class exit `"0"'
                    ─────────────────────────────────────────
>  ─────────────────────────────  end _eqlist.eq  ────────────────
            = local eq_freeparm1 0
            – local lhs `lhs' `depvars'
            = local lhs  piq_timing_max
            – local eq_names `eq_names' `eq'
            = local eq_names  piq_timing_max
            – local nxvars :list sizeof eq_rhs`i'
            = local nxvars :list sizeof eq_rhs1
            – local TMP : copy local eq_rhs`i'
            = local TMP : copy local eq_rhs1
            – forval j = 1/`nxvars' {
            = forval j = 1/0 {
              gettoken xvar TMP : TMP
              local colna `"`colna' `eq':`xvar'"'
              }
            – if `eq_freeparm`i'' {
            = if 0 {
              if `nxvars' {
              di as err "{it:xvars} not allowed with option {bf:freeparm}"
              exit 198
              }
              if strpos(`"`eq'"', ":") {
              local colna `"`colna' /`eq'"'
              }
              else {
              local colna `"`colna' /:`eq'"'
              }
              }
            – else if !`eq_nocons`i'' {
            = else if !0 {
            – local colna `"`colna' `eq':_cons"'
            = local colna `" piq_timing_max:_cons"'
            – }
            – if "`moptobj'" != "" {
            = if "" != "" {
              if "`eq_offset`i''" != "" {
              if usubstr("`eq_offset`i''",1,2)=="__" {
```

```
                   capture clonevar `moptobj''`eq_offset`i'' = `eq_offset`i''
                   local dropmetoo `dropmetoo' `moptobj''`eq_offset`i''
                   }
                   }
                   }
        -      }
        - local depvars `.`eqlist'.eq depvars `i''
            ──────────────────────────────────────────────────
> ──────────────────────────────────── begin _eqlist.eq ─────────────
        – version 9.2
        – args item idx
        – if "`item'" == "count" {
        = if "depvars" == "count" {
          sreturn local value `"`.n_eq'"'
          class exit `"`s(value)'"'
          }
        – else if 0 < `idx' & `idx' <= `.n_eq' {
        = else if 0 < 2 & 2 <= 2 {
        – .eq_list[`idx'].item `item'
        = .eq_list[2].item depvars
            ──────────────────────────────────────────────────
> ──────────────────────────────────── begin _eqspec.item ───────────
        – version 9.2
        – args item
        – ._check_eq_item_name item, `item'
        = ._check_eq_item_name item, depvars
            ──────────────────────────────────────────────────
> ─────────────────────────────── begin _eqspec._check_eq_item_name ──────────
          – version 9.2
          – capture syntax name(name=c_item) [, NAME DEPvars INDEPvars
>  IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
          – if c(rc) error 198
          – if `:list sizeof other' {
          = if 0 {
            local other other_markvars
            }
          – local item `name' `depvars' `indepvars' `if' `in' `wgt' `o
> ther' `nocons' `offset' `exposure' `freeparm' `options'
          = local item  depvars
          – if `:list sizeof item' != 1 {
          = if 1 != 1 {
            error 198
            }
          – c_local `c_item' `item'
          = c_local item depvars
            ──────────────────────────────────────────────────
```

```
> ─────────────────────────────── end _eqspec._check_eq_item_name ───────────────
            – local value `"`.`item''"'
            = local value `""'
            – sreturn local value `"`value'"'
            = sreturn local value `""'
            – class exit `"`value'"'
            = class exit `""'
            ──────────────────────────────────────────────────────────────────

> ──────────────────────────────────────────── end _eqspec.item ────────────
            – class exit `"`s(value)'"'
            = class exit `""'
            ──────────────────────────────────────────────────────────────────

> ─────────────────────────────────────────── end _eqlist.eq ─────────────
          = local depvars
          – local eq `.`eqlist'.eq name `i''
            ──────────────────────────────────────────────────────────────────

> ────────────────────────────────────────── begin _eqlist.eq ─────────────
            – version 9.2
            – args item idx
            – if "`item'" == "count" {
            = if "name" == "count" {
              sreturn local value `"`.n_eq'"'
              class exit `"`s(value)'"'
              }
            – else if 0 < `idx' & `idx' <= `.n_eq' {
            = else if 0 < 2 & 2 <= 2 {
            – .eq_list[`idx'].item `item'
            = .eq_list[2].item name
            ──────────────────────────────────────────────────────────────────

> ────────────────────────────────────────── begin _eqspec.item ─────────────
            – version 9.2
            – args item
            – ._check_eq_item_name item, `item'
            = ._check_eq_item_name item, name
            ──────────────────────────────────────────────────────────────────

> ──────────────────────────── begin _eqspec._check_eq_item_name ─────────────
              – version 9.2
              – capture syntax name(name=c_item) [, NAME DEPvars INDEPvars
>   IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
              – if c(rc) error 198
              – if `:list sizeof other' {
              = if 0 {
                local other other_markvars
                }
              – local item `name' `depvars' `indepvars' `if' `in' `wgt' `o
> ther' `nocons' `offset' `exposure' `freeparm' `options'
```

```
                          = local item name
                          - if `:list sizeof item' != 1 {
                          = if 1 != 1 {
                            error 198
                            }
                          - c_local `c_item' `item'
                          = c_local item name
                          ──────────────────────────────────────────
> ───────────────────────── end _eqspec._check_eq_item_name ───────────
                    - local value `"`.`item''"'
                    = local value `"lnalpha"'
                    - sreturn local value `"`value'"'
                    = sreturn local value `"lnalpha"'
                    - class exit `"`value'"'
                    = class exit `"lnalpha"'
                        ──────────────────────────────────────────
> ──────────────────────────────────────── end _eqspec.item ───────────
                    - class exit `"`s(value)'"'
                    = class exit `"lnalpha"'
                        ──────────────────────────────────────────
> ──────────────────────────────────────── end _eqlist.eq ───────────
                = local eq lnalpha
                - if !`:length local eq' {
                = if !7 {
                  local eq eq`i'
                  }
                - if `:list eq in eqnames' {
                = if 0 {
                  di as err "equation '`eq'' multiply defined"
                  exit 110
                  }
                - local eqnames `eqnames' `eq'
                = local eqnames piq_timing_max lnalpha
                - fvexpand `.`eqlist'.eq indepvars `i'' if $ML_samp
                        ──────────────────────────────────────────
> ──────────────────────────────────────── begin _eqlist.eq ───────────
                    - version 9.2
                    - args item idx
                    - if "`item'" == "count" {
                    = if "indepvars" == "count" {
                      sreturn local value `"`.n_eq'"'
                      class exit `"`s(value)'"'
                      }
                    - else if 0 < `idx' & `idx' <= `.n_eq' {
                    = else if 0 < 2 & 2 <= 2 {
                    - .eq_list[`idx'].item `item'
```

```
              = .eq_list[2].item indepvars
            ─────────────────────────────────────────────────────
>  ──────────────────────────────────────── begin _eqspec.item ──────────────────
              - version 9.2
              - args item
              - ._check_eq_item_name item, `item'
              = ._check_eq_item_name item, indepvars
              ─────────────────────────────────────────────────────
>  ──────────────────────────── begin _eqspec._check_eq_item_name ────────────────
              - version 9.2
              - capture syntax name(name=c_item) [, NAME DEPvars INDEPvars
>   IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
              - if c(rc) error 198
              - if `:list sizeof other' {
              = if 0 {
                local other other_markvars
                }
              - local item `name' `depvars' `indepvars' `if' `in' `wgt' `o
> ther' `nocons' `offset' `exposure' `freeparm' `options'
              = local item   indepvars
              - if `:list sizeof item' != 1 {
              = if 1 != 1 {
                error 198
                }
              - c_local `c_item' `item'
              = c_local item indepvars
              ─────────────────────────────────────────────────────
>  ──────────────────────────── end _eqspec._check_eq_item_name ──────────────────
              - local value `"`.`item''"'
              = local value `""'
              - sreturn local value `"`value'"'
              = sreturn local value `""'
              - class exit `"`value'"'
              = class exit `""'
            ─────────────────────────────────────────────────────
>  ──────────────────────────────────────── end _eqspec.item ─────────────────────
              - class exit `"`s(value)'"'
              = class exit `""'
            ─────────────────────────────────────────────────────
>  ──────────────────────────────────────── end _eqlist.eq ───────────────────────
            = fvexpand  if __000005
            - if "`r(tsops)'" == "true" {
            = if "" == "true" {
              global ML_preserve no
              }
            - local eq_rhs`i' `"`r(varlist)'"'
```

```
             = local eq_rhs2 `""'
             - local eq_nocons`i' `.`eqlist'.eq nocons `i''
              ─────────────────────────────────────────────────────
>  ───────────────────────────────────── begin _eqlist.eq ───────────────
             - version 9.2
             - args item idx
             - if "`item'" == "count" {
             = if "nocons" == "count" {
               sreturn local value `"`.n_eq'"'
               class exit `"`s(value)'"'
               }
             - else if 0 < `idx' & `idx' <= `.n_eq' {
             = else if 0 < 2 & 2 <= 2 {
             - .eq_list[`idx'].item `item'
             = .eq_list[2].item nocons
              ─────────────────────────────────────────────────────
>  ───────────────────────────────────── begin _eqspec.item ───────────────
             - version 9.2
             - args item
             - ._check_eq_item_name item, `item'
             = ._check_eq_item_name item, nocons
              ─────────────────────────────────────────────────────
>  ──────────────────────────────── begin _eqspec._check_eq_item_name ───────────
             - version 9.2
             - capture syntax name(name=c_item) [, NAME DEPvars INDEPvars
>  IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
             - if c(rc) error 198
             - if `:list sizeof other' {
             = if 0 {
               local other other_markvars
               }
             - local item `name' `depvars' `indepvars' `if' `in' `wgt' `o
> ther' `nocons' `offset' `exposure' `freeparm' `options'
             = local item         nocons
             - if `:list sizeof item' != 1 {
             = if 1 != 1 {
               error 198
               }
             - c_local `c_item' `item'
             = c_local item nocons
              ─────────────────────────────────────────────────────
>  ──────────────────────────────── end _eqspec._check_eq_item_name ───────────
             - local value `"`.`item''"'
             = local value `"0"'
             - sreturn local value `"`value'"'
             = sreturn local value `"0"'
```

```
            – class exit `"`value'"'
            = class exit `"0"'
           ─────────────────────────────────────────
>  ───────────────────────────────────── end _eqspec.item ──────────────
          – class exit `"`s(value)'"'
          = class exit `"0"'
           ─────────────────────────────────────────
>  ───────────────────────────────────── end _eqlist.eq ────────────────
         = local eq_nocons2 0
         – local eq_offset`i' `.`eqlist'.eq offset `i''
           ─────────────────────────────────────────
>  ───────────────────────────────────── begin _eqlist.eq ──────────────
          – version 9.2
          – args item idx
          – if "`item'" == "count" {
          = if "offset" == "count" {
            sreturn local value `"`.n_eq'"'
            class exit `"`s(value)'"'
            }
          – else if 0 < `idx' & `idx' <= `.n_eq' {
          = else if 0 < 2 & 2 <= 2 {
          – .eq_list[`idx'].item `item'
          = .eq_list[2].item offset
           ─────────────────────────────────────────
>  ───────────────────────────────────── begin _eqspec.item ────────────
          – version 9.2
          – args item
          – ._check_eq_item_name item, `item'
          = ._check_eq_item_name item, offset
           ─────────────────────────────────────────
>  ──────────────────────────────── begin _eqspec._check_eq_item_name ───
            – version 9.2
            – capture syntax name(name=c_item) [, NAME DEPvars INDEPvars
>   IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
            – if c(rc) error 198
            – if `:list sizeof other' {
            = if 0 {
              local other other_markvars
              }
            – local item `name' `depvars' `indepvars' `if' `in' `wgt' `o
> ther' `nocons' `offset' `exposure' `freeparm' `options'
            = local item           offset
            – if `:list sizeof item' != 1 {
            = if 1 != 1 {
              error 198
              }
```

```
                  – c_local `c_item' `item'
                  = c_local item offset
                  ───────────────────────────────────────────────
>  ──────────────────────────────  end _eqspec._check_eq_item_name  ───────────
            – local value `"`.`item''"'
            = local value `""'
            – sreturn local value `"`value'"'
            = sreturn local value `""'
            – class exit `"`value'"'
            = class exit `""'

            ───────────────────────────────────────────────
>  ──────────────────────────────────────────  end _eqspec.item  ──────────────
            – class exit `"`s(value)'"'
            = class exit `""'

            ───────────────────────────────────────────────
>  ───────────────────────────────────────────────  end _eqlist.eq  ───────────
          = local eq_offset2
          – local eq_exposure`i' `.`eqlist'.eq exposure `i''

            ───────────────────────────────────────────────
>  ──────────────────────────────────────────  begin _eqlist.eq  ──────────────
          – version 9.2
          – args item idx
          – if "`item'" == "count" {
          = if "exposure" == "count" {
            sreturn local value `"`.n_eq'"'
            class exit `"`s(value)'"'
            }
          – else if 0 < `idx' & `idx' <= `.n_eq' {
          = else if 0 < 2 & 2 <= 2 {
          – .eq_list[`idx'].item `item'
          = .eq_list[2].item exposure

            ───────────────────────────────────────────────
>  ──────────────────────────────────────────  begin _eqspec.item  ────────────
          – version 9.2
          – args item
          – ._check_eq_item_name item, `item'
          = ._check_eq_item_name item, exposure

            ───────────────────────────────────────────────
>  ──────────────────────────  begin _eqspec._check_eq_item_name  ─────────────
            – version 9.2
            – capture syntax name(name=c_item) [, NAME DEPvars INDEPvars
>   IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
            – if c(rc) error 198
            – if `:list sizeof other' {
            = if 0 {
              local other other_markvars
```

```
                }
              – local item `name' `depvars' `indepvars' `if' `in' `wgt' `o
> ther' `nocons' `offset' `exposure' `freeparm' `options'
              = local item           exposure
              – if `:list sizeof item' != 1 {
              = if 1 != 1 {
                error 198
                }
              – c_local `c_item' `item'
              = c_local item exposure
              ────────────────────────────────────────────────────
> ──────────────────────── end _eqspec._check_eq_item_name ───────────
              – local value `"`.`item''"'
              = local value `"0"'
              – sreturn local value `"`value'"'
              = sreturn local value `"0"'
              – class exit `"`value'"'
              = class exit `"0"'

              ────────────────────────────────────────────────────
> ──────────────────────────────────── end _eqspec.item ──────────────
              – class exit `"`s(value)'"'
              = class exit `"0"'

              ────────────────────────────────────────────────────
> ──────────────────────────────────── end _eqlist.eq ────────────────
            = local eq_exposure2 0
            – local eq_freeparm`i' `.`eqlist'.eq freeparm `i''

              ────────────────────────────────────────────────────
> ──────────────────────────────────── begin _eqlist.eq ──────────────
            – version 9.2
            – args item idx
            – if "`item'" == "count" {
            = if "freeparm" == "count" {
              sreturn local value `"`.n_eq'"'
              class exit `"`s(value)'"'
              }
            – else if 0 < `idx' & `idx' <= `.n_eq' {
            = else if 0 < 2 & 2 <= 2 {
            – .eq_list[`idx'].item `item'
            = .eq_list[2].item freeparm

              ────────────────────────────────────────────────────
> ──────────────────────────────────── begin _eqspec.item ────────────
            – version 9.2
            – args item
            – ._check_eq_item_name item, `item'
            = ._check_eq_item_name item, freeparm

              ────────────────────────────────────────────────────
```

```
> ───────────────────────── begin _eqspec._check_eq_item_name ─────────────
                    – version 9.2
                    – capture syntax name(name=c_item) [, NAME DEPvars INDEPvars
>  IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
                    – if c(rc) error 198
                    – if `:list sizeof other' {
                    = if 0 {
                      local other other_markvars
                      }
                    – local item `name' `depvars' `indepvars' `if' `in' `wgt' `o
> ther' `nocons' `offset' `exposure' `freeparm' `options'
                    = local item               freeparm
                    – if `:list sizeof item' != 1 {
                    = if 1 != 1 {
                      error 198
                      }
                    – c_local `c_item' `item'
                    = c_local item freeparm
                    ──────────────────────────────────────────────────────────
> ───────────────────────── end _eqspec._check_eq_item_name ──────────────
                  – local value `"`.`item''"'
                  = local value `"1"'
                  – sreturn local value `"`value'"'
                  = sreturn local value `"1"'
                  – class exit `"`value'"'
                  = class exit `"1"'
                  ──────────────────────────────────────────────────────────
> ─────────────────────────────────────── end _eqspec.item ───────────────
                  – class exit `"`s(value)'"'
                  = class exit `"1"'
                  ──────────────────────────────────────────────────────────
> ─────────────────────────────────────── end _eqlist.eq ─────────────────
              = local eq_freeparm2 1
              – local lhs `lhs' `depvars'
              = local lhs piq_timing_max
              – local eq_names `eq_names' `eq'
              = local eq_names piq_timing_max lnalpha
              – local nxvars :list sizeof eq_rhs`i'
              = local nxvars :list sizeof eq_rhs2
              – local TMP : copy local eq_rhs`i'
              = local TMP : copy local eq_rhs2
              – forval j = 1/`nxvars' {
              = forval j = 1/0 {
                gettoken xvar TMP : TMP
                local colna `"`colna' `eq':`xvar'"'
                }
```

```
- if `eq_freeparm`i'' {
= if 1 {
- if `nxvars' {
= if 0 {
  di as err "{it:xvars} not allowed with option {bf:freeparm}"
  exit 198
  }
- if strpos(`"`eq'"', ":") {
= if strpos(`"lnalpha"', ":") {
  local colna `"`colna' /`eq'"'
  }
- else {
- local colna `"`colna' /:`eq'"'
= local colna `" piq_timing_max:_cons /:lnalpha"'
- }
- }
- else if !`eq_nocons`i'' {
= else if !0 {
  local colna `"`colna' `eq':_cons"'
  }
- if "`moptobj'" != "" {
= if "" != "" {
  if "`eq_offset`i''" != "" {
  if usubstr("`eq_offset`i''",1,2)=="__" {
  capture clonevar `moptobj'`eq_offset`i'' = `eq_offset`i''
  local dropmetoo `dropmetoo' `moptobj'`eq_offset`i''
  }
  }
  }
- }
- if "`moptobj'" != "" {
= if "" != "" {
  foreach y of local lhs {
  if usubstr("`y'",1,2)=="__" {
  capture clonevar `moptobj'`y' = `y'
  local tmp `tmp' `moptobj'`y'
  local dropmetoo `dropmetoo' `moptobj'`y'
  }
  else {
  local tmp `tmp' `y'
  }
  }
  local lhs `tmp'
  }
- if `waldtest' > 0 & `:length local lf0' {
= if 0 > 0 & 0 {
```

```
                  opts_exclusive "waldtest() lf0()"
                  }
          - if `:length local continue' {
          = if 0 {
            if !`:length local init' {
            tempname init
            local ub0 `init'
            }
            else tempname ub0
            mat `ub0' = e(b)
            tempname v0 iv0
            mat `v0' = e(V)
            mat `iv0' = syminv(`v0')
            global ML_rank0 = colsof(`v0') - diag0cnt(`iv0')
            if !`:length local lf0' & !missing(e(ll)) {
            local lf0 `=colsof(`ub0')' `e(ll)'
            }
            local ub0
            }
          - if `:length local init' {
          = if 14 {
          - tempname b0
          - local dim : list sizeof colna
          - matrix `b0' = J(1,`dim',0)
          = matrix __000007 = J(1,2,0)
          - matrix colna `b0' = `colna'
          = matrix colna __000007 =  piq_timing_max:_cons /:lnalpha
          - `vv' _mkvec `b0', from(`init') update first error("initial vecto
> r")
          = version 18: _mkvec __000007, from(__000003, copy) update first e
> rror("initial vector")
                  ─────────────────────────────────────────────────────
> ──────────────────────────────────────────── begin _mkvec ──────────────
          - local vv : display "version " string(_caller()) ":"
          - version 6
          - gettoken matout 0 : 0, parse(", ")
          - if "`matout'"=="" | "`matout'"=="," {
          = if "__000007"=="" | "__000007"=="," {
            error 198
            }
          - syntax [, FROM(str) UPdate COLnames(str) ERRor(str) FIRST ]
          - if "`update'"!="" {
          = if "update"!="" {
          - if "`colname'"!="" {
          = if ""!="" {
            di in red "update and colnames() cannot both be " "specified"
```

```
                exit 198
                }
      ─ capture local colname : colfullnames `matout'
      = capture local colname : colfullnames __000007
      ─ if _rc {
          di in red "matrix `matout' not found"
          exit 111
          }
      ─ if rowsof(matrix(`matout')) != 1 {
      = if rowsof(matrix(__000007)) != 1 {
          di in red "`matout' matrix to be updated must be " "a row vect
> or"
          exit 503
          }
      ─ local matin `matout'
      = local matin __000007
      ─ }
      ─ if `"`error'"'!="" {
      = if `"initial vector"'!="" {
      ─ local error `"`error': "'
      = local error `"initial vector: "'
      ─ }
      ─ tempname mat
      ─ if `"`from'"'!="" {
      = if `"__000003, copy"'!="" {
      ─ From `from'
      = From __000003, copy
          ─────────────────────────────────────────────
> ─────────────────────────────────── begin _mkvec.From ───────────────
      ─ gettoken from 0 : 0, parse(",") bind
      ─ sret clear
      ─ sret local from `from'
      = sret local from __000003
      ─ if `"`0'"'!="" {
      = if `", copy"'!="" {
      ─ syntax [, COPY SKIP ]
      ─ }
      ─ sret local copy `copy'
      = sret local copy copy
      ─ sret local skip `skip'
      = sret local skip
          ─────────────────────────────────────────────
> ─────────────────────────────────── end _mkvec.From ────────────────
      ─ local copy `s(copy)'
      = local copy copy
      ─ local skip `s(skip)'
```

```
              = local skip
              - if "`copy'"!="" {
              = if "copy"!="" {
              - CopyMat `mat' `"`error'"' `s(from)'
              = CopyMat __000008 `"initial vector: "' __000003
              ────────────────────────────────────────────────
> ──────────────────────────────────── begin _mkvec.CopyMat ──────────────
              - args matall error
              - tempname matadd
              - local i 3
              - while "``i''"!="" {
              = while "__000003"!="" {
              - capture di matrix(``i''[1,1])
              = capture di matrix(__000003[1,1])
              - if _rc == 0 {
              - ChkMat `matadd' ``i'' `"`error'"'
              = ChkMat __000009 __000003 `"initial vector: "'
              ────────────────────────────────────────────────
> ──────────────────────────────────── begin _mkvec.ChkMat ───────────────
              - args matout matin error
              - capture di matrix(`matin'[1,1])
              = capture di matrix(__000003[1,1])
              - if _rc {
                capture confirm number `matin'
                if _rc {
                di in red `"`error'matrix `matin' not found"'
                exit 111
                }
                di in red `"`error'list of numbers requires copy option"'
                exit 198
                }
              - if matrix(rowsof(`matin')!=1 & colsof(`matin')!=1) {
              = if matrix(rowsof(__000003)!=1 & colsof(__000003)!=1) {
                di in red "`matin' " matrix(rowsof(`matin')) " x " matrix(
> colsof(`matin')) " is not a vector"
                exit 503
                }
              - if matrix(rowsof(`matin')) == 1 {
              = if matrix(rowsof(__000003)) == 1 {
              - mat `matout' = `matin'
              = mat __000009 = __000003
              - }
              - else mat `matout' = `matin''
              = else mat __000009 = __000003'
              ────────────────────────────────────────────────
> ──────────────────────────────────── end _mkvec.ChkMat ─────────────────
```

```
                   - }
                   - else {
                     capture confirm number ``i''
                     if _rc {
                     di in red `"`error'copy option requires "' "either a matrix
> or a list of numbers"
                     exit 198
                     }
                     mat `matadd' = J(1,1,``i'')
                     }
                   - mat `matall' = nullmat(`matall') , `matadd'
                   = mat __000008 = nullmat(__000008) , __000009
                   - local i = `i' + 1
                   = local i = 3 + 1
                   - }
                   - while "``i''"!="" {
                   = while ""!="" {
                     capture di matrix(``i''[1,1])
                     if _rc == 0 {
                     ChkMat `matadd' ``i'' `"`error'"'
                     }
                     else {
                     capture confirm number ``i''
                     if _rc {
                     di in red `"`error'copy option requires "' "either a matrix
> or a list of numbers"
                     exit 198
                     }
                     mat `matadd' = J(1,1,``i'')
                     }
                     mat `matall' = nullmat(`matall') , `matadd'
                     local i = `i' + 1
                     }
                   ─────────────────────────────────────────────────────
> ─────────────────────────────────────── end _mkvec.CopyMat ─────────────
                - if `"`colname'"'!="" {
                = if `"piq_timing_max:_cons /lnalpha"'!="" {
                - local dim : list sizeof colname
                - if `dim' != colsof(matrix(`mat')) {
                = if 2 != colsof(matrix(__000008)) {
                  di in red `"`error'matrix must "' `"be dimension "' `dim'
                  exit 503
                  }
                - `vv' mat colnames `mat' = `colname'
                = version 18: mat colnames __000008 = piq_timing_max:_cons /lnal
> pha
```

```
      - }
      - }
      - else {
        `vv' BuildMat `mat' `"`error'"' "`skip'" `s(from)'
        if `"`colname'"'!="" {
        `vv' ChkNames `mat' "`matin'" `"`colname'"' `"`error'"' "`skip
> '" "`first'"
        local fill `s(k_fill)'
        }
        }
      - }
      - else {
        local fill 0
        if "`update'"!="" {
        mat `mat' = `matin'
        }
        else if `"`colname'"'!="" {
        local dim : list sizeof colname
        mat `mat' = J(1,`dim',0)
        `vv' mat colnames `mat' = `colname'
        }
        else {
        di in red "from() must be specified"
        exit 198
        }
        }
      - sret clear
      - sret local copy `copy'
      = sret local copy copy
      - sret local skip `skip'
      = sret local skip
      - sret local k = colsof(matrix(`mat'))
      = sret local k = colsof(matrix(__000008))
      - if "`fill'"!="" {
      = if ""!="" {
        sret local k_fill `fill'
        }
      - else sret local k_fill = colsof(matrix(`mat'))
      = else sret local k_fill = colsof(matrix(__000008))
      - matrix rename `mat' `matout', replace
      = matrix rename __000008 __000007, replace
      ─────────────────────────────────────────────────────────────
> ─────────────────────────────────── end _mkvec ────────────────
      - }
      - tempname bomit
      - matrix `bomit' = J(1,`:list sizeof colna',0)
```

```
           = matrix __000008 = J(1,2,0)
           - matrix colna `bomit' = `colna'
           = matrix colna __000008 =  piq_timing_max:_cons /:lnalpha
           - _ms_omit_info `bomit'
           = _ms_omit_info __000008
           - if r(k_omit) | `:length local constraints' {
           = if r(k_omit) | 0 {
             nobreak {
             capture noisily break {
             _b_post0 `colna'
             local clist : subinstr local constraints "," " ", all
             `vv' makecns `clist', `cnsnotes'
             local constraints `"`r(clist)'"'
             local k_autoCns = e(k_autoCns)
             tempname C
             capture matrix `C' = e(Cns)
             local rcc = c(rc)
             }
             local rc = c(rc)
             ereturn clear
             }
             if (`rc') exit `rc'
             if (`rcc') {
             local C
             local k_autoCns
             }
             }
           - if `:length local constraints' {
           = if 0 {
             local lf0
             }
           - local vce `vce' `robust' `cluster'
           = local vce  robust
           - if `:length local vce' {
           = if 6 {
           - _vce_parse, argoptlist(CLuster) optlist(OIM OPG Robust) old : `w
> t', `vce'
           = _vce_parse, argoptlist(CLuster) optlist(OIM OPG Robust) old : ,
> robust
                    ────────────────────────────────────────────────────
> ──────────────────────────────────── begin _vce_parse ───────────────
           - version 10
           - _on_colon_parse `0'
           = _on_colon_parse , argoptlist(CLuster) optlist(OIM OPG Robust)
> old : , robust
                    ────────────────────────────────────────────────────
```

```
– version 8.2
– sreturn local before ""
– sreturn local after ""
– gettoken before after : 0, parse(":") bind match(par) quotes
– if "`par'" != "" {
= if "" != "" {
  local before `"(`before')"'
  }
– if `"`before'"' == ":" {
= if `", argoptlist(CLuster) optlist(OIM OPG Robust) old "' ==
```
> ":" {
```
  sreturn local after `"`after'"'
  exit
  }
– while `"`COLON'"' != ":" & `"`after'"' != "" {
= while `""' != ":" & `": , robust"' != "" {
– gettoken COLON after : after, parse(":") bind match(par) quo
```
> tes
```
– if "`par'" != "" {
= if "" != "" {
  local before `before' (`COLON')
  local COLON
  }
– else if `"`COLON'"' != ":" {
= else if `":"' != ":" {
  local before `"`before' `COLON'"'
  local COLON
  }
– }
– while `"`COLON'"' != ":" & `"`after'"' != "" {
= while `":"' != ":" & `" , robust"' != "" {
  gettoken COLON after : after, parse(":") bind match(par) quo
```
> tes
```
  if "`par'" != "" {
  local before `before' (`COLON')
  local COLON
  }
  else if `"`COLON'"' != ":" {
  local before `"`before' `COLON'"'
  local COLON
  }
  }
– if `"`COLON'"' != ":" {
= if `":"' != ":" {
  di as err "'' found where ':' expected"
```

```
                        exit 198
                        }
                   – sreturn local before `"`before'"'
                   = sreturn local before `", argoptlist(CLuster) optlist(OIM OPG
>  Robust) old "'
                   – sreturn local after `"`after'"'
                   = sreturn local after `" , robust"'
                   ────────────────────────────────────────────────────────
> ────────────────────────────────────── end _on_colon_parse ───────────────
                   – local 0 `"`s(before)'"'
                   = local 0 `", argoptlist(CLuster) optlist(OIM OPG Robust) old "'
                   – local user `"`s(after)'"'
                   = local user `" , robust"'
                   – syntax [varname(default=none)], [ OPTlist(namelist) ARGOPTlist
> (namelist) PWallowed(namelist) OLD_is_ok NOARGOPT_is_ok ]
                   – local touse `varlist'
                   = local touse
                   – tempname o a
                   – .`o' = ._optlist.new
                   = .__000009 = ._optlist.new
                   – local optlist : list uniq optlist
                   – foreach name of local optlist {
                   – .`o'.addopt `name'
                   = .__000009.addopt OIM
                   ────────────────────────────────────────────────────────
> ─────────────────────────────────────── begin _optlist.addopt ─────────────
                   – version 9
                   – syntax name(name=optspec) [, PASSthru]
                   – local mname = lower("`optspec'")
                   = local mname = lower("OIM")
                   – if "`passthru'" != "" {
                   = if "" != "" {
                     local optspec `optspec'(passthru)
                     }
                   – .options.Arrpush "`optspec'"
                   = .options.Arrpush "OIM"
                   – .names.Arrpush "`mname'"
                   = .names.Arrpush "oim"
                   ────────────────────────────────────────────────────────
> ──────────────────────────────────────── end _optlist.addopt ──────────────
                   – }
                   – .`o'.addopt `name'
                   = .__000009.addopt OPG
                   ────────────────────────────────────────────────────────
> ─────────────────────────────────────── begin _optlist.addopt ─────────────
                   – version 9
```

```
                – syntax name(name=optspec) [, PASSthru]
                – local mname = lower("`optspec'")
                = local mname = lower("OPG")
                – if "`passthru'" != "" {
                = if "" != "" {
                  local optspec `optspec'(passthru)
                  }
                – .options.Arrpush "`optspec'"
                = .options.Arrpush "OPG"
                – .names.Arrpush "`mname'"
                = .names.Arrpush "opg"
                ─────────────────────────────────────────
> ──────────────────────────── end _optlist.addopt ────────────
            – }
            – .`o'.addopt `name'
            = .__000009.addopt Robust
                ─────────────────────────────────────────
> ──────────────────────────── begin _optlist.addopt ──────────
            – version 9
            – syntax name(name=optspec) [, PASSthru]
            – local mname = lower("`optspec'")
            = local mname = lower("Robust")
            – if "`passthru'" != "" {
            = if "" != "" {
              local optspec `optspec'(passthru)
              }
            – .options.Arrpush "`optspec'"
            = .options.Arrpush "Robust"
            – .names.Arrpush "`mname'"
            = .names.Arrpush "robust"
                ─────────────────────────────────────────
> ──────────────────────────── end _optlist.addopt ────────────
            – }
            – .`a' = ._optlist.new
            = .__00000A = ._optlist.new
            – local argoptlist : list uniq argoptlist
            – foreach name of local argoptlist {
            – .`a'.addopt `name'
            = .__00000A.addopt CLuster
                ─────────────────────────────────────────
> ──────────────────────────── begin _optlist.addopt ──────────
            – version 9
            – syntax name(name=optspec) [, PASSthru]
            – local mname = lower("`optspec'")
            = local mname = lower("CLuster")
            – if "`passthru'" != "" {
```

```
                = if "" != "" {
                  local optspec `optspec'(passthru)
                  }
                – .options.Arrpush "`optspec'"
                = .options.Arrpush "CLuster"
                – .names.Arrpush "`mname'"
                = .names.Arrpush "cluster"
                ────────────────────────────────────────────────
> ───────────────────────────── end _optlist.addopt ─────────────
              – }
              – local OPTNAMES `"`.`o'.dumpnames'"'
                ────────────────────────────────────────────────
> ───────────────────────────── begin _optlist.dumpnames ────────────
                – version 9
                – forval i = 1/`.names.arrnels' {
                = forval i = 1/3 {
                – local namelist `namelist' `.names[`i']'
                = local namelist  oim
                – }
                – local namelist `namelist' `.names[`i']'
                = local namelist oim opg
                – }
                – local namelist `namelist' `.names[`i']'
                = local namelist oim opg robust
                – }
                – local namelist : list uniq namelist
                – sreturn local namelist `"`namelist'"'
                = sreturn local namelist `"oim opg robust"'
                – class exit `"`namelist'"'
                = class exit `"oim opg robust"'
                ────────────────────────────────────────────────
> ───────────────────────────── end _optlist.dumpnames ──────────────
              = local OPTNAMES `"oim opg robust"'
              – local ARGOPTNAMES `"`.`a'.dumpnames'"'
                ────────────────────────────────────────────────
> ───────────────────────────── begin _optlist.dumpnames ────────────
                – version 9
                – forval i = 1/`.names.arrnels' {
                = forval i = 1/1 {
                – local namelist `namelist' `.names[`i']'
                = local namelist  cluster
                – }
                – local namelist : list uniq namelist
                – sreturn local namelist `"`namelist'"'
                = sreturn local namelist `"cluster"'
                – class exit `"`namelist'"'
```

```
                          = class exit `"cluster"'
                          ─────────────────────────────────────────
> ─────────────────────────────────── end _optlist.dumpnames ───────────────
              = local ARGOPTNAMES `"cluster"'
              - local AND : list OPTNAMES & ARGOPTNAMES
              - if `:list sizeof AND' {
              = if 0 {
                di as err "vcetype '`:word 1 of `AND''' specified twice"
                exit 198
                }
              - local pwallowed : list uniq pwallowed
              - local pwlist robust cluster
              - foreach n of local pwallowed {
                local lc = lower("`n'")
                local pwlist `pwlist' `lc'
                }
              - if "`old_is_ok'" != "" {
              = if "old_is_ok" != "" {
              - local ROBUST robust
              - if `:list ROBUST in OPTNAMES' {
              = if 1 {
              - local robust Robust
              - }
              - local CLUSTER cluster
              - if `:list CLUSTER in ARGOPTNAMES' {
              = if 1 {
              - local cluster CLuster(varname)
              - }
              - }
              - local 0 `"`user'"'
              = local 0 `" , robust"'
              - syntax [fw aw pw iw] [, VCE(string asis) `robust' `cluster' ]
              = syntax [fw aw pw iw] [, VCE(string asis) Robust CLuster(varnam
> e) ]
              - if `"`vce'"' != "" {
              = if `""' != "" {
                gettoken name args : vce, parse(" ,")
                local args : list retok args
                capture ParseVCE `o' `a' , `name'
                if c(rc) {
                di as err "vcetype {bf:`name'} not allowed"
                exit 198
                }
                local name `r(vce)'
                if "`weight'" == "pweight" & !`:list name in pwlist' {
                di as err "pweights are not allowed with vce(`name')"
```

```
                        exit 198
                        }
                        return add
                        if `"`robust'"' != "" & !inlist("`name'","","robust","eim","oi
> m","cluster") {
                        opts_exclusive "`robust' vce(`name')"
                        }
                        if "`name'" == "cluster" {
                        if `"`args'"' == "" {
                        di as err "invalid vce(cluster) option"
                        exit 198
                        }
                        confirm var `args'
                        unab args : `args'
                        local markout `args'
                        if "`cluster'" != "" {
                        if !`:list args == cluster' {
                        di as err "options cluster() and vce(cluster) are in conflict"
                        exit 100
                        }
                        }
                        }
                        else if "`cluster'" != "" & !inlist("`name'","eim","oim") {
                        opts_exclusive "cluster() vce(`name')"
                        }
                        if `"`args'"' != "" {
                        if ! `:list name in ARGOPTNAMES' {
                        di as err "invalid vce() option"
                        exit 198
                        }
                        if "`name'" == "hc2" {
                        confirm var `args'
                        unab args : `args'
                        local markout `args'
                        }
                        return local vceargs `"`:list retok args'"'
                        }
                        else if `:list name in ARGOPTNAMES' {
                        if "`noargopt_is_ok'" == "" {
                        di as err "invalid vce() option"
                        exit 198
                        }
                        }
                        }
                  - else {
                  - if "`weight'" == "pweight" | "`robust'" != "" {
```

```
            = if "" == "pweight" | "robust" != "" {
            - local vce robust
            - }
            - if "`cluster'" != "" {
            = if "" != "" {
              local vce cluster
              local args `cluster'
              local markout `cluster'
              }
            - return local vce `"'`vce'"'
            = return local vce `"robust"'
            - return local vceargs `"'`args'"'
            = return local vceargs `""'
            - }
            - if "`return(vce)'" != "" {
            = if "robust" != "" {
            - if `"'`return(vceargs)'"'` != "" {
            = if `""'` != "" {
              local ss " "
              }
            - return local vceopt `"vce(`return(vce)'`ss'`return(vceargs)')"
  > '
            = return local vceopt `"vce(robust)"'
            - }
            - if "`return(vce)'" == "cluster" {
            = if "robust" == "cluster" {
              return local cluster `return(vceargs)'
              }
            - if inlist("`return(vce)'", "robust", "cluster") {
            = if inlist("robust", "robust", "cluster") {
            - return local robust robust
            - }
            - if "`touse'" != "" {
            = if "" != "" {
              if "`markout'" != "" {
              markout `touse' `markout', strok
              }
              }
            _____
  > ─────────────────────────────────── end _vce_parse ───────────
            - local vce `r(vce)'
            = local vce robust
            - }
            - else if "`weight'" == "pweight" {
            = else if "" == "pweight" {
              local vce robust
```

                    Friday, January 10, 2025 at 11:33 AM   Page 554

```
  }
- if `:length local svy' {
= if 0 {
  local vce svy
  }
- if `"`vce'"' == "cluster" {
= if `"robust"' == "cluster" {
  local cluster `r(cluster)'
  markout $ML_sample `cluster', strok
  }
- if `:length local group' {
= if 0 {
  markout $ML_sample `group', strok
  global ML_group : copy local group
  if bsubstr("`:type `group''",1,3) == "str" {
  if `interactive' {
  SetGlobalVar ML_grp : _MLgr
  }
  else {
  global ML_grp : tempvar
  if `"`moptobj'"' != "" {
  global ML_grp `moptobj'$ML_grp
  }
  }
  quietly egen $ML_grp = group(`group')
  if ! `:length local cluster' {
  local cluster : copy global ML_grp
  }
  }
  else {
  if ! `:length local cluster' {
  local cluster : copy global ML_group
  }
  }
  }
- if "$ML_samp" != "$ML_sample" {
= if "__000005" != "__000005" {
  quietly replace $ML_samp = 0 if $ML_samp & $ML_sample == 0
  }
- if `:length local vce' == 0 {
= if 6 == 0 {
  if `"`technique'"' == "bhhh" {
  local vce opg
  }
  else local vce oim
  }
```

```
          - if inlist("`vce'", "robust", "cluster") & bsubstr("`evaltype'",1
> ,1) == "d" {
          = if inlist("robust", "robust", "cluster") & bsubstr("e2",1,1) ==
> "d" {
            local optname = cond("`svy'"=="","vce(`vce')","svy")
            di as err "option `optname' is not allowed with evaltype `evalty
> pe'"
            exit 198
            }
          - if `:length local crittype' == 0 {
          = if 0 == 0 {
          - if inlist("`vce'", "cluster", "robust", "svy") {
          = if inlist("robust", "cluster", "robust", "svy") {
          - local crittype "log pseudolikelihood"
          - }
          - else local crittype "log likelihood"
          - }
          - global ML_waldtest `waldtest'
          = global ML_waldtest 0
          - if `:length local svy' | `:length local weight' {
          = if 0 | 0 {
            if `interactive' {
            SetGlobalVar ML_w : _MLw
            }
            else {
            global ML_w : tempvar
            if `"`moptobj'"' != "" {
            global ML_w `moptobj'$ML_w
            }
            }
            }
          - if `:length local weight' {
          = if 0 {
            if `"`moptobj'"' != "" {
            cap drop $ML_w
            }
            quietly gen double $ML_w `exp' if $ML_samp
            local wtype `"`weight'"'
            local wexp `"`exp'"'
            global ML_wtyp : copy local wtype
            global ML_wexp : copy local wexp
            if "`wtype'" == "iweight" | "`svy'" != "" {
            local zeroweight zeroweight
            }
            }
          - if inlist("`vce'", "svy", "cluster") {
```

```
        = if inlist("robust", "svy", "cluster") {
          if `interactive' {
          SetGlobalVar ML_subv : _MLsu
          }
          else {
          global ML_subv : tempvar
          if `"`moptobj'"' != "" {
          global ML_subv `moptobj'$ML_subv
          }
          }
          }
        - quietly count if $ML_sample
        = quietly count if __000005
        - if r(N) == 0 {
          error 2000
          }
        - if `"`weight'"' != "" {
        = if `""' != "" {
          quietly count if $ML_sample & $ML_w != 0
          if r(N) == 0 {
          di in gr "all observation have zero weights"
          exit 2000
          }
          }
        - if `:length local lf0' {
        = if 0 {
          if `:list sizeof lf0' != 2 {
          di as err "lf0(`lf0') invalid"
          exit 198
          }
          global ML_k0 : word 1 of `lf0'
          global ML_ll_0 : word 2 of `lf0'
          confirm integer number $ML_k0
          confirm number $ML_ll_0
          if $ML_k0 < 0 {
          di as err "lf0(`lf0') invalid"
          exit 198
          }
          }
        - if "`obs'" == "" {
        = if "" == "" {
        - if "`wtype'" != "fweight" {
        = if "" != "fweight" {
        - quietly count if $ML_sample
        = quietly count if __000005
        - local obs = r(N)
```

```
  - }
  - else {
    sum $ML_w if $ML_sample, mean
    local obs = r(sum)
    }
  - }
  - if `:length local iterid' {
  = if 0 {
    local iterid = trim(bsubstr(`"`iterid'"',1,32))
    }
  - if `:length local crittype' {
  = if 20 {
  - local crittype = trim(bsubstr(`"`crittype'"',1,32))
  = local crittype = trim(bsubstr(`"log pseudolikelihood"',1,32))
  - }
  - if `:length local derivscale' {
  = if 0 {
    confirm matrix `derivscale'
    }
  - if `:length local derivh' {
  = if 0 {
    confirm matrix `derivh'
    }
  - local l : strlen local deriv
  - ParseUsemin, `deriv' len(`l')
  = ParseUsemin,  len(0)
    ─────────────────────────────────────────────────────
> ──────────────────────────────── begin mopt.ParseUsemin ─────────────────
        - syntax [, LEN(integer 0) MIN1(string) NOMIN MIN]
        - if `"`min1'"' != "" & `"`nomin'"' != "" {
        = if `""' != "" & `""' != "" {
          di as err "options min() and nomin are mutually exclusive"
          exit 198
          }
        - if `"`min'"' != "" & `"`nomin'"' != "" {
        = if `""' != "" & `""' != "" {
          di as err "options min and nomin are mutually exclusive"
          exit 198
          }
        - if (`"`min1'"' != "") {
        = if (`""' != "") {
          confirm matrix `min1'
          local deriv `min1'
          }
        - else if (`"`min'"' != "") {
        = else if (`""' != "") {
```

```
                        if (`len' > length(`"`min'"')) {
                        di as err "must specify a matrix of 2 columns in option min()"
                        exit 198
                        }
                        local deriv 1
                        }
              ─ else {
              ─ if (`len' > 0) {
              = if (0 > 0) {
                        if ("`nomin'" == "") {
                        di as err "must specify a matrix of 2 columns in option min()"
                        exit 198
                        }
                        else if (`len' > length(`"`nomin'"')) {
                        di as err "options min() and nomin are mutually exclusive"
                        exit 198
                        }
                        else {
                        local deriv 0
                        }
                        }
              ─ else {
              ─ local deriv 0
              ─ }
              ─ }
              ─ sreturn local deriv `deriv'
              = sreturn local deriv 0
              ─────────────────────────────────────────────────────────
> ──────────────────────────────── end mopt.ParseUsemin ────────────────
           ─ local deriv = s(deriv)
           ─ if `:length local gnwmatrix' {
           = if 0 {
             confirm matrix `gnwmatrix'
             }
           ─ `vv' mata: Mopt_model()
           = version 18: mata: Mopt_model()
             ─────────────────────────────────────────────────────────
> ──────────────────────────── begin mopt_check_program ────────────────
           ─ version 10
           ─ args name
           ─ capture confirm name `name'
           = capture confirm name nbreg_lf
           ─ if c(rc) {
             di as err "unrecognized command:   `name' invalid command name
> "
             exit 199
```

```
                    }
              - capture which `name'
              = capture which nbreg_lf
              - if !c(rc) {
              - exit
              _____
> ─────────────────────────────────── end mopt_check_program ──────────────
              - global ML_stat model
              - if !`interactive' {
              = if !0 {
              - `vv' MaxMin `maxmin', nooutput `score' `options' moptobj(`moptob
> j')
              = version 18: MaxMin maximize, nooutput  search(off) moptobj()
              _____
> ─────────────────────────────────────── begin mopt.MaxMin ───────────────
              - local vv : di "version " string(_caller()) ":"
              - version 12
              - ChkMacros
              _____
> ──────────────────────────────────── begin mopt.ChkMacros ───────────────
                - if "$ML_stat" != "model" {
                = if "model" != "model" {
                  di as err "you must issue -ml model- first"
                  exit 198
                  }
                - capture confirm var $ML_samp $ML_w $ML_subv
                = capture confirm var __000005 __000005
                - if c(rc) {
                  di as err "Since issuing the -ml model- statement, you have
> done something to drop" _n "temporary variables ml added to your data.  You
> must start again."
                  Clear
                  exit 111
                  }
              _____
> ──────────────────────────────────────── end mopt.ChkMacros ─────────────
                - syntax name(name=maxmin) [, NEGH TOLerance(numlist max=1 >=0)
> LTOLerance(numlist max=1 >=0) NONRTOLerance NRTOLerance(numlist max=1 >=0) Q
> TOLerance(numlist max=1 >=0) GTOLerance(numlist max=1 >=0) ITERate(numlist m
> ax=1 >=0) NOTCONCAVE(numlist max=1 >=0) ndami DIFficult HALFSTEPonly DOOPT S
> EArch(name) Repeat(passthru) Bounds(string) SCore(string) noWARNing noCLEAR
> NOLOg LOg DOTs SHOWTOLerance SHOWNRtolerance SHOWSTEP TRace COEFDIffs GRADie
> nt HESSian noSKIPline noOUTput Level(cilevel) moptobj(string) * ]
                - if `:length local nrtolerance' {
                = if 0 {
                  opts_exclusive "nrtolerance() `nonrtolerance'"
```

```
                         }
                       − if `:length local qtolerance' {
                       = if 0 {
                         opts_exclusive "qtolerance() `nonrtolerance'"
                         }
                       − opts_exclusive "`nonrtolerance' `shownrtolerance'"
                       = opts_exclusive " "
                       ──────────────────────────────────────────────────────
  >  ─────────────────────────────────── begin opts_exclusive ──────────────
                       − version 8.2
                       − args opts optname errcode optslab
                       − local opts `opts'
                       = local opts
                       − local n 0
                       − while `"`opts'"' != "" {
                       = while `""' != "" {
                         local ++n
                         gettoken item`n' opts : opts, bind
                         }
                       − if `n' < 2 {
                       = if 0 < 2 {
                       − exit

                       ──────────────────────────────────────────────────────
  >  ──────────────────────────────────── end opts_exclusive ───────────────
                       − if `:length local shownrtolerance' {
                       = if 0 {
                         local showtolerance showtolerance
                         }
                       − if "$ML_preserve" != "no" {
                       = if "no" != "no" {
                         if `:length local score' {
                         di as smcl as err "May not specify {bf:score()} option unless"
  >  _n "        a) estimation subsample is the entire data in memory, or" _n "
  >  b) you specify option {bf:nopreserve} on {bf:ml model} statement (meaning"
  >  _n "          your evaluation program explicitly restricts itself to obs" _n
  >  "          for which {bf:$}" "{bf:ML_samp==1}."
                         exit 198
                         }
                         preserve
                         local N = c(N)
                         quietly keep if $ML_sample
                         if (`N' != c(N)) {
                         mata: Mopt_init_regetviews()
                         }
                         }
                       − if `:length local score' {
```

```
                   = if 0 {
                     SetupScore `"$ML_evaltype"' `"`score'"' $ML_n $ML_dim
                     local scores "`s(scores)'"
                     }
                   – _parse_iterlog, `nolog' `log'
                   = _parse_iterlog,
                     ──────────────────────────────────────────────
>  ─────────────────────────────────────── begin _parse_iterlog ─────────────
                   – version 16
                   – syntax [, NOLOG LOG]
                   – if "`log'`nolog'" != "" {
                   = if "" != "" {
                     opts_exclusive "`log' `nolog'"
                     }
                   – else if "`c(iterlog)'" == "on" {
                   = else if "on" == "on" {
                   – local log log
                   – }
                   – else {
                     local nolog nolog
                     }
                   – sreturn local log `log'
                   = sreturn local log log
                   – sreturn local nolog `nolog'
                   = sreturn local nolog
                     ──────────────────────────────────────────────
>  ──────────────────────────────────────── end _parse_iterlog ──────────────
                   – local log "`s(nolog)'"
                   = local log ""
                   – local tropts `log' `dots' `showtolerance' `showstep' `trace' `
>  coefdiffs'
                   = local tropts
                   – if "`tropts'" != "nolog" {
                   = if "" != "nolog" {
                   – local tropts `tropts' `gradient' `hessian'
                   = local tropts
                   – if "`skipline'" == "" {
                   = if "" == "" {
                   – if "`iterate'" != "0" | `:length local tropts' {
                   = if "" != "0" | 0 {
                   – di
```

```
                    - }
                    - }
                    - }
                    - else {
                      local gradient
                      local hessian
                      local nolog nolog
                      }
                    - if "`search'" != "off" & "`iterate'" != "0" {
                    = if "off" != "off" & "" != "0" {
                      if "`search'" == "quietly" {
                      local sopts nolog
                      }
                      else {
                      if `:length local tropts' {
                      if "`tropts'" != "nolog" {
                      local sopts trace
                      }
                      else local sopts nolog
                      }
                      }
                      if "`search'" == "norescale" {
                      local sopts `sopts' norescale
                      }
                      Search `bounds', nopreserve `sopts' `repeat' `maxmin'
                      }
                    - tempname value b V iV
                    - `vv' mata: Mopt_maxmin()
                    = version 18: mata: Mopt_maxmin()
                    ────────────────────────────────────────────────
  > ──────────────────────────────────── begin nbreg_lf ──────────────
                    - version 6.0
                    - args todo b lnf g H sc1 sc2
                    - tempvar xb
                    - tempname lnalpha m
                    - mleval `xb' = `b', eq(1)
                    = mleval __00000Q = __00000J, eq(1)
                    - mleval `lnalpha' = `b', eq(2) scalar
                    = mleval __00000R = __00000J, eq(2) scalar
                    - local y "$ML_y1"
                    = local y "piq_timing_max"
                    - scalar `m' = exp(-`lnalpha')
                    = scalar __00000S = exp(-__00000R)
                    - if `lnalpha' < -20 {
                    = if __00000R < -20 {
                      mlsum `lnf' = -lngamma(`y'+1) - exp(`xb') + `y'*`xb'
```

```
                      }
                    - else {
                    - mlsum `lnf' = lngamma(`m'+`y') - lngamma(`y'+1) - lngamma(`m
>  ') - `m'*ln1p(exp(`xb'+`lnalpha')) - `y'*ln1p(exp(-`xb'-`lnalpha'))
                      = mlsum __00000K = lngamma(__00000S+piq_timing_max) - lngamma(
>  piq_timing_max+1) - lngamma(__00000S) - __00000S*ln1p(exp(__00000Q+__00000R)
>  ) - piq_timing_max*ln1p(exp(-__00000Q-__00000R))
                    - }
                    - if `todo' == 0 | `lnf'==. { exit }
                    = if 2 == 0 | __00000K==. { exit }
                    - tempname alpha
                    - tempvar mu p
                    - quietly {
                    - gen double `mu' = exp(`xb') if $ML_samp
                    = gen double __00000U = exp(__00000Q) if __000005
                    - gen double `p' = 1/(1+exp(`xb'+`lnalpha')) if $ML_samp
                    = gen double __00000V = 1/(1+exp(__00000Q+__00000R)) if __0000
>  05
                    - if `lnalpha'<-20 {
                    = if __00000R<-20 {
                      replace `sc1' = `y'-`mu' if $ML_samp
                      replace `sc2' = 0 if $ML_samp
                      }
                    - else {
                    - replace `sc1' = `p'*(`y'-`mu') if $ML_samp
                    = replace __00000N = __00000V*(piq_timing_max-__00000U) if __0
>  00005
                    - replace `sc2' = `m'*(digamma(`m') - digamma(`y'+`m') - ln(`p
>  ')) + `p'*(`y'-`mu') if $ML_samp
                    = replace __00000O = __00000S*(digamma(__00000S) - digamma(piq
>  _timing_max+__00000S) - ln(__00000V)) + __00000V*(piq_timing_max-__00000U) i
>  f __000005
                    - }
                    - }
                    - $ML_ec tempname g1 g2
                    = * tempname g1 g2
                    - $ML_ec mlvecsum `lnf' `g1' = `sc1', eq(1)
                    = * mlvecsum __00000K  = __00000N, eq(1)
                    - $ML_ec mlvecsum `lnf' `g2' = `sc2', eq(2)
                    = * mlvecsum __00000K  = __000000, eq(2)
                    - $ML_ec matrix `g' = (`g1',`g2')
                    = * matrix __00000L = (,)
                    - if `todo' == 1 | `lnf'==. { exit }
                    = if 2 == 1 | __00000K==. { exit }
                    - tempname alpha d11 d12 d22
                    - scalar `alpha' = exp(`lnalpha')
```

```
              = scalar __00000W = exp(__00000R)
              - if `lnalpha' < -20 {
              = if __00000R < -20 {
                mlmatsum `lnf' `d11' = `mu', eq(1)
                mlmatsum `lnf' `d12' = 0, eq(1,2)
                mlmatsum `lnf' `d22' = 0, eq(2)
                }
              - else {
              - mlmatsum `lnf' `d11' = `mu'*`p'*(`alpha'*`p'*(`y'-`mu')+1),
> eq(1)
              = mlmatsum __00000K __00000X = __00000U*__00000V*(__00000W*__0
> 0000V*(piq_timing_max-__00000U)+1), eq(1)
              - mlmatsum `lnf' `d12' = `alpha'*`mu'*`p'^2*(`y'-`mu'), eq(1,2
> )
              = mlmatsum __00000K __00000Y = __00000W*__00000U*__00000V^2*(p
> iq_timing_max-__00000U), eq(1,2)
              - mlmatsum `lnf' `d22' = `m'*(digamma(`m') - digamma(`y'+`m')
> - ln(`p') - `m'*(trigamma(`y'+`m') - trigamma(`m'))) + `mu'*`p'*(`alpha'*`p'
> *(`y'-`mu')- 1), eq(2)
              = mlmatsum __00000K __00000Z = __00000S*(digamma(__00000S) - d
> igamma(piq_timing_max+__00000S) - ln(__00000V) - __00000S*(trigamma(piq_timi
> ng_max+__00000S) - trigamma(__00000S))) + __00000U*__00000V*(__00000W*__0000
> 0V*(piq_timing_max-__00000U)- 1), eq(2)
              - }
              - matrix `H' = (`d11',`d12' \ `d12'',`d22')
              = matrix __00000M = (__00000X,__00000Y \ __00000Y',__00000Z)
              ──────────────────────────────────────────────────────
> ───────────────────────────────────────── end nbreg_lf ──────────────
Iteration 0:  Log pseudolikelihood = -329.28462
              ──────────────────────────────────────────────────────
> ───────────────────────────────────────── begin nbreg_lf ──────────────
              - version 6.0
              - args todo b lnf g H sc1 sc2
              - tempvar xb
              - tempname lnalpha m
              - mleval `xb' = `b', eq(1)
              = mleval __00000Q = __00000J, eq(1)
              - mleval `lnalpha' = `b', eq(2) scalar
              = mleval __00000R = __00000J, eq(2) scalar
              - local y "$ML_y1"
              = local y "piq_timing_max"
              - scalar `m' = exp(-`lnalpha')
              = scalar __00000S = exp(-__00000R)
              - if `lnalpha' < -20 {
              = if __00000R < -20 {
                mlsum `lnf' = -lngamma(`y'+1) - exp(`xb') + `y'*`xb'
```

```
                          }
                        - else {
                        - mlsum `lnf' = lngamma(`m'+`y') - lngamma(`y'+1) - lngamma(`m
> ') - `m'*ln1p(exp(`xb'+`lnalpha')) - `y'*ln1p(exp(-`xb'-`lnalpha'))
                          = mlsum __00000K = lngamma(__00000S+piq_timing_max) - lngamma(
> piq_timing_max+1) - lngamma(__00000S) - __00000S*ln1p(exp(__00000Q+__00000R)
> ) - piq_timing_max*ln1p(exp(-__00000Q-__00000R))
                        - }
                        - if `todo' == 0 | `lnf'==. { exit }
                          = if 0 == 0 | __00000K==. { exit }
                        ─────────────────────────────────────────────────────────────
> ───────────────────────────────────────── end nbreg_lf ──────────────
                        ─────────────────────────────────────────────────────────────
> ─────────────────────────────────────── begin nbreg_lf ──────────────
                        - version 6.0
                        - args todo b lnf g H sc1 sc2
                        - tempvar xb
                        - tempname lnalpha m
                        - mleval `xb' = `b', eq(1)
                          = mleval __00000Q = __00000J, eq(1)
                        - mleval `lnalpha' = `b', eq(2) scalar
                          = mleval __00000R = __00000J, eq(2) scalar
                        - local y "$ML_y1"
                          = local y "piq_timing_max"
                        - scalar `m' = exp(-`lnalpha')
                          = scalar __00000S = exp(-__00000R)
                        - if `lnalpha' < -20 {
                          = if __00000R < -20 {
                          mlsum `lnf' = -lngamma(`y'+1) - exp(`xb') + `y'*`xb'
                          }
                        - else {
                        - mlsum `lnf' = lngamma(`m'+`y') - lngamma(`y'+1) - lngamma(`m
> ') - `m'*ln1p(exp(`xb'+`lnalpha')) - `y'*ln1p(exp(-`xb'-`lnalpha'))
                          = mlsum __00000K = lngamma(__00000S+piq_timing_max) - lngamma(
> piq_timing_max+1) - lngamma(__00000S) - __00000S*ln1p(exp(__00000Q+__00000R)
> ) - piq_timing_max*ln1p(exp(-__00000Q-__00000R))
                        - }
                        - if `todo' == 0 | `lnf'==. { exit }
                          = if 0 == 0 | __00000K==. { exit }
                        ─────────────────────────────────────────────────────────────
> ───────────────────────────────────────── end nbreg_lf ──────────────
                        ─────────────────────────────────────────────────────────────
> ─────────────────────────────────────── begin nbreg_lf ──────────────
                        - version 6.0
                        - args todo b lnf g H sc1 sc2
                        - tempvar xb
```

```
              - tempname lnalpha m
              - mleval `xb' = `b', eq(1)
              = mleval __00000Q = __00000J, eq(1)
              - mleval `lnalpha' = `b', eq(2) scalar
              = mleval __00000R = __00000J, eq(2) scalar
              - local y "$ML_y1"
              = local y "piq_timing_max"
              - scalar `m' = exp(-`lnalpha')
              = scalar __00000S = exp(-__00000R)
              - if `lnalpha' < -20 {
              = if __00000R < -20 {
                mlsum `lnf' = -lngamma(`y'+1) - exp(`xb') + `y'*`xb'
                }
              - else {
              - mlsum `lnf' = lngamma(`m'+`y') - lngamma(`y'+1) - lngamma(`m
  > ') - `m'*ln1p(exp(`xb'+`lnalpha')) - `y'*ln1p(exp(-`xb'-`lnalpha'))
              = mlsum __00000K = lngamma(__00000S+piq_timing_max) - lngamma(
  > piq_timing_max+1) - lngamma(__00000S) - __00000S*ln1p(exp(__00000Q+__00000R)
  > ) - piq_timing_max*ln1p(exp(-__00000Q-__00000R))
              - }
              - if `todo' == 0 | `lnf'==. { exit }
              = if 0 == 0 | __00000K==. { exit }
              ──────────────────────────────────────────────────────────
  > ─────────────────────────────────────────── end nbreg_lf ──────────────
              ──────────────────────────────────────────────────────────
  > ───────────────────────────────────────── begin nbreg_lf ──────────────
              - version 6.0
              - args todo b lnf g H sc1 sc2
              - tempvar xb
              - tempname lnalpha m
              - mleval `xb' = `b', eq(1)
              = mleval __00000Q = __00000J, eq(1)
              - mleval `lnalpha' = `b', eq(2) scalar
              = mleval __00000R = __00000J, eq(2) scalar
              - local y "$ML_y1"
              = local y "piq_timing_max"
              - scalar `m' = exp(-`lnalpha')
              = scalar __00000S = exp(-__00000R)
              - if `lnalpha' < -20 {
              = if __00000R < -20 {
                mlsum `lnf' = -lngamma(`y'+1) - exp(`xb') + `y'*`xb'
                }
              - else {
              - mlsum `lnf' = lngamma(`m'+`y') - lngamma(`y'+1) - lngamma(`m
  > ') - `m'*ln1p(exp(`xb'+`lnalpha')) - `y'*ln1p(exp(-`xb'-`lnalpha'))
              = mlsum __00000K = lngamma(__00000S+piq_timing_max) - lngamma(
```

```
> piq_timing_max+1) – lngamma(__00000S) – __00000S*ln1p(exp(__00000Q+__00000R)
> ) – piq_timing_max*ln1p(exp(–__00000Q–__00000R))
                       – }
                       – if `todo' == 0 | `lnf'==. { exit }
                       = if 2 == 0 | __00000K==. { exit }
                       – tempname alpha
                       – tempvar mu p
                       – quietly {
                       – gen double `mu' = exp(`xb') if $ML_samp
                       = gen double __00000U = exp(__00000Q) if __000005
                       – gen double `p' = 1/(1+exp(`xb'+`lnalpha')) if $ML_samp
                       = gen double __00000V = 1/(1+exp(__00000Q+__00000R)) if __0000
> 05
                       – if `lnalpha'<–20 {
                       = if __00000R<–20 {
                         replace `sc1' = `y'–`mu' if $ML_samp
                         replace `sc2' = 0 if $ML_samp
                         }
                       – else {
                       – replace `sc1' = `p'*(`y'–`mu') if $ML_samp
                       = replace __00000N = __00000V*(piq_timing_max–__00000U) if __0
> 00005
                       – replace `sc2' = `m'*(digamma(`m') – digamma(`y'+`m') – ln(`p
> ')) + `p'*(`y'–`mu') if $ML_samp
                       = replace __00000O = __00000S*(digamma(__00000S) – digamma(piq
> _timing_max+__00000S) – ln(__00000V)) + __00000V*(piq_timing_max–__00000U) i
> f __000005
                       – }
                       – }
                       – $ML_ec tempname g1 g2
                       = * tempname g1 g2
                       – $ML_ec mlvecsum `lnf' `g1' = `sc1', eq(1)
                       = * mlvecsum __00000K  = __00000N, eq(1)
                       – $ML_ec mlvecsum `lnf' `g2' = `sc2', eq(2)
                       = * mlvecsum __00000K  = __000000, eq(2)
                       – $ML_ec matrix `g' = (`g1',`g2')
                       = * matrix __00000L = (,)
                       – if `todo' == 1 | `lnf'==. { exit }
                       = if 2 == 1 | __00000K==. { exit }
                       – tempname alpha d11 d12 d22
                       – scalar `alpha' = exp(`lnalpha')
                       = scalar __00000W = exp(__00000R)
                       – if `lnalpha' < –20 {
                       = if __00000R < –20 {
                         mlmatsum `lnf' `d11' = `mu', eq(1)
                         mlmatsum `lnf' `d12' = 0, eq(1,2)
```

```
                mlmatsum `lnf' `d22' = 0, eq(2)
                }
              - else {
              - mlmatsum `lnf' `d11' = `mu'*`p'*(`alpha'*`p'*(`y'-`mu')+1),
> eq(1)
              = mlmatsum __00000K __00000X = __00000U*__00000V*(__00000W*__0
> 0000V*(piq_timing_max-__00000U)+1), eq(1)
              - mlmatsum `lnf' `d12' = `alpha'*`mu'*`p'^2*(`y'-`mu'), eq(1,2
> )
              = mlmatsum __00000K __00000Y = __00000W*__00000U*__00000V^2*(p
> iq_timing_max-__00000U), eq(1,2)
              - mlmatsum `lnf' `d22' = `m'*(digamma(`m') - digamma(`y'+`m')
> - ln(`p') - `m'*(trigamma(`y'+`m') - trigamma(`m'))) + `mu'*`p'*(`alpha'*`p'
> *(`y'-`mu')- 1), eq(2)
              = mlmatsum __00000K __00000Z = __00000S*(digamma(__00000S) - d
> igamma(piq_timing_max+__00000S) - ln(__00000V) - __00000S*(trigamma(piq_timi
> ng_max+__00000S) - trigamma(__00000S))) + __00000U*__00000V*(__00000W*__0000
> 0V*(piq_timing_max-__00000U)- 1), eq(2)
              - }
              - matrix `H' = (`d11',`d12' \ `d12'',`d22')
              = matrix __00000M = (__00000X,__00000Y \ __00000Y',__00000Z)
              ─────────────────────────────────────────────────────────────
> ───────────────────────────────────── end nbreg_lf ──────────────
Iteration 1:   Log pseudolikelihood = −322.25152
              ─────────────────────────────────────────────────────────────
> ───────────────────────────────────── begin nbreg_lf ─────────────
              - version 6.0
              - args todo b lnf g H sc1 sc2
              - tempvar xb
              - tempname lnalpha m
              - mleval `xb' = `b', eq(1)
              = mleval __00000Q = __00000J, eq(1)
              - mleval `lnalpha' = `b', eq(2) scalar
              = mleval __00000R = __00000J, eq(2) scalar
              - local y "$ML_y1"
              = local y "piq_timing_max"
              - scalar `m' = exp(-`lnalpha')
              = scalar __00000S = exp(-__00000R)
              - if `lnalpha' < −20 {
              = if __00000R < −20 {
                mlsum `lnf' = −lngamma(`y'+1) − exp(`xb') + `y'*`xb'
                }
              - else {
              - mlsum `lnf' = lngamma(`m'+`y') − lngamma(`y'+1) − lngamma(`m
> ') − `m'*ln1p(exp(`xb'+`lnalpha')) − `y'*ln1p(exp(−`xb'−`lnalpha'))
              = mlsum __00000K = lngamma(__00000S+piq_timing_max) − lngamma(
```

```
> piq_timing_max+1) − lngamma(__00000S) − __00000S*ln1p(exp(__00000Q+__00000R)
> ) − piq_timing_max*ln1p(exp(−__00000Q−__00000R))
                   − }
                   − if `todo' == 0 | `lnf'==. { exit }
                   = if 0 == 0 | __00000K==. { exit }
                   ───────────────────────────────────────────────
> ─────────────────────────────────── end nbreg_lf ───────────────
                   ───────────────────────────────────────────────
> ─────────────────────────────────── begin nbreg_lf ─────────────
                   − version 6.0
                   − args todo b lnf g H sc1 sc2
                   − tempvar xb
                   − tempname lnalpha m
                   − mleval `xb' = `b', eq(1)
                   = mleval __00000Q = __00000J, eq(1)
                   − mleval `lnalpha' = `b', eq(2) scalar
                   = mleval __00000R = __00000J, eq(2) scalar
                   − local y "$ML_y1"
                   = local y "piq_timing_max"
                   − scalar `m' = exp(−`lnalpha')
                   = scalar __00000S = exp(−__00000R)
                   − if `lnalpha' < −20 {
                   = if __00000R < −20 {
                     mlsum `lnf' = −lngamma(`y'+1) − exp(`xb') + `y'*`xb'
                     }
                   − else {
                   − mlsum `lnf' = lngamma(`m'+`y') − lngamma(`y'+1) − lngamma(`m
> ') − `m'*ln1p(exp(`xb'+`lnalpha')) − `y'*ln1p(exp(−`xb'−`lnalpha'))
                   = mlsum __00000K = lngamma(__00000S+piq_timing_max) − lngamma(
> piq_timing_max+1) − lngamma(__00000S) − __00000S*ln1p(exp(__00000Q+__00000R)
> ) − piq_timing_max*ln1p(exp(−__00000Q−__00000R))
                   − }
                   − if `todo' == 0 | `lnf'==. { exit }
                   = if 0 == 0 | __00000K==. { exit }
                   ───────────────────────────────────────────────
> ─────────────────────────────────── end nbreg_lf ───────────────
                   ───────────────────────────────────────────────
> ─────────────────────────────────── begin nbreg_lf ─────────────
                   − version 6.0
                   − args todo b lnf g H sc1 sc2
                   − tempvar xb
                   − tempname lnalpha m
                   − mleval `xb' = `b', eq(1)
                   = mleval __00000Q = __00000J, eq(1)
                   − mleval `lnalpha' = `b', eq(2) scalar
                   = mleval __00000R = __00000J, eq(2) scalar
```

```
- local y "$ML_y1"
= local y "piq_timing_max"
- scalar `m' = exp(-`lnalpha')
= scalar __00000S = exp(-__00000R)
- if `lnalpha' < -20 {
= if __00000R < -20 {
  mlsum `lnf' = -lngamma(`y'+1) - exp(`xb') + `y'*`xb'
  }
- else {
- mlsum `lnf' = lngamma(`m'+`y') - lngamma(`y'+1) - lngamma(`m
> ') - `m'*ln1p(exp(`xb'+`lnalpha')) - `y'*ln1p(exp(-`xb'-`lnalpha'))
= mlsum __00000K = lngamma(__00000S+piq_timing_max) - lngamma(
> piq_timing_max+1) - lngamma(__00000S) - __00000S*ln1p(exp(__00000Q+__00000R)
> ) - piq_timing_max*ln1p(exp(-__00000Q-__00000R))
- }
- if `todo' == 0 | `lnf'==. { exit }
= if 2 == 0 | __00000K==. { exit }
- tempname alpha
- tempvar mu p
- quietly {
- gen double `mu' = exp(`xb') if $ML_samp
= gen double __00000U = exp(__00000Q) if __000005
- gen double `p' = 1/(1+exp(`xb'+`lnalpha')) if $ML_samp
= gen double __00000V = 1/(1+exp(__00000Q+__00000R)) if __0000
> 05
- if `lnalpha'<-20 {
= if __00000R<-20 {
  replace `sc1' = `y'-`mu' if $ML_samp
  replace `sc2' = 0 if $ML_samp
  }
- else {
- replace `sc1' = `p'*(`y'-`mu') if $ML_samp
= replace __00000N = __00000V*(piq_timing_max-__00000U) if __0
> 00005
- replace `sc2' = `m'*(digamma(`m') - digamma(`y'+`m') - ln(`p
> ')) + `p'*(`y'-`mu') if $ML_samp
= replace __00000O = __00000S*(digamma(__00000S) - digamma(piq
> _timing_max+__00000S) - ln(__00000V)) + __00000V*(piq_timing_max-__00000U) i
> f __000005
- }
- }
- $ML_ec tempname g1 g2
= * tempname g1 g2
- $ML_ec mlvecsum `lnf' `g1' = `sc1', eq(1)
= * mlvecsum __00000K  = __00000N, eq(1)
- $ML_ec mlvecsum `lnf' `g2' = `sc2', eq(2)
```

```
                  = * mlvecsum __00000K  = __000000, eq(2)
                  - $ML_ec matrix `g' = (`g1',`g2')
                  = * matrix __00000L = (,)
                  - if `todo' == 1 | `lnf'==. { exit }
                  = if 2 == 1 | __00000K==. { exit }
                  - tempname alpha d11 d12 d22
                  - scalar `alpha' = exp(`lnalpha')
                  = scalar __00000W = exp(__00000R)
                  - if `lnalpha' < -20 {
                  = if __00000R < -20 {
                    mlmatsum `lnf' `d11' = `mu', eq(1)
                    mlmatsum `lnf' `d12' = 0, eq(1,2)
                    mlmatsum `lnf' `d22' = 0, eq(2)
                    }
                  - else {
                  - mlmatsum `lnf' `d11' = `mu'*`p'*(`alpha'*`p'*(`y'-`mu')+1),
> eq(1)
                  = mlmatsum __00000K __00000X = __00000U*__00000V*(__00000W*__0
> 0000V*(piq_timing_max-__00000U)+1), eq(1)
                  - mlmatsum `lnf' `d12' = `alpha'*`mu'*`p'^2*(`y'-`mu'), eq(1,2
> )
                  = mlmatsum __00000K __00000Y = __00000W*__00000U*__00000V^2*(p
> iq_timing_max-__00000U), eq(1,2)
                  - mlmatsum `lnf' `d22' = `m'*(digamma(`m') - digamma(`y'+`m')
> - ln(`p') - `m'*(trigamma(`y'+`m') - trigamma(`m'))) + `mu'*`p'*(`alpha'*`p'
> *(`y'-`mu')- 1), eq(2)
                  = mlmatsum __00000K __00000Z = __00000S*(digamma(__00000S) - d
> igamma(piq_timing_max+__00000S) - ln(__00000V) - __00000S*(trigamma(piq_timi
> ng_max+__00000S) - trigamma(__00000S))) + __00000U*__00000V*(__00000W*__0000
> 0V*(piq_timing_max-__00000U)- 1), eq(2)
                  - }
                  - matrix `H' = (`d11',`d12' \ `d12'',`d22')
                  = matrix __00000M = (__00000X,__00000Y \ __00000Y',__00000Z)
                  ────────────────────────────────────────────────────────
> ──────────────────────────────────── end nbreg_lf ─────────────────
Iteration 2:  Log pseudolikelihood = -322.23587
                  ──────────────────────────────────────────────────────
> ──────────────────────────────────── begin nbreg_lf ───────────────
                  - version 6.0
                  - args todo b lnf g H sc1 sc2
                  - tempvar xb
                  - tempname lnalpha m
                  - mleval `xb' = `b', eq(1)
                  = mleval __00000Q = __00000J, eq(1)
                  - mleval `lnalpha' = `b', eq(2) scalar
                  = mleval __00000R = __00000J, eq(2) scalar
```

```
                  - local y "$ML_y1"
                  = local y "piq_timing_max"
                  - scalar `m' = exp(-`lnalpha')
                  = scalar __00000S = exp(-__00000R)
                  - if `lnalpha' < -20 {
                  = if __00000R < -20 {
                    mlsum `lnf' = -lngamma(`y'+1) - exp(`xb') + `y'*`xb'
                    }
                  - else {
                  - mlsum `lnf' = lngamma(`m'+`y') - lngamma(`y'+1) - lngamma(`m
>  ') - `m'*ln1p(exp(`xb'+`lnalpha')) - `y'*ln1p(exp(-`xb'-`lnalpha'))
                  = mlsum __00000K = lngamma(__00000S+piq_timing_max) - lngamma(
>  piq_timing_max+1) - lngamma(__00000S) - __00000S*ln1p(exp(__00000Q+__00000R)
>  ) - piq_timing_max*ln1p(exp(-__00000Q-__00000R))
                  - }
                  - if `todo' == 0 | `lnf'==. { exit }
                  = if 0 == 0 | __00000K==. { exit }
                  ─────────────────────────────────────────────────────
>  ─────────────────────────────────── end nbreg_lf ───────────────
                  ─────────────────────────────────────────────────────
>  ───────────────────────────────── begin nbreg_lf ───────────────
                  - version 6.0
                  - args todo b lnf g H sc1 sc2
                  - tempvar xb
                  - tempname lnalpha m
                  - mleval `xb' = `b', eq(1)
                  = mleval __00000Q = __00000J, eq(1)
                  - mleval `lnalpha' = `b', eq(2) scalar
                  = mleval __00000R = __00000J, eq(2) scalar
                  - local y "$ML_y1"
                  = local y "piq_timing_max"
                  - scalar `m' = exp(-`lnalpha')
                  = scalar __00000S = exp(-__00000R)
                  - if `lnalpha' < -20 {
                  = if __00000R < -20 {
                    mlsum `lnf' = -lngamma(`y'+1) - exp(`xb') + `y'*`xb'
                    }
                  - else {
                  - mlsum `lnf' = lngamma(`m'+`y') - lngamma(`y'+1) - lngamma(`m
>  ') - `m'*ln1p(exp(`xb'+`lnalpha')) - `y'*ln1p(exp(-`xb'-`lnalpha'))
                  = mlsum __00000K = lngamma(__00000S+piq_timing_max) - lngamma(
>  piq_timing_max+1) - lngamma(__00000S) - __00000S*ln1p(exp(__00000Q+__00000R)
>  ) - piq_timing_max*ln1p(exp(-__00000Q-__00000R))
                  - }
                  - if `todo' == 0 | `lnf'==. { exit }
                  = if 0 == 0 | __00000K==. { exit }
```

```
> ──────────────────────────────────────────────────────────────────
> ────────────────────────────────────────────── end nbreg_lf ──────────────
> ──────────────────────────────────────────────────────────────────
> ───────────────────────────────────────────── begin nbreg_lf ──────────────
                  - version 6.0
                  - args todo b lnf g H sc1 sc2
                  - tempvar xb
                  - tempname lnalpha m
                  - mleval `xb' = `b', eq(1)
                  = mleval __00000Q = __00000J, eq(1)
                  - mleval `lnalpha' = `b', eq(2) scalar
                  = mleval __00000R = __00000J, eq(2) scalar
                  - local y "$ML_y1"
                  = local y "piq_timing_max"
                  - scalar `m' = exp(-`lnalpha')
                  = scalar __00000S = exp(-__00000R)
                  - if `lnalpha' < -20 {
                  = if __00000R < -20 {
                    mlsum `lnf' = -lngamma(`y'+1) - exp(`xb') + `y'*`xb'
                    }
                  - else {
                  - mlsum `lnf' = lngamma(`m'+`y') - lngamma(`y'+1) - lngamma(`m
> ') - `m'*ln1p(exp(`xb'+`lnalpha')) - `y'*ln1p(exp(-`xb'-`lnalpha'))
                  = mlsum __00000K = lngamma(__00000S+piq_timing_max) - lngamma(
> piq_timing_max+1) - lngamma(__00000S) - __00000S*ln1p(exp(__00000Q+__00000R)
> ) - piq_timing_max*ln1p(exp(-__00000Q-__00000R))
                  - }
                  - if `todo' == 0 | `lnf'==. { exit }
                  = if 2 == 0 | __00000K==. { exit }
                  - tempname alpha
                  - tempvar mu p
                  - quietly {
                  - gen double `mu' = exp(`xb') if $ML_samp
                  = gen double __00000U = exp(__00000Q) if __000005
                  - gen double `p' = 1/(1+exp(`xb'+`lnalpha')) if $ML_samp
                  = gen double __00000V = 1/(1+exp(__00000Q+__00000R)) if __0000
> 05
                  - if `lnalpha'<-20 {
                  = if __00000R<-20 {
                    replace `sc1' = `y'-`mu' if $ML_samp
                    replace `sc2' = 0 if $ML_samp
                    }
                  - else {
                  - replace `sc1' = `p'*(`y'-`mu') if $ML_samp
                  = replace __00000N = __00000V*(piq_timing_max-__00000U) if __0
> 00005
```

Friday, January 10, 2025 at 11:33 AM   Page 574

```
            - replace `sc2' = `m'*(digamma(`m') - digamma(`y'+`m') - ln(`p
> ')) + `p'*(`y'-`mu') if $ML_samp
            = replace __000000 = __00000S*(digamma(__00000S) - digamma(piq
> _timing_max+__00000S) - ln(__00000V)) + __00000V*(piq_timing_max-__00000U) i
> f __000005
            - }
            - }
            - $ML_ec tempname g1 g2
            = * tempname g1 g2
            - $ML_ec mlvecsum `lnf' `g1' = `sc1', eq(1)
            = * mlvecsum __00000K  = __00000N, eq(1)
            - $ML_ec mlvecsum `lnf' `g2' = `sc2', eq(2)
            = * mlvecsum __00000K  = __000000, eq(2)
            - $ML_ec matrix `g' = (`g1',`g2')
            = * matrix __00000L = (,)
            - if `todo' == 1 | `lnf'==. { exit }
            = if 2 == 1 | __00000K==. { exit }
            - tempname alpha d11 d12 d22
            - scalar `alpha' = exp(`lnalpha')
            = scalar __00000W = exp(__00000R)
            - if `lnalpha' < -20 {
            = if __00000R < -20 {
              mlmatsum `lnf' `d11' = `mu', eq(1)
              mlmatsum `lnf' `d12' = 0, eq(1,2)
              mlmatsum `lnf' `d22' = 0, eq(2)
              }
            - else {
            - mlmatsum `lnf' `d11' = `mu'*`p'*(`alpha'*`p'*(`y'-`mu')+1),
> eq(1)
            = mlmatsum __00000K __00000X = __00000U*__00000V*(__00000W*__0
> 0000V*(piq_timing_max-__00000U)+1), eq(1)
            - mlmatsum `lnf' `d12' = `alpha'*`mu'*`p'^2*(`y'-`mu'), eq(1,2
> )
            = mlmatsum __00000K __00000Y = __00000W*__00000U*__00000V^2*(p
> iq_timing_max-__00000U), eq(1,2)
            - mlmatsum `lnf' `d22' = `m'*(digamma(`m') - digamma(`y'+`m')
> - ln(`p') - `m'*(trigamma(`y'+`m') - trigamma(`m'))) + `mu'*`p'*(`alpha'*`p'
> *(`y'-`mu')- 1), eq(2)
            = mlmatsum __00000K __00000Z = __00000S*(digamma(__00000S) - d
> igamma(piq_timing_max+__00000S) - ln(__00000V) - __00000S*(trigamma(piq_timi
> ng_max+__00000S) - trigamma(__00000S))) + __00000U*__00000V*(__00000W*__0000
> 0V*(piq_timing_max-__00000U)- 1), eq(2)
            - }
            - matrix `H' = (`d11',`d12' \ `d12'',`d22')
            = matrix __00000M = (__00000X,__00000Y \ __00000Y',__00000Z)
            _____
```

```
> ───────────────────────────────── end nbreg_lf ─────────────────
Iteration 3:   Log pseudolikelihood = −322.23587
                       ──────────────────────────────────────────────
> ───────────────────────────────── begin mopt_post ─────────────────
                – args b V C wgt touse depvar
                – if `:length local touse' {
                = if 8 {
                – tempname esamp
                – quietly gen byte `esamp' = `touse'
                = quietly gen byte __00000S = __000005
                – }
                – ereturn post `b' `V' `C' `wgt', esample(`esamp') depname(`de
> pvar') buildfvinfo
                = ereturn post __00000Q __00000R  [], esample(__00000S) depnam
> e(piq_timing_max) buildfvinfo
                       ──────────────────────────────────────────────
> ───────────────────────────────── end mopt_post ─────────────────
                – ereturn scalar k_eq_model = abs($ML_waldtest)
                = ereturn scalar k_eq_model = abs(0)
                – if `:length global ML_ll_0' {
                = if 0 {
                  ereturn scalar ll_0 = $ML_ll_0
                  if `:length global ML_rank0' {
                  ereturn scalar rank0 = $ML_rank0
                  ereturn scalar df_m = e(rank) − $ML_rank0
                  }
                  else ereturn scalar df_m = e(rank) − $ML_k0
                  }
                – if !`:length global ML_ll_0' | inlist(e(vce), "robust", "clust
> er", "linearized") {
                = if !0 | inlist(e(vce), "robust", "cluster", "linearized") {
                – if "$ML_svy" == "" {
                = if "" == "" {
                – _prefix_model_test, minimum
                       ──────────────────────────────────────────────
> ───────────────────────────────── begin _prefix_model_test ─────────────────
                – version 9
                – syntax [name(name=cmd)] [, svy noADJust noSVYadjust MINimum
> ]
                – if (inlist("`cmd'","asmixlogit","cmmixlogit","cmxtmixlogit")
> ) {
                = if (inlist("","asmixlogit","cmmixlogit","cmxtmixlogit")) {
                  _asmixtest, `svy' `adjust' `svyadjust'
                  exit
                  }
                – local K = 1
```

```
        -  if "`e(k_eq_model)'" != "" {
        =  if "0" != "" {
        -  capture confirm integer number `e(k_eq_model)'
        =  capture confirm integer number 0
        -  if ! c(rc) {
        -  local K = e(k_eq_model)
        -  }
        -  }
        -  if "`e(k_eq_model_skip)'" != "" {
        =  if "" != "" {
           capture confirm integer number `e(k_eq_model_skip)'
           if ! c(rc) {
           local skip = e(k_eq_model_skip)
           }
           }
        -  ereturn local df_m
        -  ereturn local F
        -  ereturn local chi2
        -  ereturn local chi2type
        -  ereturn local p
        -  if (`K' == 0) {
        =  if (0 == 0) {
        -  exit
        _____
```

> ─────────────────────────────── end _prefix_model_test ───────────────

```
        -  }
        -  else {
           _prefix_model_test, $ML_svy $ML_noadj
           }
        -  }
        -  else if `:length global ML_ll_0' {
        =  else if 0 {
           if `"`maxmin'"' == "minimize" {
           ereturn scalar chi2 = –2*(e(ll)–e(ll_0))
           }
           else {
           ereturn scalar chi2 = 2*(e(ll)–e(ll_0))
           }
           ereturn scalar p = chi2tail(e(df_m), e(chi2))
           ereturn local chi2type "LR"
           }
        -  if `:length global ML_wexp' {
        =  if 0 {
           ereturn local wtype `"$ML_wtyp"'
           ereturn local wexp `"$ML_wexp"'
           }
```

```
            - if `:length global ML_group' {
            = if 0 {
              ereturn local group `"$ML_group"'
              if `"`e(clustvar)'"' == "$ML_grp" & "$ML_grp" != "" {
              ereturn local clustvar `"$ML_group"'
              }
            }
            - ereturn local cmd "ml"
            - if `:length local score' {
            = if 0 {
              mata: Mopt_score(0)
              ereturn local scorevars `scores'
            }
            - if "$ML_preserve" != "no" {
            = if "no" != "no" {
              restore
              if "`e(prefix)'" == "svy" & e(N_strata_omit) {
              tempname v
              quietly _svy2 $ML_sample if $ML_sample, type(total) svy v(`v')
>  subpop(`e(subpop)') touse($ML_sample)
            }
              ereturn repost, esample($ML_sample)
            }
            - if `"`moptobj'"' != "" {
            = if `""' != "" {
              local clear noclear
            }
            - if !`:length local clear' {
            = if !0 {
            - Clear
              ─────────────────────────────────────────────────────
>  ─────────────────────────────────── begin mopt.Clear ─────────────
            - syntax [, NOTANOPTION]
            - capture drop $ML_w
            = capture drop __000005
            - capture drop $ML_samp
            = capture drop __000005
            - capture drop $ML_sample
            = capture drop __000005
            - capture drop $ML_subv
            = capture drop
            - capture drop $ML_grp
            = capture drop
            - mata: Mopt_drop_external()
            - macro drop ML_*
              ─────────────────────────────────────────────────────
```

```
> ─────────────────────────────── end mopt.Clear ───────────────────
              – }
              – else {
                capture confirm var $ML_sample
                if c(rc) {
                quietly gen byte $ML_sample = e(sample)
                }
                }
              – if `:length local output' == 0 {
              = if 8 == 0 {
                Display, level(`level') `options'
                }
                ──────────────────────────────────────────────────
> ───────────────────────────────── end mopt.MaxMin ─────────────────
          – }
                ──────────────────────────────────────────────────
> ───────────────────────────────── end mopt.Model ─────────────────
            – if c(rc) {
              local rc = c(rc)
              Clear
              exit `rc'
              }
            – exit
                ──────────────────────────────────────────────────
> ──────────────────────────────────── end mopt ───────────────────
         – exit
                ──────────────────────────────────────────────────
> ──────────────────────────────────── end ml ────────────────────
         – mat `b0' = e(b)
         = mat __000003 = e(b)
         – scalar `ll0' = e(ll)
         = scalar __000004 = e(ll)
         – local continu "continue"
         – }
         – if `"`from'"'=="" {
         = if `""'=="" {
         – if "`constan'"=="" {
         = if ""=="" {
         – local dim = colsof(`bp')
         = local dim = colsof(__000002)
         – if `dim' > 1 {
         = if 9 > 1 {
         – tempvar xb
         – qui mat score `xb' = `bp' if `touse'
         = qui mat score __000005 = __000002 if __000000
         – if "`weight'"!="" {
```

```
        = if ""!="" {
          local wt `"[aw`exp']"'
          }
        - summarize `xb' `wt' if `touse', meanonly
        = summarize __000005  if __000000, meanonly
        - if "`offset'"!="" {
        = if ""!="" {
          qui replace `xb' = `xb' + `b0'[1,1] - r(mean) + `offset'
          }
        - else {
        - qui replace `xb' = `xb' + `b0'[1,1] - r(mean)
        = qui replace __000005 = __000005 + __000003[1,1] - r(mean)
        - }
        - mat `bp'[1,`dim'] = `bp'[1,`dim'] + `b0'[1,1] - r(mean)
        = mat __000002[1,9] = __000002[1,9] + __000003[1,1] - r(mean)
        - mat `bp' = (`bp', `b0'[1,2..2])
        = mat __000002 = (__000002, __000003[1,2..2])
        - `LLprog' `y' `xb' `b0'[1,2] [`weight'`exp'] if `touse', nobs(`r(N)')
        = LLalpha piq_timing_max __000005 __000003[1,2] [] if __000000, nobs(145
> )
        ─────────────────────────────────────────────────────────────────
> ────────────────────────────────────── begin nbreg.LLalpha ──────────────
        - gettoken y 0 : 0
        - gettoken z 0 : 0
        - gettoken b0 0 : 0
        - syntax [fw aw pw iw] [if], Nobs(string)
        - if "`weight'"!="" {
        = if ""!="" {
          if "`weight'"=="fweight" {
          local wt `"[fw`exp']"'
          }
          else local wt `"[aw`exp']"'
          }
        - tempname lnalpha m
        - scalar `lnalpha' = `b0'
        = scalar __000006 = __000003[1,2]
        - local bound -20
        - if `lnalpha' < `bound' { scalar `lnalpha' = `bound' }
        = if __000006 < -20 { scalar __000006 = -20 }
        - scalar `m' = exp(-`lnalpha')
        = scalar __000007 = exp(-__000006)
        - qui replace `z' = lngamma(`m'+`y') - lngamma(`y'+1) - lngamma(`m') -
>  `m'*ln1p(exp(`z'+`lnalpha')) - `y'*ln1p(exp(-`z'-`lnalpha')) `if'
        = qui replace __000005 = lngamma(__000007+piq_timing_max) - lngamma(pi
> q_timing_max+1) - lngamma(__000007) - __000007*ln1p(exp(__000005+__000006))
> - piq_timing_max*ln1p(exp(-__000005-__000006)) if __000000
```

```
        - summarize `z' `wt' `if', meanonly
        = summarize __000005  if __000000, meanonly
        - if r(N) != `nobs' { exit }
        = if r(N) != 145 { exit }
        - if "`weight'"=="aweight" {
        = if ""=="aweight" {
          ret scalar lnf = r(N)*r(mean)
          }
        - else ret scalar lnf = r(sum)
        ─────────────────────────────────────────────────────────
```

```
        - if r(lnf) > `ll0' & r(lnf)<. {
        = if r(lnf) > __000004 & r(lnf)<. {
        - local initopt "init(`bp')"
        = local initopt "init(__000002)"
        - }
        - }
        - if "`initopt'"=="" {
        = if "init(__000002)"=="" {
          local initopt "init(`b0')"
          }
        - }
        - else {
          tempname b0
          mat `b0' = (0)
          if _caller() < 15 {
          mat colnames `b0' = ln`parm':_cons
          }
          else {
          mat colnames `b0' = /ln`parm'
          }
          mat `bp' = (`bp',`b0')
          local initopt "init(`bp')"
          }
        - `nohead' di in gr _n "Fitting full model:"
        =  di in gr _n "Fitting full model:"
```

```
Fitting full model:
       - }
       - else local initopt `"init(`from')"'
       = else local initopt `"init()"'
       - `vv' ml model `mm' `prog' (`yname': `y'=`xvars', `constan' `offopt') /
> ln`parm' if `touse' [`weight''`exp'], collinear missing max nooutput nopreser
> ve `initopt' search(off) `mlopts' `scopt' `robust' `vce' `continu' title(`ti
> tle') diparm(ln`parm', exp label("`parm'")) `negh' `moptobj'
       = version 18: ml model e2 nbreg_lf (piq_timing_max: piq_timing_max=ln_ne
> q cb_authors_ext estimated est_late o.est_early wg_ndx_other stky_pr_rotembe
> rg stky_pr_calvo,  ) /lnalpha if __000000 [], collinear missing max nooutput
>  nopreserve init(__000002) search(off)   robust vce(robust) continue title(N
> egative binomial regression) diparm(lnalpha, exp label("alpha")) negh
         ──────────────────────────────────────────────────────────────────────
> ───────────────────────────────────────────── begin ml ────────────────────
         - if _caller()>=11 {
         - mopt `0'
         = mopt model e2 nbreg_lf (piq_timing_max: piq_timing_max=ln_neq cb_aut
> hors_ext estimated est_late o.est_early wg_ndx_other stky_pr_rotemberg stky_
> pr_calvo,  ) /lnalpha if __000000 [], collinear missing max nooutput noprese
> rve init(__000002) search(off)   robust vce(robust) continue title(Negative
> binomial regression) diparm(lnalpha, exp label("alpha")) negh
         ──────────────────────────────────────────────────────────────────────
> ──────────────────────────────────────────── begin mopt ───────────────────
         - local vv : di "version " string(_caller()) ":"
         - version 12
         - gettoken subcmd 0 : 0, parse(" ,")
         - local lcmd : length local subcmd
         - if "`subcmd'" == "clear" {
         = if "model" == "clear" {
           Clear
           exit
           }
         - if `"`subcmd'"' == "hold" {
         = if `"model"' == "hold" {
           ml_hold `0'
           exit
           }
         - if `"`subcmd'"' == "unhold" {
         = if `"model"' == "unhold" {
           ml_unhold `0'
           exit
           }
         - if "`subcmd'" == "score" {
         = if "model" == "score" {
           if _caller() > 12 {
```

```
  `vv' Score `0'
  }
  else {
  Score `0'
  }
  exit
  }
- if "`subcmd'" == "count" {
= if "model" == "count" {
  Count `0'
  exit
  }
- if "`subcmd'" == "trace" {
= if "model" == "trace" {
  Trace `0'
  exit
  }
- if "`subcmd'" == bsubstr("graph",1,max(2,`lcmd')) {
= if "model" == bsubstr("graph",1,max(2,5)) {
  Graph `0'
  exit
  }
- if "`subcmd'" == "init" {
= if "model" == "init" {
  Interactive 0
  `vv' Init `0'
  exit
  }
- if "`subcmd'" == bsubstr("maximize",1,max(3,`lcmd')) {
= if "model" == bsubstr("maximize",1,max(3,5)) {
  Interactive 1
  `vv' MaxMin maximize `0'
  exit
  }
- if "`subcmd'" == bsubstr("minimize",1,max(3,`lcmd')) {
= if "model" == bsubstr("minimize",1,max(3,5)) {
  Interactive 1
  `vv' MaxMin minimize `0'
  exit
  }
- if "`subcmd'" == bsubstr("display",1,max(2,`lcmd')) {
= if "model" == bsubstr("display",1,max(2,5)) {
  Display `0'
  exit
  }
- if "`subcmd'" == bsubstr("footnote",1,max(4,`lcmd')) {
```

```
            = if "model" == bsubstr("footnote",1,max(4,5)) {
              ml_footnote `0'
              exit
              }
            – if "`subcmd'" == "," {
            = if "model" == "," {
              Display, `0'
              exit
              }
            – if "`subcmd'" == bsubstr("model",1,max(3,`lcmd')) {
            = if "model" == bsubstr("model",1,max(3,5)) {
            – `vv' capture noi Model `0'
            = version 18: capture noi Model  e2 nbreg_lf (piq_timing_max: piq_ti
> ming_max=ln_neq cb_authors_ext estimated est_late o.est_early wg_ndx_other s
> tky_pr_rotemberg stky_pr_calvo,  ) /lnalpha if __000000 [], collinear missin
> g max nooutput nopreserve init(__000002) search(off)   robust vce(robust) co
> ntinue title(Negative binomial regression) diparm(lnalpha, exp label("alpha"
> )) negh
              ───────────────────────────────────────────────────────────────
> ─────────────────────────────────────────── begin mopt.Model ──────────────
            – local version = string(_caller())
            – local vv : di "version `version':"
            = local vv : di "version 18:"
            – version 12
            – syntax anything(id="model" name=spec) [if] [in] [fw aw pw iw] [,
>   BRACKET COLlinear MISSing CONTinue lf0(string) INIT(string) CONSTraints(str
> ing) noCNSNOTEs VCE(passthru) NEGH NOPREserve TECHnique(string) ITERID(strin
> g) CRITtype(string) OBS(numlist max=1 >0) TItle(string) WALDtest(integer –1)
>   SVY SUBpop(string) SRSsubpop noSVYadjust SCore(passthru) noOUTput noSCVARS
> GROUP(varname) ITERPROLOG(string) DERIVPROLOG(string) DERIVH(string) DERIVSC
> ALE(string) DERIV(string) nrderiv GNWMATrix(string) KAUXiliary(numlist int >
> =0) MAXimize MINimize USERinfo(namelist) PUPDATED Robust CLuster(passthru) m
> optobj(string) USEVIEWS * ]
            – if `"`moptobj'"' == "" {
            = if `""' == "" {
            – Clear
              ───────────────────────────────────────────────────────────────
> ─────────────────────────────────────────── begin mopt.Clear ──────────────
            – syntax [, NOTANOPTION]
            – capture drop $ML_w
            = capture drop
            – capture drop $ML_samp
            = capture drop
            – capture drop $ML_sample
            = capture drop
            – capture drop $ML_subv
```

```
              = capture drop
              - capture drop $ML_grp
              = capture drop
              - mata: Mopt_drop_external()
              - macro drop ML_*
              ─────────────────────────────────────────────────────────
> ──────────────────────────────────────── end mopt.Clear ───────────────
              - }
              - local maxmin `minimize' `maximize'
              = local maxmin   maximize
              - opts_exclusive "`maxmin'"
              = opts_exclusive "maximize"
              ─────────────────────────────────────────────────────────
> ──────────────────────────────────── begin opts_exclusive ───────────────
              - version 8.2
              - args opts optname errcode optslab
              - local opts `opts'
              = local opts maximize
              - local n 0
              - while `"`opts'"' != "" {
              = while `"maximize"' != "" {
              - local ++n
              - gettoken item`n' opts : opts, bind
              = gettoken item1 opts : opts, bind
              - }
              - while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              - if `n' < 2 {
              = if 1 < 2 {
              - exit
              ─────────────────────────────────────────────────────────
> ──────────────────────────────────── end opts_exclusive ───────────────
              - if `:length local maxmin' {
              = if 8 {
              - local interactive 0
              - }
              - else local interactive 1
              - _get_diparmopts, diparmopts(`options') soptions syntaxonly
              = _get_diparmopts, diparmopts(search(off) diparm(lnalpha, exp labe
> l("alpha"))) soptions syntaxonly
              ─────────────────────────────────────────────────────────
> ──────────────────────────────────── begin _get_diparmopts ───────────────
              - if _caller() < 8.2 {
```

```
                _get_diparmopts_8 `0'
                exit
                }
            - version 9
            - local version : di "version " string(_caller()) ":"
            - syntax [, diparmopts(string asis) EXECute soptions bottom plus
>   SYNTAXonly * ]
            - local goptions `options'
            = local goptions
            - SpliceGlobals junk , `goptions'
            = SpliceGlobals junk ,
            ─────────────────────────────────────────────────────────
> ─────────────────────── begin _get_diparmopts.SpliceGlobals ───────────────
            - syntax name(id="macro name" name=c_diparm) [, diparm(string
> asis) Level(cilevel) dof(passthru) syntaxonly ]
            - if `"`dof'"' == "" & `"`e(df_r)'"' != "" {
            = if `""' == "" & `""' != "" {
              capture confirm integer number `e(df_r)'
              if !c(rc) {
              local gdof dof(`e(df_r)')
              }
              capture
              }
            - else local gdof `"`dof'"'
            = else local gdof `""'
            - local glevel `level'
            = local glevel 95
            - local lopt level(`glevel')
            = local lopt level(95)
            - if (`"`diparm'"' == "") exit
            = if (`""' == "") exit
            ─────────────────────────────────────────────────────────
> ──────────────────────── end _get_diparmopts.SpliceGlobals ───────────────
            - local 0 `", `diparmopts'"'
            = local 0 `", search(off) diparm(lnalpha, exp label("alpha"))"'
            - local diparmopts
            - local k 0
            - syntax [, diparm(string asis) * ]
            - while `"`diparm'"' != "" {
            = while `"lnalpha, exp label("alpha")"' != "" {
            - local ++k
            - local single 1
            - local after
            - capture _on_colon_parse `diparm'
            = capture _on_colon_parse lnalpha, exp label("alpha")
            ─────────────────────────────────────────────────────────
```

```
> ───────────────────────── begin _on_colon_parse ─────────────
                  – version 8.2
                  – sreturn local before ""
                  – sreturn local after ""
                  – gettoken before after : 0, parse(":") bind match(par) quotes
                  – if "`par'" != "" {
                  = if "" != "" {
                    local before `"(`before')"'
                    }
                  – if `"`before'"' == ":" {
                  = if `"lnalpha, exp label("alpha")"' == ":" {
                    sreturn local after `"`after'"'
                    exit
                    }
                  – while `"`COLON'"' != ":" & `"`after'"' != "" {
                  = while `""' != ":" & `""' != "" {
                    gettoken COLON after : after, parse(":") bind match(par) quo
> tes
                    if "`par'" != "" {
                    local before `before' (`COLON')
                    local COLON
                    }
                    else if `"`COLON'"' != ":" {
                    local before `"`before' `COLON'"'
                    local COLON
                    }
                    }
                  – if `"`COLON'"' != ":" {
                  = if `""' != ":" {
                  – di as err "'' found where ':' expected"
                  – exit 198
                    }
                  ─────────────────────────────────────────────────────────
> ───────────────────────── end _on_colon_parse ──────────────
                  – if !c(rc) {
                    local single 0
                    local diparm `"`s(before)'"'
                    local after `"`s(after)'"'
                    }
                  – capture
                  – SpliceGlobals diparm , diparm(`diparm') `syntaxonly' `goptions
> '
                  = SpliceGlobals diparm , diparm(lnalpha, exp label("alpha")) syn
> taxonly
                  ─────────────────────────────────────────────────────────
> ───────────────────── begin _get_diparmopts.SpliceGlobals ──────────
```

```
                    – syntax name(id="macro name" name=c_diparm) [, diparm(string
> asis) Level(cilevel) dof(passthru) syntaxonly ]
                    – if `"`dof'"' == "" & `"`e(df_r)'"' != "" {
                    = if `""' == "" & `""' != "" {
                      capture confirm integer number `e(df_r)'
                      if !c(rc) {
                      local gdof dof(`e(df_r)')
                      }
                      capture
                      }
                    – else local gdof `"`dof'"'
                    = else local gdof `""'
                    – local glevel `level'
                    = local glevel 95
                    – local lopt level(`glevel')
                    = local lopt level(95)
                    – if (`"`diparm'"' == "") exit
                    = if (`"lnalpha, exp label("alpha")"' == "") exit
                    – local 0 `diparm'
                    = local 0 lnalpha, exp label("alpha")
                    – syntax anything(id="eqname(s)" name=eqspecs) [, Level(passth
> ru) dof(passthru) * ]
                    – if ("`eqspecs'" == "__sep__") exit
                    = if ("lnalpha" == "__sep__") exit
                    – if "`level'" == "" {
                    = if "" == "" {
                    – local lopt level(`glevel')
                    = local lopt level(95)
                    – }
                    – else local lopt `level'
                    = else local lopt
                    – if `"`dof'"' == "" {
                    = if `""' == "" {
                    – local dof `"`gdof'"'
                    = local dof `""'
                    – }
                    – if "`syntaxonly'" == "" {
                    = if "syntaxonly" == "" {
                      c_local `c_diparm' `"`eqspecs', `options' `lopt' `dof'"'
                      }
                    – else {
                    – c_local `c_diparm' `"`diparm'"'
                    = c_local diparm `"lnalpha, exp label("alpha")"'
                    – }
                    ─────────────────────────────────────────────────────
> ───────────────────── end _get_diparmopts.SpliceGlobals ─────────────
```

```
- local diparm`k' `"'`diparm'"'
= local diparm1 `"lnalpha, exp label("alpha")"'
- local diparmopts `"'`diparmopts' : `diparm'"'
= local diparmopts `" : lnalpha, exp label("alpha")"'
- if `single' | `"'`:list retok after'"' == "" {
= if 1 | `""' == "" {
- local 0 `", `options'"'
= local 0 `", search(off)"'
- syntax [, diparm(string asis) * ]
- }
- else {
  local diparm `"'`after'"'
  }
- }
- while `"'`diparm'"' != "" {
= while `""' != "" {
  local ++k
  local single 1
  local after
  capture _on_colon_parse `diparm'
  if !c(rc) {
  local single 0
  local diparm `"'`s(before)'"'
  local after `"'`s(after)'"'
  }
  capture
  SpliceGlobals diparm , diparm(`diparm') `syntaxonly' `goptions
> '

  local diparm`k' `"'`diparm'"'
  local diparmopts `"'`diparmopts' : `diparm'"'
  if `single' | `"'`:list retok after'"' == "" {
  local 0 `", `options'"'
  syntax [, diparm(string asis) * ]
  }
  else {
  local diparm `"'`after'"'
  }
  }
- if `"'`soptions'"' == "" {
= if `"soptions"' == "" {
  syntax [, diparm(string asis) ]
  }
- if ("'`execute'" == "") {
= if ("" == "") {
- sreturn clear
- sreturn local options `"'`options'"'
```

```
        = sreturn local options `"search(off)"'
        – sreturn local diparm `"`diparmopts'"'
        = sreturn local diparm `" : lnalpha, exp label("alpha")"'
        – forval i = 1/`k' {
        = forval i = 1/1 {
        – sreturn local diparm`i' `"`diparm`i''"'
        = sreturn local diparm1 `"lnalpha, exp label("alpha")"'
        – }
        – sreturn local k `k'
        = sreturn local k 1
        – exit
```

> ─────────────────────────────── end _get_diparmopts ───────────────

```
        – forval k = 1/`s(k)' {
        = forval k = 1/1 {
        – local diparm`k' `"`s(diparm`k')'"'
        = local diparm1 `"lnalpha, exp label("alpha")"'
        – }
        – local ndiparm `s(k)'
        = local ndiparm 1
        – local options `"`s(options)'"'
        = local options `"search(off)"'
        – if `interactive' & `:length local options' {
        = if 0 & 11 {
          local 0 , `options'
          syntax [, NOTANOPTION]
          }
        – if `:length local nopreserve' | `:length local score' {
        = if 10 | 0 {
        – global ML_preserve no
        – }
        – else global ML_preserve yes
        – gettoken evaltype spec : spec
        – confirm name `evaltype'
        = confirm name e2
        – gettoken evaluator spec : spec
        – global ML_evaltype : copy local evaltype
        – if `:length local srssubpop' {
        = if 0 {
          local 0 , srssubpop
          syntax [, NONOPTION]
          exit 198
          }
        – if `:length local subpop' {
        = if 0 {
          local svy svy
```

```
                }
            - if `:length local svy' {
            = if 0 {
              opts_exclusive "`vce' `svy'" vce
              if `:length local weight' {
              di as err "svy option not allowed with weights"
              exit 198
              }
              global ML_noadj : copy local svyadjust
              }
            - global ML_svy : copy local svy
            - if _caller() >= 15 & c(userversion) >= 15 {
            - local fparm ", freeparm"
            - }
            - local eqspec : copy local spec
            - local ieq 0
            - while `:length local eqspec' {
            = while 143 {
            - local ++ieq
            - gettoken eq eqspec : eqspec, bind
            - if bsubstr(trim("`eq'"),1,1) == "/" {
            = if bsubstr(trim("(piq_timing_max: piq_timing_max=ln_neq cb_autho
> rs_ext estimated est_late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr
> _calvo,  )"),1,1) == "/" {
                local eq = bsubstr(trim("`eq'"),2,.)
                local spec : subinstr local spec "/`eq'" `"(`eq'":`fparm')"', w
> ord
                }
            - else {
            - gettoken p1 p2 : eq, parse("()")
            - local p2 = trim(`"`p2'"')
            = local p2 = trim(`"piq_timing_max: piq_timing_max=ln_neq cb_autho
> rs_ext estimated est_late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr
> _calvo,  )"')
            - if bsubstr("`p2'",1,1) == "," {
            = if bsubstr("piq_timing_max: piq_timing_max=ln_neq cb_authors_ext
>  estimated est_late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo
> ,  )",1,1) == "," {
                gettoken comma p2 : p2, parse(",")
                local p2 = trim(`"`p2'"')
                }
            - if `"`p1'`p2'"' == "()" {
            = if `"(piq_timing_max: piq_timing_max=ln_neq cb_authors_ext estim
> ated est_late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo,  )"'
>  == "()" {
                local spec : subinstr local spec "`eq'" "(eq`ieq':)", word
```

```
                }
    -       }
    -     }
    -   while `:length local eqspec' {
    =   while 9 {
    -     local ++ieq
    -     gettoken eq eqspec : eqspec, bind
    -     if bsubstr(trim("`eq'"),1,1) == "/" {
    =     if bsubstr(trim("/lnalpha"),1,1) == "/" {
    -       local eq = bsubstr(trim("`eq'"),2,.)
    =       local eq = bsubstr(trim("/lnalpha"),2,.)
    -       local spec : subinstr local spec "/`eq'" `"("`eq'":`fparm')"', w
> ord
    =       local spec : subinstr local spec "/lnalpha" `"("lnalpha":, freep
> arm)"', word
    -     }
    -     else {
            gettoken p1 p2 : eq, parse("()")
            local p2 = trim(`"`p2'"')
            if bsubstr("`p2'",1,1) == "," {
            gettoken comma p2 : p2, parse(",")
            local p2 = trim(`"`p2'"')
            }
            if `"`p1'`p2'"' == "()" {
            local spec : subinstr local spec "`eq'" "(eq`ieq':)", word
            }
          }
    -     }
    -   while `:length local eqspec' {
    =   while 0 {
          local ++ieq
          gettoken eq eqspec : eqspec, bind
          if bsubstr(trim("`eq'"),1,1) == "/" {
          local eq = bsubstr(trim("`eq'"),2,.)
          local spec : subinstr local spec "/`eq'" `"("`eq'":`fparm')"', w
> ord
          }
          else {
          gettoken p1 p2 : eq, parse("()")
          local p2 = trim(`"`p2'"')
          if bsubstr("`p2'",1,1) == "," {
          gettoken comma p2 : p2, parse(",")
          local p2 = trim(`"`p2'"')
          }
          if `"`p1'`p2'"' == "()" {
          local spec : subinstr local spec "`eq'" "(eq`ieq':)", word
```

```
                   }
                   }
                   }
          − if `interactive' {
          = if 0 {
            SetGlobalVar ML_sample : _MLtua
            }
          − else {
          − global ML_sample : tempvar
          − if `"`moptobj'"' != "" {
          = if `""' != "" {
            global ML_sample `moptobj'$ML_sample
            }
          − }
          − if `"`moptobj'"' != "" {
          = if `""' != "" {
            cap drop $ML_sample
            }
          − `vv' mark $ML_sample `if' `in' [`weight'`exp'], `zeroweight'
          = version 18: mark __000006 if __000000   [],
          − tempname eqlist
          − .`eqlist' = ._eqlist.new, eqopts(NOCONStant FREEParm) eqargopts(
  > OFFset EXPosure) noneedvarlist numdepvars(0) needequal
          = .__000007 = ._eqlist.new, eqopts(NOCONStant FREEParm) eqargopts(
  > OFFset EXPosure) noneedvarlist numdepvars(0) needequal
               −class {
               −instance:
               −       array          n_depvars
               −       string         needequal
               −       string         noneedvarlist
               −       string         wtypes
               −       string         collinear
               −       string         nocons
               −       string         nocons_ignore
               −       double         n_eq
               −       string         gl_if
               −       string         gl_in
               −       string         gl_wgt
               −       string         gl_options
               −       _optlist       eq_opts_allowed
                 −class {
                 −instance:
                 −       array options  = {}
                 −       array names    = {}
                 −}
               −       array          eq_list
```

```
          –          _optlist        mark_opts
          –          array           mark_list
          –          array           mark_name
          –          _optlist        smark_opts
          –          array           smark_list
          –          array           smark_name
          –          _optlist        rmcoll_opts
          –          array           rmcoll_list
          –          array           rmcoll_name
          –          _optlist        rmdcoll_opts
          –          array           rmdcoll_list
          –          array           rmdcoll_name
          –}
          ──────────────────────────────────────────────
> ───────────────────────────── begin _eqlist.new ───────────────
          – version 9.2
          – ._init
          ──────────────────────────────────────────────
> ───────────────────────────── begin _eqlist._init ───────────────
          – version 9.2
          – .n_eq = 0
          – .gl_if = ""
          – .gl_in = ""
          – .gl_wgt = ""
          – .gl_options = ""
          – .eq_list = {}
          ──────────────────────────────────────────────
> ───────────────────────────── end _eqlist._init ───────────────
          – ._setup `0'
          = ._setup , eqopts(NOCONStant FREEParm) eqargopts(OFFset EXPosur
> e) noneedvarlist numdepvars(0) needequal
          ──────────────────────────────────────────────
> ───────────────────────────── begin _eqlist._setup ───────────────
          – version 9.2
          – .mark_list = {}
          – .mark_name = {}
          – .mark_opts.reset
          ──────────────────────────────────────────────
> ───────────────────────────── begin _optlist.reset ───────────────
          – version 9
          – .options = {}
          – .names = {}
          ──────────────────────────────────────────────
> ───────────────────────────── end _optlist.reset ───────────────
          – .smark_list = {}
          – .smark_name = {}
```

```
                            – .smark_opts.reset
                            ─────────────────────────────────────────────
>  ─────────────────────────────────── begin _optlist.reset ───────────
                  – version 9
                  – .options = {}
                  – .names = {}
                            ─────────────────────────────────────────────
>  ─────────────────────────────────── end _optlist.reset ────────────
                  – .rmcoll_list = {}
                  – .rmcoll_name = {}
                  – .rmcoll_opts.reset
                            ─────────────────────────────────────────────
>  ─────────────────────────────────── begin _optlist.reset ───────────
                  – version 9
                  – .options = {}
                  – .names = {}
                            ─────────────────────────────────────────────
>  ─────────────────────────────────── end _optlist.reset ────────────
                  – .rmdcoll_list = {}
                  – .rmdcoll_name = {}
                  – .rmdcoll_opts.reset
                            ─────────────────────────────────────────────
>  ─────────────────────────────────── begin _optlist.reset ───────────
                  – version 9
                  – .options = {}
                  – .names = {}
                            ─────────────────────────────────────────────
>  ─────────────────────────────────── end _optlist.reset ────────────
              – syntax [, EQopts(namelist) EQARGopts(namelist) noNEEDVARLIST
>  COMMONopts(string asis) MARKopts(namelist) SMARKopts(namelist) RMCOLLopts(n
>  amelist) RMDCOLLopts(namelist) NUMDEPvars(numlist integer >=0) NEEDEQUAL WTY
>  PES(string) IGNORENOCONS ]
                  – .eq_opts_allowed.reset
                            ─────────────────────────────────────────────
>  ─────────────────────────────────── begin _optlist.reset ───────────
                  – version 9
                  – .options = {}
                  – .names = {}
                            ─────────────────────────────────────────────
>  ─────────────────────────────────── end _optlist.reset ────────────
              – foreach opt of local eqopts {
              – .eq_opts_allowed.addopt `opt'
              = .eq_opts_allowed.addopt NOCONStant
                            ─────────────────────────────────────────────
>  ─────────────────────────────────── begin _optlist.addopt ──────────
                  – version 9
```

```
- syntax name(name=optspec) [, PASSthru]
- local mname = lower("`optspec'")
= local mname = lower("NOCONStant")
- if "`passthru'" != "" {
= if "" != "" {
  local optspec `optspec'(passthru)
  }
- .options.Arrpush "`optspec'"
= .options.Arrpush "NOCONStant"
- .names.Arrpush "`mname'"
= .names.Arrpush "noconstant"
```

> ──────────────────────────────────── end _optlist.addopt ──────────────

```
- }
- .eq_opts_allowed.addopt `opt'
= .eq_opts_allowed.addopt FREEParm
```

> ──────────────────────────────────── begin _optlist.addopt ──────────────

```
- version 9
- syntax name(name=optspec) [, PASSthru]
- local mname = lower("`optspec'")
= local mname = lower("FREEParm")
- if "`passthru'" != "" {
= if "" != "" {
  local optspec `optspec'(passthru)
  }
- .options.Arrpush "`optspec'"
= .options.Arrpush "FREEParm"
- .names.Arrpush "`mname'"
= .names.Arrpush "freeparm"
```

> ──────────────────────────────────── end _optlist.addopt ──────────────

```
- }
- foreach opt of local eqargopts {
- .eq_opts_allowed.addopt `opt', passthru
= .eq_opts_allowed.addopt OFFset, passthru
```

> ──────────────────────────────────── begin _optlist.addopt ──────────────

```
- version 9
- syntax name(name=optspec) [, PASSthru]
- local mname = lower("`optspec'")
= local mname = lower("OFFset")
- if "`passthru'" != "" {
= if "passthru" != "" {
- local optspec `optspec'(passthru)
= local optspec OFFset(passthru)
```

```
            − }
            − .options.Arrpush "`optspec'"
            = .options.Arrpush "OFFset(passthru)"
            − .names.Arrpush "`mname'"
            = .names.Arrpush "offset"
           ────────────────────────────────────────────
>  ────────────────────────────── end _optlist.addopt ──────────
            − }
            − .eq_opts_allowed.addopt `opt', passthru
            = .eq_opts_allowed.addopt EXPosure, passthru
           ────────────────────────────────────────────
>  ────────────────────────────── begin _optlist.addopt ──────────
            − version 9
            − syntax name(name=optspec) [, PASSthru]
            − local mname = lower("`optspec'")
            = local mname = lower("EXPosure")
            − if "`passthru'" != "" {
            = if "passthru" != "" {
            − local optspec `optspec'(passthru)
            = local optspec EXPosure(passthru)
            − }
            − .options.Arrpush "`optspec'"
            = .options.Arrpush "EXPosure(passthru)"
            − .names.Arrpush "`mname'"
            = .names.Arrpush "exposure"
           ────────────────────────────────────────────
>  ────────────────────────────── end _optlist.addopt ──────────
            − }
            − local i 0
            − foreach opt of local markopts {
              .mark_opts.addopt `opt', passthru
              }
            − local i 0
            − foreach opt of local smarkopts {
              .smark_opts.addopt `opt', passthru
              }
            − local i 0
            − foreach opt of local rmcollopts {
              .rmcoll_opts.addopt `opt', passthru
              }
            − local i 0
            − foreach opt of local rmdcollopts {
              .rmdcoll_opts.addopt `opt', passthru
              }
            − .n_depvars.Arrdropall
            − if "`numdepvars'" != "" {
```

```
                    = if "0" != "" {
                    – foreach ndep of local numdepvars {
                    – .n_depvars.Arrpush `ndep'
                    = .n_depvars.Arrpush 0
                    – }
                    – }
                    – else .n_depvars.Arrpush 1
                    – .needequal = "`needequal'"
                    = .needequal = "needequal"
                    – .wtypes = "`wtypes'"
                    = .wtypes = ""
                    – .noneedvarlist = "`needvarlist'"
                    = .noneedvarlist = "noneedvarlist"
                    – .nocons_ignore = "`ignorenocons'"
                    = .nocons_ignore = ""
```

> ─────────────────────────────── end _eqlist._setup ───────────────

> ───────────────────────────────── end _eqlist.new ─────────────────

```
            – .`eqlist'.parse `spec'
            = .__000007.parse  (piq_timing_max: piq_timing_max=ln_neq cb_autho
> rs_ext estimated est_late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr
> _calvo,  ) ("lnalpha":, freeparm)
```

> ──────────────────────────────── begin _eqlist.parse ───────────────

```
            – version 9.2
            – ._init
```

> ──────────────────────────────── begin _eqlist._init ──────────────

```
            – version 9.2
            – .n_eq = 0
            – .gl_if = ""
            – .gl_in = ""
            – .gl_wgt = ""
            – .gl_options = ""
            – .eq_list = {}
```

> ───────────────────────────────── end _eqlist._init ───────────────

```
          – local MARKOPTLIST `"`.mark_opts.dumpoptions'"'
```

> ──────────────────────────── begin _optlist.dumpoptions ───────────

```
            – version 9
            – forval i = 1/`.options.arrnels' {
            = forval i = 1/0 {
              local optlist `optlist' `.options[`i']'
              }
```

```
            – local optlist : list uniq optlist
            – sreturn local optlist `"`optlist'"'
            = sreturn local optlist `""'
            – class exit `"`optlist'"'
            = class exit `""'
            ────────────────────────────────────────
> ──────────────────────── end _optlist.dumpoptions ───────────
            = local MARKOPTLIST `""'
            – local SMARKOPTLIST `"`.smark_opts.dumpoptions'"'
            ────────────────────────────────────────
> ──────────────────────── begin _optlist.dumpoptions ───────────
            – version 9
            – forval i = 1/`.options.arrnels' {
            = forval i = 1/0 {
              local optlist `optlist' `.options[`i']'
              }
            – local optlist : list uniq optlist
            – sreturn local optlist `"`optlist'"'
            = sreturn local optlist `""'
            – class exit `"`optlist'"'
            = class exit `""'
            ────────────────────────────────────────
> ──────────────────────── end _optlist.dumpoptions ───────────
            = local SMARKOPTLIST `""'
            – local RMCOLLOPTLIST `"`.rmcoll_opts.dumpoptions'"'
            ────────────────────────────────────────
> ──────────────────────── begin _optlist.dumpoptions ───────────
            – version 9
            – forval i = 1/`.options.arrnels' {
            = forval i = 1/0 {
              local optlist `optlist' `.options[`i']'
              }
            – local optlist : list uniq optlist
            – sreturn local optlist `"`optlist'"'
            = sreturn local optlist `""'
            – class exit `"`optlist'"'
            = class exit `""'
            ────────────────────────────────────────
> ──────────────────────── end _optlist.dumpoptions ───────────
            = local RMCOLLOPTLIST `""'
            – local RMDCOLLOPTLIST `"`.rmdcoll_opts.dumpoptions'"'
            ────────────────────────────────────────
> ──────────────────────── begin _optlist.dumpoptions ───────────
            – version 9
            – forval i = 1/`.options.arrnels' {
            = forval i = 1/0 {
```

```
                  local optlist `optlist' `.options[`i']'
                  }
          – local optlist : list uniq optlist
          – sreturn local optlist `"`optlist'"'
          = sreturn local optlist `""'
          – class exit `"`optlist'"'
          = class exit `""'
          ──────────────────────────────────────────────────────────
> ──────────────────────────────────── end _optlist.dumpoptions ─────────────
          = local RMDCOLLOPTLIST `""'
          – _parse expand EQ GL : 0, gweight common( `MARKOPTLIST' `SMARKO
> PTLIST' `RMCOLLOPTLIST' `RMDCOLLOPTLIST' COLlinear )
          = _parse expand EQ GL : 0, gweight common(     COLlinear )
          – if `EQ_n' == 0 & "`.noneedvarlist'" == "" {
          = if 2 == 0 & "noneedvarlist" == "" {
            syntax varlist
            }
          – local rebind = `EQ_n' == 1
          = local rebind = 2 == 1
          – if `rebind' {
          = if 0 {
            tokenize `"`0'"', parse(",()[]")
            local rebind = `"`1'"' != "(" & `"`2'"' == "("
            }
          – if `rebind' {
          = if 0 {
            while `:length local 0' {
            gettoken tok 0 : 0, parse(" ,") bind match(par)
            if "`par'" == "(" {
            gettoken nxt : 0
            local nxt = substr(`"`nxt'"',1,1)
            if inlist(`"`nxt'"', "#", "|") {
            local ZERO `"`ZERO' (`tok')"'
            }
            else {
            local ZERO `"(`ZERO') (`tok') `0'"'
            local 0
            }
            }
            else if inlist("`tok'", "if", "in", ",") {
            local ZERO `"(`ZERO') `tok' `0'"'
            local 0
            }
            else if inlist(substr(`"`tok'"',1,1), "#", "|") {
            local ZERO `"`ZERO'`tok'"'
            }
```

```
                  else {
                  local ZERO `"`ZERO' `tok'"'
                  }
                  }
                  _parse expand EQ GL : ZERO, gweight common( `MARKOPTLIST' `SMA
> RKOPTLIST' `RMCOLLOPTLIST' `RMDCOLLOPTLIST' COLlinear )
                  }
              – forval i = 1/`EQ_n' {
              = forval i = 1/2 {
              – if `i' <= `.n_depvars.arrnels' {
              = if 1 <= 1 {
              – local ndep = `.n_depvars[`i']'
              = local ndep = 0
              – }
              – .eq_list[`i'] = ._eqspec.new, numdepvars(`ndep') `.needequal'
> `.noneedvarlist' wtypes(`.wtypes') `.nocons_ignore'
              = .eq_list[1] = ._eqspec.new, numdepvars(0) needequal noneedvarl
> ist wtypes()
                  –class {
                  –instance:
                  –         double  n_depvars
                  –         double  needequal
                  –         double  needvarlist
                  –         string  wtypes
                  –         string  name
                  –         string  depvars
                  –         double  hasequal
                  –         string  indepvars
                  –         string  other_markvars
                  –         double  nocons
                  –         double  nocons_ignore
                  –         string  offset
                  –         double  exposure
                  –         double  freeparm
                  –         string  if
                  –         string  in
                  –         string  wgt
                  –         string  options
                  –}
                  ————————————————————————————————————————————————
> ——————————————————————————————————————— begin _eqspec.new ——————————————
              – version 9.2
              – syntax [, NUMDEPvars(numlist integer >=0 max=1) NEEDEQUAL no
> NEEDVARLIST WTYPES(string) IGNORENOCONS ]
              – .n_depvars = 1
              – if `:list sizeof numdepvars' {
```

```
                        = if 1 {
                        - .n_depvars = `numdepvars'
                        = .n_depvars = 0
                        - }
                        - .needequal = ("`needequal'" != "")
                        = .needequal = ("needequal" != "")
                        - .needvarlist = ("`needvarlist'" == "")
                        = .needvarlist = ("noneedvarlist" == "")
                        - .nocons_ignore = ("`ignorenocons'" != "")
                        = .nocons_ignore = ("" != "")
                        - .wtypes = "`wtypes'"
                        = .wtypes = ""
                       ──────────────────────────────────────
  > ──────────────────────────────────────── end _eqspec.new ─────────────────
                    - .eq_list[`i'].parse `.eq_opts_allowed.objkey':`EQ_`i''
                    = .eq_list[1].parse __key(600002b58080):piq_timing_max: piq_timi
  > ng_max=ln_neq cb_authors_ext estimated est_late o.est_early wg_ndx_other stk
  > y_pr_rotemberg stky_pr_calvo
                       ──────────────────────────────────────
  > ──────────────────────────────────────── begin _eqspec.parse ──────────────
                    - version 9.2
                    - _on_colon_parse `0'
                    = _on_colon_parse __key(600002b58080):piq_timing_max: piq_timi
  > ng_max=ln_neq cb_authors_ext estimated est_late o.est_early wg_ndx_other stk
  > y_pr_rotemberg stky_pr_calvo
                       ──────────────────────────────────────
  > ──────────────────────────────────────── begin _on_colon_parse ────────────
                    - version 8.2
                    - sreturn local before ""
                    - sreturn local after ""
                    - gettoken before after : 0, parse(":") bind match(par) quot
  > es
                    - if "`par'" != "" {
                    = if "" != "" {
                      local before `"(`before')"'
                      }
                    - if `"`before'"' == ":" {
                    = if `"__key(600002b58080)"' == ":" {
                      sreturn local after `"`after'"'
                      exit
                      }
                    - while `"`COLON'"' != ":" & `"`after'"' != "" {
                    = while `""' != ":" & `":piq_timing_max: piq_timing_max=ln_n
  > eq cb_authors_ext estimated est_late o.est_early wg_ndx_other stky_pr_rotemb
  > erg stky_pr_calvo"' != "" {
                    - gettoken COLON after : after, parse(":") bind match(par) q
```

```
> uotes
                – if "`par'" != "" {
                = if "" != "" {
                  local before `before' (`COLON')
                  local COLON
                  }
                – else if `"`COLON'"' != ":" {
                = else if `":"' != ":" {
                  local before `"`before' `COLON'"'
                  local COLON
                  }
                – }
                – while `"`COLON'"' != ":" & `"`after'"' != "" {
                = while `":"' != ":" & `"piq_timing_max: piq_timing_max=ln_n
> eq cb_authors_ext estimated est_late o.est_early wg_ndx_other stky_pr_rotemb
> erg stky_pr_calvo"' != "" {
                  gettoken COLON after : after, parse(":") bind match(par) q
> uotes

                  if "`par'" != "" {
                  local before `before' (`COLON')
                  local COLON
                  }
                  else if `"`COLON'"' != ":" {
                  local before `"`before' `COLON'"'
                  local COLON
                  }
                  }
                – if `"`COLON'"' != ":" {
                = if `":"' != ":" {
                  di as err "'' found where ':' expected"
                  exit 198
                  }
                – sreturn local before `"`before'"'
                = sreturn local before `"__key(600002b58080)"'
                – sreturn local after `"`after'"'
                = sreturn local after `"piq_timing_max: piq_timing_max=ln_ne
> q cb_authors_ext estimated est_late o.est_early wg_ndx_other stky_pr_rotembe
> rg stky_pr_calvo"'
                  ─────────────────────────────────────────────────────

> ──────────────────────────────────────── end _on_colon_parse ───────────────
                – local ol `s(before)'
                = local ol __key(600002b58080)
                – if `:list sizeof ol' {
                = if 1 {
                – local OPTLIST `"`.`ol'.dumpoptions'"'
                  ─────────────────────────────────────────────────────
```

Friday, January 10, 2025 at 11:33 AM   Page 603

```
> ──────────────────────── begin _optlist.dumpoptions ────────────────
                    - version 9
                    - forval i = 1/`.options.arrnels' {
                    = forval i = 1/4 {
                    - local optlist `optlist' `.options[`i']'
                    = local optlist  NOCONStant
                    - }
                    - local optlist `optlist' `.options[`i']'
                    = local optlist NOCONStant FREEParm
                    - }
                    - local optlist `optlist' `.options[`i']'
                    = local optlist NOCONStant FREEParm OFFset(passthru)
                    - }
                    - local optlist `optlist' `.options[`i']'
                    = local optlist NOCONStant FREEParm OFFset(passthru) EXPosur
> e(passthru)
                    - }
                    - local optlist : list uniq optlist
                    - sreturn local optlist `"`optlist'"'
                    = sreturn local optlist `"NOCONStant FREEParm OFFset(passthr
> u) EXPosure(passthru)"'
                    - class exit `"`optlist'"'
                    = class exit `"NOCONStant FREEParm OFFset(passthru) EXPosure
> (passthru)"'
                      ─────────────────────────────────────────────────────────
> ──────────────────────── end _optlist.dumpoptions ──────────────────
                = local OPTLIST `"NOCONStant FREEParm OFFset(passthru) EXPosur
> e(passthru)"'
                    - local OPTNAMES `"`.`ol'.dumpnames'"'
                      ─────────────────────────────────────────────────────────
> ──────────────────────── begin _optlist.dumpnames ──────────────────
                    - version 9
                    - forval i = 1/`.names.arrnels' {
                    = forval i = 1/4 {
                    - local namelist `namelist' `.names[`i']'
                    = local namelist  noconstant
                    - }
                    - local namelist `namelist' `.names[`i']'
                    = local namelist noconstant freeparm
                    - }
                    - local namelist `namelist' `.names[`i']'
                    = local namelist noconstant freeparm offset
                    - }
                    - local namelist `namelist' `.names[`i']'
                    = local namelist noconstant freeparm offset exposure
                    - }
```

```
                  - local namelist : list uniq namelist
                  - sreturn local namelist `"`namelist'"'
                  = sreturn local namelist `"noconstant freeparm offset exposu
 > re"'

                  - class exit `"`namelist'"'
                  = class exit `"noconstant freeparm offset exposure"'
                  ─────────────────────────────────────────────────────────
 > ────────────────────────────────── end _optlist.dumpnames ──────────────
                  = local OPTNAMES `"noconstant freeparm offset exposure"'
                  - local NOCONS constant noconstant
                  - if `"`:list NOCONS & OPTNAMES'"' == "" {
                  = if `"noconstant"' == "" {
                    local NOCONS noCONStant
                    }
                  - else local NOCONS
                  - }
                  - local 0 `"`s(after)'"'
                  = local 0 `"piq_timing_max: piq_timing_max=ln_neq cb_authors_e
 > xt estimated est_late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_cal
 > vo"'
                  - if `"`.wtypes'"' != "" {
                  = if `""' != "" {
                    local wgt "[`.wtypes']"
                    }
                  - syntax [anything(equalok)] [if] [in] `wgt' [, `OPTLIST' `NOC
 > ONS' *]
                  = syntax [anything(equalok)] [if] [in]  [, NOCONStant FREEParm
 >  OFFset(passthru) EXPosure(passthru)  *]
                  - local HOLDIF `"`if'"'
                  = local HOLDIF `""'
                  - local HOLDIN `"`in'"'
                  = local HOLDIN `""'
                  - if "`wgt'" != "" & "`weight'" != "" {
                  = if "" != "" & "" != "" {
                    local HOLDWGT `"[`weight'`exp']"'
                    }
                  - gettoken NAME REST : anything, parse(":")
                  - if trim("`NAME'") == ":" {
                  = if trim("piq_timing_max") == ":" {
                    di as err "nothing found where equation name expected"
                    exit 198
                    }
                  - if `:list sizeof REST' {
                  = if 9 {
                  - if strpos(`"`NAME'"', ":") {
                  = if strpos(`"piq_timing_max"', ":") {
```

```
                    capture _msparse `NAME'
                    if c(rc) {
                    di as err "{bf:`NAME'} invalid equation specification"
                    exit 198
                    }
                    }
          - else {
          - ._confirm_eqname `NAME'
          = ._confirm_eqname piq_timing_max
            ─────────────────────────────────────────────────────
  > ─────────────────────────── begin _eqspec._confirm_eqname ─────────────
          - version 9.2
          - capture confirm number `0'
          = capture confirm number piq_timing_max
          - if (! c(rc)) exit
          - local hasdot = strpos(`"`0'"',".")
          = local hasdot = strpos(`"piq_timing_max"',".")
          - if `hasdot' {
          = if 0 {
            syntax varname(ts)
            exit
            }
          - capture syntax name(id="equation name")
          - if (! c(rc)) exit
            ─────────────────────────────────────────────────────
  > ─────────────────────────── end _eqspec._confirm_eqname ─────────────
          - }
          - local NAME : list retok NAME
          - gettoken COLON anything : REST, parse(":")
          - }
          - else {
            local NAME
            }
          - gettoken DEPVARS REST : anything, parse("=") bind
          - if "`DEPVARS'" == "=" {
          = if "piq_timing_max" == "=" {
            local REST : copy local anything
            local DEPVARS
            }
          - if (`:length local DEPVARS' == 0 & `.n_depvars') {
          = if (14 == 0 & 0) {
            di as err "nothing found where depvar expected"
            exit 198
            }
          - if `"`REST'"' == "" {
          = if `"=ln_neq cb_authors_ext estimated est_late o.est_early w
```

```
> g_ndx_other stky_pr_rotemberg stky_pr_calvo"' == "" {
                    if 0`.needequal' {
                    if `.needvarlist' | (`:length local DEPVARS' != 0 & `.n_depv
> ars') {
                    di as err "equal sign required to separate depvars from inde
> pvars"
                    exit 198
                    }
                    }
                    local DEPVARS
                    local n_deps : list sizeof anything
                    if `n_deps' != 0 | `.needvarlist' {
                    if `n_deps' < `.n_depvars' {
                    error 102
                    }
                    forval j = 1/`.n_depvars' {
                    gettoken YY anything : anything
                    local DEPVARS `DEPVARS' `YY'
                    }
                    local INDEPVARS : list retok anything
                    }
                    loca hasequal 0
                    }
                  - else {
                  - gettoken EQ INDEPVARS : REST, parse("=") bind
                  - local hasequal 1
                  - }
                  - if `:list sizeof DEPVARS' {
                  = if 1 {
                  - _fv_check_depvar `DEPVARS'
                  = _fv_check_depvar piq_timing_max
                  - tsunab DEPVARS : `DEPVARS'
                  = tsunab DEPVARS : piq_timing_max
                    ─────────────────────────────────────────────────
> ───────────────────────────────────────── begin tsunab ─────────────
                  - version 6
                  - gettoken user 0: 0, parse(" :")
                  - gettoken colon 0: 0, parse(" :")
                  - if `"`colon'"' != ":" { error 198 }
                  = if `":"' != ":" { error 198 }
                  - syntax [varlist(ts default=empty)] [, MIN(integer 1) MAX(i
> nteger 32000) NAME(string)]
                  - c_local `user' `varlist'
                  = c_local DEPVARS piq_timing_max
                  - local n : word count `varlist'
                  = local n : word count piq_timing_max
```

```
                    – if `n'>=`min' & `n'<=`max' { exit }
                    = if 1>=1 & 1<=32000 { exit }
                    ────────────────────────────────────────────
>  ─────────────────────────────────────── end tsunab ─────────────────
                – }
                – if `:list sizeof INDEPVARS' {
                = if 8 {
                – fvunab INDEPVARS : `INDEPVARS'
                = fvunab INDEPVARS : ln_neq cb_authors_ext estimated est_late
>  o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo
                    ────────────────────────────────────────────
>  ─────────────────────────────────────── begin fvunab ─────────────────
                – version 11
                – _on_colon_parse `0'
                = _on_colon_parse INDEPVARS : ln_neq cb_authors_ext estimate
>  d est_late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo
                    ────────────────────────────────────────────
>  ─────────────────────────────── begin _on_colon_parse ─────────────────
                    – version 8.2
                    – sreturn local before ""
                    – sreturn local after ""
                    – gettoken before after : 0, parse(":") bind match(par) qu
>  otes
                    – if "`par'" != "" {
                    = if "" != "" {
                       local before `"(`before')"'
                       }
                    – if `"`before'"' == ":" {
                    = if `"INDEPVARS "' == ":" {
                       sreturn local after `"`after'"'
                       exit
                       }
                    – while `"`COLON'"' != ":" & `"`after'"' != "" {
                    = while `""' != ":" & `": ln_neq cb_authors_ext estimated
>  est_late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo"' != "" {
                    – gettoken COLON after : after, parse(":") bind match(par)
>  quotes
                    – if "`par'" != "" {
                    = if "" != "" {
                       local before `before' (`COLON')
                       local COLON
                       }
                    – else if `"`COLON'"' != ":" {
                    = else if `":"' != ":" {
                       local before `"`before' `COLON'"'
                       local COLON
```

```
                    }
                  – }
                  – while `"`COLON'"' != ":" & `"`after'"' != "" {
                  = while `":"' != ":" & `" ln_neq cb_authors_ext estimated
> est_late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo"' != "" {
                    gettoken COLON after : after, parse(":") bind match(par)
>  quotes

                    if "`par'" != "" {
                    local before `before' (`COLON')
                    local COLON
                    }
                    else if `"`COLON'"' != ":" {
                    local before `"`before' `COLON'"'
                    local COLON
                    }
                    }
                  – if `"`COLON'"' != ":" {
                  = if `":"' != ":" {
                    di as err "'' found where ':' expected"
                    exit 198
                    }
                  – sreturn local before `"`before'"'
                  = sreturn local before `"INDEPVARS "'
                  – sreturn local after `"`after'"'
                  = sreturn local after `" ln_neq cb_authors_ext estimated e
> st_late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo"'
                        ─────────────────────────────────────────────
>  ──────────────────────────────────── end _on_colon_parse ───────────────
                – local 0 `"`s(before)'"'
                = local 0 `"INDEPVARS "'
                – syntax name(id="macro name" name=user)
                – local 0 `"`s(after)'"'
                = local 0 `" ln_neq cb_authors_ext estimated est_late o.est_
> early wg_ndx_other stky_pr_rotemberg stky_pr_calvo"'
                – syntax [varlist(ts fv default=none)] [, MIN(integer 1) MAX
> (integer 32000) NAME(string) ]
                – c_local `user' `varlist'
                = c_local INDEPVARS ln_neq cb_authors_ext estimated est_late
>  o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo
                – local n : list sizeof varlist
                – if (`min' <= `n' & `n' <= `max') exit
                = if (1 <= 8 & 8 <= 32000) exit
                        ─────────────────────────────────────────────
>  ──────────────────────────────────── end fvunab ───────────────
              – }
              – if inlist("noconstant", "`noconstant'", "`constant'") {
```

```
                     = if inlist("noconstant", "", "") {
                       if "`INDEPVARS'" == "" & ! `.nocons_ignore' {
                       di as err "independent variables are required when option no
> constant is specified"
                       exit 102
                       }
                       if "`NOCONS'" != "" {
                       local options `options' noconstant
                       }
                       local NOCONS 1
                       }
                     - else local NOCONS 0
                     - if `"`offset'`exposure'"' != "" {
                     = if `""' != "" {
                       ._check_offset, `offset' `exposure'
                       local OFFSET "`s(offset)'"
                       local EXPOSURE = ("`exposure'" != "")
                       local OTHER `s(offset)'
                       }
                     - else local EXPOSURE 0
                     - local FREEPARM = `"`freeparm'"' != ""
                     = local FREEPARM = `""' != ""
                     - local OPTIONS
                     - local SPACE
                     - foreach OPTNAME of local OPTNAMES {
                     - if `"``OPTNAME''"' != "" {
                     = if `""' != "" {
                       local OPTIONS `"`OPTIONS'`SPACE'``OPTNAME''"'
                       local SPACE " "
                       }
                     - }
                     - if `"``OPTNAME''"' != "" {
                     = if `""' != "" {
                       local OPTIONS `"`OPTIONS'`SPACE'``OPTNAME''"'
                       local SPACE " "
                       }
                     - }
                     - if `"``OPTNAME''"' != "" {
                     = if `""' != "" {
                       local OPTIONS `"`OPTIONS'`SPACE'``OPTNAME''"'
                       local SPACE " "
                       }
                     - }
                     - if `"``OPTNAME''"' != "" {
                     = if `""' != "" {
                       local OPTIONS `"`OPTIONS'`SPACE'``OPTNAME''"'
```

```
                       local SPACE " "
                       }
                   - }
                   - if `"`options'"' != "" {
                   = if `""' != "" {
                       local OPTIONS `"`OPTIONS'`SPACE'`options'"'
                       }
                   - .name = `"`NAME'"'
                   = .name = `"piq_timing_max"'
                   - .depvars = `"`DEPVARS'"'
                   = .depvars = `"piq_timing_max"'
                   - .hasequal = `hasequal'
                   = .hasequal = 1
                   - .indepvars = `"`:list retok INDEPVARS'"'
                   = .indepvars = `"ln_neq cb_authors_ext estimated est_late o.es
> t_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo"'
                   - .other_markvars = `"`:list retok OTHER'"'
                   = .other_markvars = `""'
                   - .nocons = `NOCONS'
                   = .nocons = 0
                   - .if = `"`HOLDIF'"'
                   = .if = `""'
                   - .in = `"`HOLDIN'"'
                   = .in = `""'
                   - .wgt = `"`HOLDWGT'"'
                   = .wgt = `""'
                   - .offset = `"`OFFSET'"'
                   = .offset = `""'
                   - .exposure = `EXPOSURE'
                   = .exposure = 0
                   - .freeparm = `FREEPARM'
                   = .freeparm = 0
                   - .options = `"`OPTIONS'"'
                   = .options = `""'
                   ─────────────────────────────────────────────────
> ──────────────────────────────────── end _eqspec.parse ───────────────
                - }
                - if `i' <= `.n_depvars.arrnels' {
                = if 2 <= 1 {
                    local ndep = `.n_depvars[`i']'
                    }
                - .eq_list[`i'] = ._eqspec.new, numdepvars(`ndep') `.needequal'
> `.noneedvarlist' wtypes(`.wtypes') `.nocons_ignore'
                = .eq_list[2] = ._eqspec.new, numdepvars(0) needequal noneedvarl
> ist wtypes()
                   ─────────────────────────────────────────────────
```

```
>  ───────────────────────────────────────────  begin _eqspec.new  ─────────────────
                 – version 9.2
                 – syntax [, NUMDEPvars(numlist integer >=0 max=1) NEEDEQUAL no
>  NEEDVARLIST WTYPES(string) IGNORENOCONS ]
                 – .n_depvars = 1
                 – if `:list sizeof numdepvars' {
                 = if 1 {
                 – .n_depvars = `numdepvars'
                 = .n_depvars = 0
                 – }
                 – .needequal = ("`needequal'" != "")
                 = .needequal = ("needequal" != "")
                 – .needvarlist = ("`needvarlist'" == "")
                 = .needvarlist = ("noneedvarlist" == "")
                 – .nocons_ignore = ("`ignorenocons'" != "")
                 = .nocons_ignore = ("" != "")
                 – .wtypes = "`wtypes'"
                 = .wtypes = ""
                 ───────────────────────────────────────────────────────────────

>  ───────────────────────────────────────────  end _eqspec.new  ──────────────────
             – .eq_list[`i'].parse `.eq_opts_allowed.objkey':`EQ_`i''
             = .eq_list[2].parse __key(600002b58080):"lnalpha":, freeparm
                 ───────────────────────────────────────────────────────────────

>  ───────────────────────────────────────────  begin _eqspec.parse  ──────────────
                 – version 9.2
                 – _on_colon_parse `0'
                 = _on_colon_parse __key(600002b58080):"lnalpha":, freeparm
                 ───────────────────────────────────────────────────────────────

>  ───────────────────────────────────────────  begin _on_colon_parse  ────────────
                 – version 8.2
                 – sreturn local before ""
                 – sreturn local after ""
                 – gettoken before after : 0, parse(":") bind match(par) quot
>  es
                 – if "`par'" != "" {
                 = if "" != "" {
                   local before `"(`before')"'
                   }
                 – if `"`before'"' == ":" {
                 = if `"__key(600002b58080)"' == ":" {
                   sreturn local after `"`after'"'
                   exit
                   }
                 – while `"`COLON'"' != ":" & `"`after'"' != "" {
                 = while `""' != ":" & `":"lnalpha":, freeparm"' != "" {
                 – gettoken COLON after : after, parse(":") bind match(par) q
```

```
> uotes
                  – if "`par'" != "" {
                  = if "" != "" {
                    local before `before' (`COLON')
                    local COLON
                    }
                  – else if `"`COLON'"' != ":" {
                  = else if `":"' != ":" {
                    local before `"`before' `COLON'"'
                    local COLON
                    }
                  – }
                  – while `"`COLON'"' != ":" & `"`after'"' != "" {
                  = while `":"' != ":" & `""lnalpha":, freeparm'" != "" {
                    gettoken COLON after : after, parse(":") bind match(par) q
> uotes

                    if "`par'" != "" {
                    local before `before' (`COLON')
                    local COLON
                    }
                    else if `"`COLON'"' != ":" {
                    local before `"`before' `COLON'"'
                    local COLON
                    }
                    }
                  – if `"`COLON'"' != ":" {
                  = if `":"' != ":" {
                    di as err "'' found where ':' expected"
                    exit 198
                    }
                  – sreturn local before `"`before'"'
                  = sreturn local before `"__key(600002b58080)"'
                  – sreturn local after `"`after'"'
                  = sreturn local after `""lnalpha":, freeparm'"'
                  ─────────────────────────────────────────────────
> ──────────────────────────────────────── end _on_colon_parse ──────────────
                  – local ol `s(before)'
                  = local ol __key(600002b58080)
                  – if `:list sizeof ol' {
                  = if 1 {
                  – local OPTLIST `"`.`ol'.dumpoptions'"'
                  ─────────────────────────────────────────────────
> ──────────────────────────────────────── begin _optlist.dumpoptions ───────
                  – version 9
                  – forval i = 1/`.options.arrnels' {
                  = forval i = 1/4 {
```

```
                    - local optlist `optlist' `.options[`i']'
                    = local optlist  NOCONStant
                    - }
                    - local optlist `optlist' `.options[`i']'
                    = local optlist NOCONStant FREEParm
                    - }
                    - local optlist `optlist' `.options[`i']'
                    = local optlist NOCONStant FREEParm OFFset(passthru)
                    - }
                    - local optlist `optlist' `.options[`i']'
                    = local optlist NOCONStant FREEParm OFFset(passthru) EXPosur
> e(passthru)
                    - }
                    - local optlist : list uniq optlist
                    - sreturn local optlist `"`optlist'"'
                    = sreturn local optlist `"NOCONStant FREEParm OFFset(passthr
> u) EXPosure(passthru)"'
                    - class exit `"`optlist'"'
                    = class exit `"NOCONStant FREEParm OFFset(passthru) EXPosure
> (passthru)"'
                          ─────────────────────────────────────────────────
> ──────────────────────────── end _optlist.dumpoptions ───────────────
             = local OPTLIST `"NOCONStant FREEParm OFFset(passthru) EXPosur
> e(passthru)"'
             - local OPTNAMES `"`.`ol'.dumpnames'"'
                          ─────────────────────────────────────────────────
> ──────────────────────────── begin _optlist.dumpnames ───────────────
                    - version 9
                    - forval i = 1/`.names.arrnels' {
                    = forval i = 1/4 {
                    - local namelist `namelist' `.names[`i']'
                    = local namelist  noconstant
                    - }
                    - local namelist `namelist' `.names[`i']'
                    = local namelist noconstant freeparm
                    - }
                    - local namelist `namelist' `.names[`i']'
                    = local namelist noconstant freeparm offset
                    - }
                    - local namelist `namelist' `.names[`i']'
                    = local namelist noconstant freeparm offset exposure
                    - }
                    - local namelist : list uniq namelist
                    - sreturn local namelist `"`namelist'"'
                    = sreturn local namelist `"noconstant freeparm offset exposu
> re"'
```

```
                        – class exit `"`namelist'"'
                        = class exit `"noconstant freeparm offset exposure"'
                       ────────────────────────────────────────────────────
> ─────────────────────────────────── end _optlist.dumpnames ──────────────
                = local OPTNAMES `"noconstant freeparm offset exposure"'
                – local NOCONS constant noconstant
                – if `"`:list NOCONS & OPTNAMES'"' == "" {
                = if `"noconstant"' == "" {
                  local NOCONS noCONStant
                  }
                – else local NOCONS
                – }
                – local 0 `"`s(after)'"'
                = local 0 `""lnalpha":, freeparm"'
                – if `"`.wtypes'"' != "" {
                = if `""' != "" {
                  local wgt "[`.wtypes']"
                  }
                – syntax [anything(equalok)] [if] [in] `wgt' [, `OPTLIST' `NOC
> ONS' *]
                = syntax [anything(equalok)] [if] [in]  [, NOCONStant FREEParm
>  OFFset(passthru) EXPosure(passthru)  *]
                – local HOLDIF `"`if'"'
                = local HOLDIF `""'
                – local HOLDIN `"`in'"'
                = local HOLDIN `""'
                – if "`wgt'" != "" & "`weight'" != "" {
                = if "" != "" & "" != "" {
                  local HOLDWGT `"[`weight'`exp']"'
                  }
                – gettoken NAME REST : anything, parse(":")
                – if trim("`NAME'") == ":" {
                = if trim("lnalpha") == ":" {
                  di as err "nothing found where equation name expected"
                  exit 198
                  }
                – if `:list sizeof REST' {
                = if 1 {
                – if strpos(`"`NAME'"', ":") {
                = if strpos(`"lnalpha"', ":") {
                  capture _msparse `NAME'
                  if c(rc) {
                  di as err "{bf:`NAME'} invalid equation specification"
                  exit 198
                  }
                  }
```

```
          – else {
          – ._confirm_eqname `NAME'
          = ._confirm_eqname lnalpha
          ─────────────────────────────────────────────
> ───────────────────────────── begin _eqspec._confirm_eqname ───────────────
          – version 9.2
          – capture confirm number `0'
          = capture confirm number lnalpha
          – if (! c(rc)) exit
          – local hasdot = strpos(`"`0'"',".")
          = local hasdot = strpos(`"lnalpha"',".")
          – if `hasdot' {
          = if 0 {
            syntax varname(ts)
            exit
            }
          – capture syntax name(id="equation name")
          – if (! c(rc)) exit
          ─────────────────────────────────────────────
> ───────────────────────────── end _eqspec._confirm_eqname ─────────────────
          – }
          – local NAME : list retok NAME
          – gettoken COLON anything : REST, parse(":")
          – }
          – else {
            local NAME
            }
          – gettoken DEPVARS REST : anything, parse("=") bind
          – if "`DEPVARS'" == "=" {
          = if "" == "=" {
            local REST : copy local anything
            local DEPVARS
            }
          – if (`:length local DEPVARS' == 0 & `.n_depvars') {
          = if (0 == 0 & 0) {
            di as err "nothing found where depvar expected"
            exit 198
            }
          – if `"`REST'"' == "" {
          = if `""' == "" {
          – if 0`.needequal' {
          = if 01 {
          – if `.needvarlist' | (`:length local DEPVARS' != 0 & `.n_depv
> ars') {
          = if 0 | (0 != 0 & 0) {
            di as err "equal sign required to separate depvars from inde
```

Friday, January 10, 2025 at 11:33 AM   Page 616

```
> pvars"
                  exit 198
                  }
          -  }
          -  local DEPVARS
          -  local n_deps : list sizeof anything
          -  if `n_deps' != 0 | `.needvarlist' {
          =  if 0 != 0 | 0 {
             if `n_deps' < `.n_depvars' {
             error 102
             }
             forval j = 1/`.n_depvars' {
             gettoken YY anything : anything
             local DEPVARS `DEPVARS' `YY'
             }
             local INDEPVARS : list retok anything
             }
          -  loca hasequal 0
          -  }
          -  else {
             gettoken EQ INDEPVARS : REST, parse("=") bind
             local hasequal 1
             }
          -  if `:list sizeof DEPVARS' {
          =  if 0 {
             _fv_check_depvar `DEPVARS'
             tsunab DEPVARS : `DEPVARS'
             }
          -  if `:list sizeof INDEPVARS' {
          =  if 0 {
             fvunab INDEPVARS : `INDEPVARS'
             }
          -  if inlist("noconstant", "`noconstant'", "`constant'") {
          =  if inlist("noconstant", "", "") {
             if "`INDEPVARS'" == "" & ! `.nocons_ignore' {
             di as err "independent variables are required when option no
> constant is specified"
                  exit 102
                  }
                  if "`NOCONS'" != "" {
             local options `options' noconstant
                  }
             local NOCONS 1
                  }
          -  else local NOCONS 0
          -  if `"`offset'`exposure'"' != "" {
```

```
= if `""' != "" {
  ._check_offset, `offset' `exposure'
  local OFFSET "`s(offset)'"
  local EXPOSURE = ("`exposure'" != "")
  local OTHER `s(offset)'
  }
- else local EXPOSURE 0
- local FREEPARM = `"`freeparm'"' != ""
= local FREEPARM = `"freeparm"' != ""
- local OPTIONS
- local SPACE
- foreach OPTNAME of local OPTNAMES {
- if `"``OPTNAME''"' != "" {
= if `""' != "" {
  local OPTIONS `"`OPTIONS'`SPACE'``OPTNAME''"'
  local SPACE " "
  }
- }
- if `"``OPTNAME''"' != "" {
= if `"freeparm"' != "" {
- local OPTIONS `"`OPTIONS'`SPACE'``OPTNAME''"'
= local OPTIONS `"freeparm"'
- local SPACE " "
- }
- }
- if `"``OPTNAME''"' != "" {
= if `""' != "" {
  local OPTIONS `"`OPTIONS'`SPACE'``OPTNAME''"'
  local SPACE " "
  }
- }
- if `"``OPTNAME''"' != "" {
= if `""' != "" {
  local OPTIONS `"`OPTIONS'`SPACE'``OPTNAME''"'
  local SPACE " "
  }
- }
- if `"`options'"' != "" {
= if `""' != "" {
  local OPTIONS `"`OPTIONS'`SPACE'`options'"'
  }
- .name = `"`NAME'"'
= .name = `"lnalpha"'
- .depvars = `"`DEPVARS'"'
= .depvars = `""'
- .hasequal = `hasequal'
```

```
                = .hasequal = 0
                – .indepvars = `"`:list retok INDEPVARS'"'
                = .indepvars = `""'
                – .other_markvars = `"`:list retok OTHER'"'
                = .other_markvars = `""'
                – .nocons = `NOCONS'
                = .nocons = 0
                – .if = `"`HOLDIF'"'
                = .if = `""'
                – .in = `"`HOLDIN'"'
                = .in = `""'
                – .wgt = `"`HOLDWGT'"'
                = .wgt = `""'
                – .offset = `"`OFFSET'"'
                = .offset = `""'
                – .exposure = `EXPOSURE'
                = .exposure = 0
                – .freeparm = `FREEPARM'
                = .freeparm = 1
                – .options = `"`OPTIONS'"'
                = .options = `"freeparm"'
                ───────────────────────────────────────────────
>  ─────────────────────────────────── end _eqspec.parse ──────────────
            – }
            – local MARKOPTLIST `"`.mark_opts.dumpoptions'"'
                ───────────────────────────────────────────────
>  ─────────────────────────── begin _optlist.dumpoptions ────────────
            – version 9
            – forval i = 1/`.options.arrnels' {
            = forval i = 1/0 {
              local optlist `optlist' `.options[`i']'
              }
            – local optlist : list uniq optlist
            – sreturn local optlist `"`optlist'"'
            = sreturn local optlist `""'
            – class exit `"`optlist'"'
            = class exit `""'
                ───────────────────────────────────────────────
>  ─────────────────────────── end _optlist.dumpoptions ──────────────
            = local MARKOPTLIST `""'
            – local MARKOPTNAMES `"`.mark_opts.dumpnames'"'
                ───────────────────────────────────────────────
>  ─────────────────────────── begin _optlist.dumpnames ──────────────
            – version 9
            – forval i = 1/`.names.arrnels' {
            = forval i = 1/0 {
```

```
                    local namelist `namelist' `.names[`i']'
                    }
            – local namelist : list uniq namelist
            – sreturn local namelist `"`namelist'"'
            = sreturn local namelist `""'
            – class exit `"`namelist'"'
            = class exit `""'
            ──────────────────────────────────────────────────────
>  ───────────────────────────── end _optlist.dumpnames ───────────────
            = local MARKOPTNAMES `""'
            – local OPTLIST1 : subinstr local MARKOPTLIST "(passthru)" "(str
>  ing asis)", all
            – local SMARKOPTLIST `"'.smark_opts.dumpoptions'"'
            ──────────────────────────────────────────────────────
>  ───────────────────────────── begin _optlist.dumpoptions ──────────
            – version 9
            – forval i = 1/`.options.arrnels' {
            = forval i = 1/0 {
              local optlist `optlist' `.options[`i']'
              }
            – local optlist : list uniq optlist
            – sreturn local optlist `"`optlist'"'
            = sreturn local optlist `""'
            – class exit `"`optlist'"'
            = class exit `""'
            ──────────────────────────────────────────────────────
>  ───────────────────────────── end _optlist.dumpoptions ─────────────
            = local SMARKOPTLIST `""'
            – local SMARKOPTNAMES `"'.smark_opts.dumpnames'"'
            ──────────────────────────────────────────────────────
>  ───────────────────────────── begin _optlist.dumpnames ─────────────
            – version 9
            – forval i = 1/`.names.arrnels' {
            = forval i = 1/0 {
              local namelist `namelist' `.names[`i']'
              }
            – local namelist : list uniq namelist
            – sreturn local namelist `"`namelist'"'
            = sreturn local namelist `""'
            – class exit `"`namelist'"'
            = class exit `""'
            ──────────────────────────────────────────────────────
>  ───────────────────────────── end _optlist.dumpnames ───────────────
            = local SMARKOPTNAMES `""'
            – local OPTLIST1s : subinstr local SMARKOPTLIST "(passthru)" "(s
>  tring asis)", all
```

```
                  ─ local RMCOLLOPTLIST `"'`.rmcoll_opts.dumpoptions'"'
                   ─────────────────────────────────────────────────────
>  ───────────────────────────── begin _optlist.dumpoptions ──────────
                  ─ version 9
                  ─ forval i = 1/`.options.arrnels' {
                  = forval i = 1/0 {
                    local optlist `optlist' `.options[`i']'
                    }
                  ─ local optlist : list uniq optlist
                  ─ sreturn local optlist `"'`optlist'"'
                  = sreturn local optlist `""'
                  ─ class exit `"'`optlist'"'
                  = class exit `""'
                   ─────────────────────────────────────────────────────
>  ───────────────────────────── end _optlist.dumpoptions ────────────
                  = local RMCOLLOPTLIST `""'
                  ─ local RMCOLLOPTNAMES `"'`.rmcoll_opts.dumpnames'"'
                   ─────────────────────────────────────────────────────
>  ───────────────────────────── begin _optlist.dumpnames ────────────
                  ─ version 9
                  ─ forval i = 1/`.names.arrnels' {
                  = forval i = 1/0 {
                    local namelist `namelist' `.names[`i']'
                    }
                  ─ local namelist : list uniq namelist
                  ─ sreturn local namelist `"'`namelist'"'
                  = sreturn local namelist `""'
                  ─ class exit `"'`namelist'"'
                  = class exit `""'
                   ─────────────────────────────────────────────────────
>  ───────────────────────────── end _optlist.dumpnames ──────────────
                  = local RMCOLLOPTNAMES `""'
                  ─ local OPTLIST2 : subinstr local RMCOLLOPTLIST "(passthru)" "(s
>  tring asis)", all
                  ─ local RMDCOLLOPTLIST `"'`.rmdcoll_opts.dumpoptions'"'
                   ─────────────────────────────────────────────────────
>  ───────────────────────────── begin _optlist.dumpoptions ──────────
                  ─ version 9
                  ─ forval i = 1/`.options.arrnels' {
                  = forval i = 1/0 {
                    local optlist `optlist' `.options[`i']'
                    }
                  ─ local optlist : list uniq optlist
                  ─ sreturn local optlist `"'`optlist'"'
                  = sreturn local optlist `""'
                  ─ class exit `"'`optlist'"'
```

```
              = class exit `""'
              ─────────────────────────────────────────────────
> ──────────────────────────────── end _optlist.dumpoptions ──────────────
              = local RMDCOLLOPTLIST `""'
              – local RMDCOLLOPTNAMES `"'`.rmdcoll_opts.dumpnames'"'
              ─────────────────────────────────────────────────
> ──────────────────────────────── begin _optlist.dumpnames ──────────────
              – version 9
              – forval i = 1/`.names.arrnels' {
              = forval i = 1/0 {
                local namelist `namelist' `.names[`i']'
                }
              – local namelist : list uniq namelist
              – sreturn local namelist `"'`namelist'"'
              = sreturn local namelist `""'
              – class exit `"'`namelist'"'
              = class exit `""'
              ─────────────────────────────────────────────────
> ──────────────────────────────── end _optlist.dumpnames ──────────────
              = local RMDCOLLOPTNAMES `""'
              – local OPTLIST3 : subinstr local RMDCOLLOPTLIST "(passthru)" "(
> string asis)", all
              – local 0 `", `GL_op'"'
              = local 0 `", "'
              – syntax [, `OPTLIST1' `OPTLIST1s' `OPTLIST2' `OPTLIST3' COLline
> ar noCONStant * ]
              = syntax [,      COLlinear noCONStant * ]
              – local GL_op `"'`options'"'
              = local GL_op `""'
              – if `"'`collinear'"' != "" {
              = if `""' != "" {
                local GL_op `"'`GL_op' `collinear'"'
                .collinear = "`collinear'"
                }
              – if `"'`constant'"' != "" {
              = if `""' != "" {
                local GL_op `"'`GL_op' `constant'"'
                .nocons = "`constant'"
                }
              – local I 0
              – foreach OPT of local MARKOPTNAMES {
                if `:list sizeof `OPT'' {
                .mark_list[`++I'] = ._eqspec.new, numdep(0) wtypes(`.wtypes')
                .mark_list[`I'].parse "" : ``OPT''
                .mark_name.Arrpush "`OPT'"
                }
```

```
                          }
                      ─ local I 0
                      ─ foreach OPT of local SMARKOPTNAMES {
                        if `:list sizeof `OPT'' {
                        .smark_list[`++I'] = ._eqspec.new, numdep(0) wtypes(`.wtypes')
                        .smark_list[`I'].parse "" : ``OPT''
                        .smark_name.Arrpush "`OPT'"
                        }
                        }
                      ─ local I 0
                      ─ foreach OPT of local RMCOLLOPTNAMES {
                        if `:list sizeof `OPT'' {
                        .rmcoll_list[`++I'] = ._eqspec.new, numdep(0) wtypes(`.wtypes'
> )
                        .rmcoll_list[`I'].parse "" : ``OPT''
                        .rmcoll_name.Arrpush "`OPT'"
                        }
                        }
                      ─ local I 0
                      ─ foreach OPT of local RMDCOLLOPTNAMES {
                        if `:list sizeof `OPT'' {
                        .rmdcoll_list[`++I'] = ._eqspec.new, wtypes(`.wtypes')
                        .rmdcoll_list[`I'].parse "" : ``OPT''
                        .rmdcoll_name.Arrpush "`OPT'"
                        }
                        }
                      ─ .n_eq = `EQ_n'
                      = .n_eq = 2
                      ─ .gl_if = `"`GL_if'"'
                      = .gl_if = `""'
                      ─ .gl_in = `"`GL_in'"'
                      = .gl_in = `""'
                      ─ .gl_wgt = `"`GL_wt'"'
                      = .gl_wgt = `""'
                      ─ .gl_options = `"`:list retok GL_op'"'
                      = .gl_options = `""'
                      ────────────────────────────────────────────────────
> ─────────────────────────────────── end _eqlist.parse ──────────────
                ─ if "`subpop'" != "" & "`missing'" == "" {
                = if "" != "" & "missing" == "" {
                  if `interactive' {
                  SetGlobalVar ML_samp : _MLtu
                  }
                  else {
                  global ML_samp : tempvar
                  if `"`moptobj'"' != "" {
```

```
                    global ML_samp `moptobj'$ML_samp
                    }
                    }
                    tempvar markuse
                    _svy_setup $ML_sample $ML_samp, svy subpop(`subpop')
                    quietly gen byte `markuse' = $ML_samp
                    }
              - else global ML_samp $ML_sample
              = else global ML_samp __000006
              - if "`collinear'" == "" {
              = if "collinear" == "" {
                .`eqlist'.rmcoll $ML_samp, replace `missing'
                }
              - else if "`missing'" == "" {
              = else if "missing" == "" {
                .`eqlist'.markout $ML_samp, replace
                }
              - if "$ML_samp" != "$ML_sample" {
              = if "__000006" != "__000006" {
                `vv' quietly replace $ML_sample = 0 if `markuse' & !$ML_samp
                drop `markuse'
                }
              - local eq_n = `.`eqlist'.eq count'
                ─────────────────────────────────────────────────────────
>  ──────────────────────────────────────────── begin _eqlist.eq ──────────
              - version 9.2
              - args item idx
              - if "`item'" == "count" {
              = if "count" == "count" {
              - sreturn local value `"`.n_eq'"'
              = sreturn local value `"2"'
              - class exit `"`s(value)'"'
              = class exit `"2"'
                ─────────────────────────────────────────────────────────
>  ────────────────────────────────────────────── end _eqlist.eq ──────────
              = local eq_n = 2
              - global ML_n : copy local eq_n
              - global ML_dim = `.`eqlist'.dim'
                ─────────────────────────────────────────────────────────
>  ─────────────────────────────────────────── begin _eqlist.dim ──────────
              - version 9.2
              - syntax
              - local neq = `.eq count'
                ─────────────────────────────────────────────────────────
>  ──────────────────────────────────────────── begin _eqlist.eq ──────────
                - version 9.2
```

```
                    - args item idx
                    - if "`item'" == "count" {
                    = if "count" == "count" {
                    - sreturn local value `"`.n_eq'"'
                    = sreturn local value `"2"'
                    - class exit `"`s(value)'"'
                    = class exit `"2"'
                    ─────────────────────────────────────────
>  ──────────────────────────────── end _eqlist.eq ──────────
                = local neq = 2
                - forval i = 1/`neq' {
                = forval i = 1/2 {
                - local xvarsi `"`.eq indepvars `i''"'
                    ─────────────────────────────────────────
>  ──────────────────────────────── begin _eqlist.eq ────────
                    - version 9.2
                    - args item idx
                    - if "`item'" == "count" {
                    = if "indepvars" == "count" {
                      sreturn local value `"`.n_eq'"'
                      class exit `"`s(value)'"'
                      }
                    - else if 0 < `idx' & `idx' <= `.n_eq' {
                    = else if 0 < 1 & 1 <= 2 {
                    - .eq_list[`idx'].item `item'
                    = .eq_list[1].item indepvars
                    ─────────────────────────────────────────
>  ──────────────────────────────── begin _eqspec.item ──────
                    - version 9.2
                    - args item
                    - ._check_eq_item_name item, `item'
                    = ._check_eq_item_name item, indepvars
                    ─────────────────────────────────────────
>  ────────────────────────── begin _eqspec._check_eq_item_name ──────
                      - version 9.2
                      - capture syntax name(name=c_item) [, NAME DEPvars INDEPva
> rs IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
                      - if c(rc) error 198
                      - if `:list sizeof other' {
                      = if 0 {
                        local other other_markvars
                        }
                      - local item `name' `depvars' `indepvars' `if' `in' `wgt'
> `other' `nocons' `offset' `exposure' `freeparm' `options'
                      = local item    indepvars
                      - if `:list sizeof item' != 1 {
```

```
                          = if 1 != 1 {
                            error 198
                            }
                          - c_local `c_item' `item'
                          = c_local item indepvars
                                ───────────────────────────────────────
```

> ─────────────────────────── end _eqspec._check_eq_item_name ─────────────
```
                  - local value `"`.`item''"'
                  = local value `"ln_neq cb_authors_ext estimated est_late o.e
```
> st_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo"'
```
                  - sreturn local value `"`value'"'
                  = sreturn local value `"ln_neq cb_authors_ext estimated est_
```
> late o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo"'
```
                  - class exit `"`value'"'
                  = class exit `"ln_neq cb_authors_ext estimated est_late o.es
```
> t_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo"'
```
                                ───────────────────────────────────────
```

> ───────────────────────────────── end _eqspec.item ──────────────
```
                - class exit `"`s(value)'"'
                = class exit `"ln_neq cb_authors_ext estimated est_late o.est_
```
> early wg_ndx_other stky_pr_rotemberg stky_pr_calvo"'
```
                                ───────────────────────────────────────
```

> ───────────────────────────────── end _eqlist.eq ──────────────
```
                = local xvarsi `"ln_neq cb_authors_ext estimated est_late o.est_
```
> early wg_ndx_other stky_pr_rotemberg stky_pr_calvo"'
```
                - local noconsi `"`.eq nocons `i''"'
                                ───────────────────────────────────────
```

> ───────────────────────────────── begin _eqlist.eq ──────────────
```
                - version 9.2
                - args item idx
                - if "`item'" == "count" {
                = if "nocons" == "count" {
                  sreturn local value `"`.n_eq'"'
                  class exit `"`s(value)'"'
                  }
                - else if 0 < `idx' & `idx' <= `.n_eq' {
                = else if 0 < 1 & 1 <= 2 {
                - .eq_list[`idx'].item `item'
                = .eq_list[1].item nocons
                                ───────────────────────────────────────
```

> ───────────────────────────────── begin _eqspec.item ──────────────
```
                - version 9.2
                - args item
                - ._check_eq_item_name item, `item'
                = ._check_eq_item_name item, nocons
                                ───────────────────────────────────────
```

```
> ──────────────────────── begin _eqspec._check_eq_item_name ────────────
                    – version 9.2
                    – capture syntax name(name=c_item) [, NAME DEPvars INDEPva
> rs IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
                    – if c(rc) error 198
                    – if `:list sizeof other' {
                    = if 0 {
                      local other other_markvars
                      }
                    – local item `name' `depvars' `indepvars' `if' `in' `wgt'
> `other' `nocons' `offset' `exposure' `freeparm' `options'
                    = local item           nocons
                    – if `:list sizeof item' != 1 {
                    = if 1 != 1 {
                      error 198
                      }
                    – c_local `c_item' `item'
                    = c_local item nocons
                    ─────────────────────────────────────────────────────
> ──────────────────────── end _eqspec._check_eq_item_name ──────────────
                  – local value `"`.`item''"'
                  = local value `"0"'
                  – sreturn local value `"`value'"'
                  = sreturn local value `"0"'
                  – class exit `"`value'"'
                  = class exit `"0"'
                    ─────────────────────────────────────────────────────
> ──────────────────────────────────────── end _eqspec.item ────────────
                  – class exit `"`s(value)'"'
                  = class exit `"0"'
                    ─────────────────────────────────────────────────────
> ──────────────────────────────────────── end _eqlist.eq ──────────────
              = local noconsi `"0"'
              – local dim = `dim' + `:list sizeof xvarsi'
              = local dim =  + 8
              – if "`noconsi'" == "0" {
              = if "0" == "0" {
              – local ++dim
              – }
              – }
              – local xvarsi `"`.eq indepvars `i''"'
                    ─────────────────────────────────────────────────────
> ──────────────────────────────────────── begin _eqlist.eq ────────────
              – version 9.2
              – args item idx
              – if "`item'" == "count" {
```

```
                = if "indepvars" == "count" {
                  sreturn local value `"'`.n_eq'"'
                  class exit `"'`s(value)'"'
                  }
                - else if 0 < `idx' & `idx' <= `.n_eq' {
                = else if 0 < 2 & 2 <= 2 {
                - .eq_list[`idx'].item `item'
                = .eq_list[2].item indepvars
                ─────────────────────────────────────────────────────
  > ──────────────────────────────────── begin _eqspec.item ───────────────
                - version 9.2
                - args item
                - ._check_eq_item_name item, `item'
                = ._check_eq_item_name item, indepvars
                ─────────────────────────────────────────────────────
  > ──────────────────────────────── begin _eqspec._check_eq_item_name ───────────
                - version 9.2
                - capture syntax name(name=c_item) [, NAME DEPvars INDEPva
  > rs IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
                - if c(rc) error 198
                - if `:list sizeof other' {
                = if 0 {
                  local other other_markvars
                  }
                - local item `name' `depvars' `indepvars' `if' `in' `wgt'
  > `other' `nocons' `offset' `exposure' `freeparm' `options'
                = local item    indepvars
                - if `:list sizeof item' != 1 {
                = if 1 != 1 {
                  error 198
                  }
                - c_local `c_item' `item'
                = c_local item indepvars
                ─────────────────────────────────────────────────────
  > ──────────────────────────────── end _eqspec._check_eq_item_name ───────────
                - local value `"'`.`item''"'
                = local value `""'
                - sreturn local value `"'`value'"'
                = sreturn local value `""'
                - class exit `"'`value'"'
                = class exit `""'
                ─────────────────────────────────────────────────────
  > ──────────────────────────────────── end _eqspec.item ───────────────
                - class exit `"'`s(value)'"'
                = class exit `""'
                ─────────────────────────────────────────────────────
```

```
> ─────────────────────────────────────── end _eqlist.eq ──────────────
              = local xvarsi `""'
              - local noconsi `"`.eq nocons `i''"'
                ──────────────────────────────────────────────────────
> ─────────────────────────────────────── begin _eqlist.eq ────────────
              - version 9.2
              - args item idx
              - if "`item'" == "count" {
              = if "nocons" == "count" {
                sreturn local value `"`.n_eq'"'
                class exit `"`s(value)'"'
                }
              - else if 0 < `idx' & `idx' <= `.n_eq' {
              = else if 0 < 2 & 2 <= 2 {
              - .eq_list[`idx'].item `item'
              = .eq_list[2].item nocons
                ──────────────────────────────────────────────────────
> ─────────────────────────────────────── begin _eqspec.item ──────────
              - version 9.2
              - args item
              - ._check_eq_item_name item, `item'
              = ._check_eq_item_name item, nocons
                ──────────────────────────────────────────────────────
> ─────────────────────────── begin _eqspec._check_eq_item_name ───────
              - version 9.2
              - capture syntax name(name=c_item) [, NAME DEPvars INDEPva
> rs IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
              - if c(rc) error 198
              - if `:list sizeof other' {
              = if 0 {
                local other other_markvars
                }
              - local item `name' `depvars' `indepvars' `if' `in' `wgt'
> `other' `nocons' `offset' `exposure' `freeparm' `options'
              = local item         nocons
              - if `:list sizeof item' != 1 {
              = if 1 != 1 {
                error 198
                }
              - c_local `c_item' `item'
              = c_local item nocons
                ──────────────────────────────────────────────────────
> ─────────────────────────── end _eqspec._check_eq_item_name ─────────
              - local value `"`.`item''"'
              = local value `"0"'
              - sreturn local value `"`value'"'
```

```
                  = sreturn local value `"0"'
                  – class exit `"`value'"'
                  = class exit `"0"'
                  ─────────────────────────────────────────────
> ──────────────────────────────────────── end _eqspec.item ──────────────
                  – class exit `"`s(value)'"'
                  = class exit `"0"'
                  ─────────────────────────────────────────────
> ──────────────────────────────────────── end _eqlist.eq ──────────────
              = local noconsi `"0"'
              – local dim = `dim' + `:list sizeof xvarsi'
              = local dim = 9 + 0
              – if "`noconsi'" == "0" {
              = if "0" == "0" {
              – local ++dim
              – }
              – }
              – sreturn local value `"`dim'"'
              = sreturn local value `"10"'
              – class exit `"`s(value)'"'
              = class exit `"10"'
              ─────────────────────────────────────────────
> ──────────────────────────────────────── end _eqlist.dim ──────────────
            = global ML_dim = 10
            – forval i = 1/`eq_n' {
            = forval i = 1/2 {
            – local depvars `.`eqlist'.eq depvars `i''
            ─────────────────────────────────────────────
> ──────────────────────────────────────── begin _eqlist.eq ──────────────
            – version 9.2
            – args item idx
            – if "`item'" == "count" {
            = if "depvars" == "count" {
              sreturn local value `"`.n_eq'"'
              class exit `"`s(value)'"'
              }
            – else if 0 < `idx' & `idx' <= `.n_eq' {
            = else if 0 < 1 & 1 <= 2 {
            – .eq_list[`idx'].item `item'
            = .eq_list[1].item depvars
            ─────────────────────────────────────────────
> ──────────────────────────────────────── begin _eqspec.item ──────────────
            – version 9.2
            – args item
            – ._check_eq_item_name item, `item'
            = ._check_eq_item_name item, depvars
```

> ───
> ──────────────────────── begin _eqspec._check_eq_item_name ────────────────
                  – version 9.2
                  – capture syntax name(name=c_item) [, NAME DEPvars INDEPvars
>   IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions]
                  – if c(rc) error 198
                  – if `:list sizeof other' {
                  = if 0 {
                    local other other_markvars
                    }
                  – local item `name' `depvars' `indepvars' `if' `in' `wgt' `o
> ther' `nocons' `offset' `exposure' `freeparm' `options'
                  = local item depvars
                  – if `:list sizeof item' != 1 {
                  = if 1 != 1 {
                    error 198
                    }
                  – c_local `c_item' `item'
                  = c_local item depvars
                  ───
> ─────────────────────── end _eqspec._check_eq_item_name ───────────────
                  – local value `"`.`item''"'
                  = local value `"piq_timing_max"'
                  – sreturn local value `"`value'"'
                  = sreturn local value `"piq_timing_max"'
                  – class exit `"`value'"'
                  = class exit `"piq_timing_max"'
                  ───
> ───────────────────────────────── end _eqspec.item ──────────────
                  – class exit `"`s(value)'"'
                  = class exit `"piq_timing_max"'
                  ───
> ─────────────────────────────────── end _eqlist.eq ──────────────
              = local depvars piq_timing_max
              – local eq `.`eqlist'.eq name `i''
                  ───
> ─────────────────────────────────── begin _eqlist.eq ──────────────
              – version 9.2
              – args item idx
              – if "`item'" == "count" {
              = if "name" == "count" {
                sreturn local value `"`.n_eq'"'
                class exit `"`s(value)'"'
                }
              – else if 0 < `idx' & `idx' <= `.n_eq' {
              = else if 0 < 1 & 1 <= 2 {

```
              – .eq_list[`idx'].item `item'
              = .eq_list[1].item name
              ───────────────────────────────────────────

>  ─────────────────────────────────── begin _eqspec.item ────────────
              – version 9.2
              – args item
              – ._check_eq_item_name item, `item'
              = ._check_eq_item_name item, name
              ───────────────────────────────────────────

>  ──────────────────────────── begin _eqspec._check_eq_item_name ──────────
              – version 9.2
              – capture syntax name(name=c_item) [, NAME DEPvars INDEPvars
>  IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
              – if c(rc) error 198
              – if `:list sizeof other' {
              = if 0 {
                local other other_markvars
                }
              – local item `name' `depvars' `indepvars' `if' `in' `wgt' `o
> ther' `nocons' `offset' `exposure' `freeparm' `options'
              = local item name
              – if `:list sizeof item' != 1 {
              = if 1 != 1 {
                error 198
                }
              – c_local `c_item' `item'
              = c_local item name
              ───────────────────────────────────────────

>  ──────────────────────────── end _eqspec._check_eq_item_name ────────────
              – local value `"`.`item''"'
              = local value `"piq_timing_max"'
              – sreturn local value `"`value'"'
              = sreturn local value `"piq_timing_max"'
              – class exit `"`value'"'
              = class exit `"piq_timing_max"'
              ───────────────────────────────────────────

>  ─────────────────────────────────────── end _eqspec.item ────────────
              – class exit `"`s(value)'"'
              = class exit `"piq_timing_max"'
              ───────────────────────────────────────────

>  ───────────────────────────────────────── end _eqlist.eq ────────────
          = local eq piq_timing_max
          – if !`:length local eq' {
          = if !14 {
            local eq eq`i'
            }
```

```
            - if `:list eq in eqnames' {
            = if 0 {
              di as err "equation '`eq'' multiply defined"
              exit 110
              }
            - local eqnames `eqnames' `eq'
            = local eqnames  piq_timing_max
            - fvexpand `.`eqlist'.eq indepvars `i'' if $ML_samp
            ─────────────────────────────────────────────────────
>  ──────────────────────────────────────── begin _eqlist.eq ──────────────
            - version 9.2
            - args item idx
            - if "`item'" == "count" {
            = if "indepvars" == "count" {
              sreturn local value `"`.n_eq'"'
              class exit `"`s(value)'"'
              }
            - else if 0 < `idx' & `idx' <= `.n_eq' {
            = else if 0 < 1 & 1 <= 2 {
            - .eq_list[`idx'].item `item'
            = .eq_list[1].item indepvars
            ─────────────────────────────────────────────────────
>  ──────────────────────────────────────── begin _eqspec.item ──────────────
            - version 9.2
            - args item
            - ._check_eq_item_name item, `item'
            = ._check_eq_item_name item, indepvars
            ─────────────────────────────────────────────────────
>  ──────────────────────────────── begin _eqspec._check_eq_item_name ──────────────
             - version 9.2
             - capture syntax name(name=c_item) [, NAME DEPvars INDEPvars
>  IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
             - if c(rc) error 198
             - if `:list sizeof other' {
             = if 0 {
               local other other_markvars
               }
             - local item `name' `depvars' `indepvars' `if' `in' `wgt' `o
> ther' `nocons' `offset' `exposure' `freeparm' `options'
             = local item    indepvars
             - if `:list sizeof item' != 1 {
             = if 1 != 1 {
               error 198
               }
             - c_local `c_item' `item'
             = c_local item indepvars
```

```
>  ─────────────────────────────── end _eqspec._check_eq_item_name ───────────────
                  ‒ local value `"`.`item''"'
                  = local value `"ln_neq cb_authors_ext estimated est_late o.est
> _early wg_ndx_other stky_pr_rotemberg stky_pr_calvo"'
                  ‒ sreturn local value `"`value'"'
                  = sreturn local value `"ln_neq cb_authors_ext estimated est_la
> te o.est_early wg_ndx_other stky_pr_rotemberg stky_pr_calvo"'
                  ‒ class exit `"`value'"'
                  = class exit `"ln_neq cb_authors_ext estimated est_late o.est_
> early wg_ndx_other stky_pr_rotemberg stky_pr_calvo"'
                  ───────────────────────────────────────────────────────────

>  ──────────────────────────────────────── end _eqspec.item ─────────────────
              ‒ class exit `"`s(value)'"'
              = class exit `"ln_neq cb_authors_ext estimated est_late o.est_ea
> rly wg_ndx_other stky_pr_rotemberg stky_pr_calvo"'
                  ───────────────────────────────────────────────────────────

>  ──────────────────────────────────────── end _eqlist.eq ───────────────────
            = fvexpand ln_neq cb_authors_ext estimated est_late o.est_early wg
> _ndx_other stky_pr_rotemberg stky_pr_calvo if __000006
                  ‒ if "`r(tsops)'" == "true" {
                  = if "" == "true" {
                    global ML_preserve no
                    }
                  ‒ local eq_rhs`i' `"`r(varlist)'"'
                  = local eq_rhs1 `"ln_neq cb_authors_ext estimated est_late o.est_e
> arly wg_ndx_other stky_pr_rotemberg stky_pr_calvo"'
                  ‒ local eq_nocons`i' `.`eqlist'.eq nocons `i''
                  ───────────────────────────────────────────────────────────

>  ──────────────────────────────────────── begin _eqlist.eq ─────────────────
              ‒ version 9.2
              ‒ args item idx
              ‒ if "`item'" == "count" {
              = if "nocons" == "count" {
                sreturn local value `"`.n_eq'"'
                class exit `"`s(value)'"'
                }
              ‒ else if 0 < `idx' & `idx' <= `.n_eq' {
              = else if 0 < 1 & 1 <= 2 {
              ‒ .eq_list[`idx'].item `item'
              = .eq_list[1].item nocons
                  ───────────────────────────────────────────────────────────

>  ──────────────────────────────────────── begin _eqspec.item ───────────────
              ‒ version 9.2
              ‒ args item
              ‒ ._check_eq_item_name item, `item'
```

```
                   = ._check_eq_item_name item, nocons
                  ─────────────────────────────────────────────────────
>  ───────────────────────────── begin _eqspec._check_eq_item_name ─────────────
                  – version 9.2
                  – capture syntax name(name=c_item) [, NAME DEPvars INDEPvars
>  IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
                  – if c(rc) error 198
                  – if `:list sizeof other' {
                  = if 0 {
                    local other other_markvars
                    }
                  – local item `name' `depvars' `indepvars' `if' `in' `wgt' `o
> ther' `nocons' `offset' `exposure' `freeparm' `options'
                  = local item        nocons
                  – if `:list sizeof item' != 1 {
                  = if 1 != 1 {
                    error 198
                    }
                  – c_local `c_item' `item'
                  = c_local item nocons
                  ─────────────────────────────────────────────────────
>  ───────────────────────────── end _eqspec._check_eq_item_name ───────────────
                  – local value `"`.`item''"'
                  = local value `"0"'
                  – sreturn local value `"`value'"'
                  = sreturn local value `"0"'
                  – class exit `"`value'"'
                  = class exit `"0"'
                  ─────────────────────────────────────────────────────
>  ─────────────────────────────────────────── end _eqspec.item ────────────────
                – class exit `"`s(value)'"'
                = class exit `"0"'
                ─────────────────────────────────────────────────────
>  ─────────────────────────────────────────── end _eqlist.eq ──────────────────
              = local eq_nocons1 0
              – local eq_offset`i' `.`eqlist'.eq offset `i''
                ─────────────────────────────────────────────────────
>  ─────────────────────────────────────────── begin _eqlist.eq ────────────────
              – version 9.2
              – args item idx
              – if "`item'" == "count" {
              = if "offset" == "count" {
                sreturn local value `"`.n_eq'"'
                class exit `"`s(value)'"'
                }
              – else if 0 < `idx' & `idx' <= `.n_eq' {
```

```
          = else if 0 < 1 & 1 <= 2 {
          - .eq_list[`idx'].item `item'
          = .eq_list[1].item offset
          ─────────────────────────────────────
>  ─────────────────────────────── begin _eqspec.item ───────────────
          - version 9.2
          - args item
          - ._check_eq_item_name item, `item'
          = ._check_eq_item_name item, offset
          ─────────────────────────────────────
>  ──────────────────────────── begin _eqspec._check_eq_item_name ──────────
          - version 9.2
          - capture syntax name(name=c_item) [, NAME DEPvars INDEPvars
>   IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
          - if c(rc) error 198
          - if `:list sizeof other' {
          = if 0 {
            local other other_markvars
            }
          - local item `name' `depvars' `indepvars' `if' `in' `wgt' `o
> ther' `nocons' `offset' `exposure' `freeparm' `options'
          = local item         offset
          - if `:list sizeof item' != 1 {
          = if 1 != 1 {
            error 198
            }
          - c_local `c_item' `item'
          = c_local item offset
          ─────────────────────────────────────
>  ───────────────────────── end _eqspec._check_eq_item_name ─────────────
          - local value `"`.`item''"'
          = local value `""'
          - sreturn local value `"`value'"'
          = sreturn local value `""'
          - class exit `"`value'"'
          = class exit `""'
          ─────────────────────────────────────
>  ───────────────────────────────── end _eqspec.item ───────────────
          - class exit `"`s(value)'"'
          = class exit `""'
          ─────────────────────────────────────
>  ──────────────────────────────────── end _eqlist.eq ───────────
        = local eq_offset1
        - local eq_exposure`i' `.`eqlist'.eq exposure `i''
          ─────────────────────────────────────
>  ──────────────────────────────────── begin _eqlist.eq ───────────
```

```
              – version 9.2
              – args item idx
              – if "`item'" == "count" {
              = if "exposure" == "count" {
                sreturn local value `"'`.n_eq'"'
                class exit `"'`s(value)'"'
                }
              – else if 0 < `idx' & `idx' <= `.n_eq' {
              = else if 0 < 1 & 1 <= 2 {
              – .eq_list[`idx'].item `item'
              = .eq_list[1].item exposure
                ─────────────────────────────────────────────
> ───────────────────────────────── begin _eqspec.item ─────────────
              – version 9.2
              – args item
              – ._check_eq_item_name item, `item'
              = ._check_eq_item_name item, exposure
                ─────────────────────────────────────────────
> ──────────────────────────── begin _eqspec._check_eq_item_name ──────────
                – version 9.2
                – capture syntax name(name=c_item) [, NAME DEPvars INDEPvars
>  IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
                – if c(rc) error 198
                – if `:list sizeof other' {
                = if 0 {
                  local other other_markvars
                  }
                – local item `name' `depvars' `indepvars' `if' `in' `wgt' `o
> ther' `nocons' `offset' `exposure' `freeparm' `options'
                = local item            exposure
                – if `:list sizeof item' != 1 {
                = if 1 != 1 {
                  error 198
                  }
                – c_local `c_item' `item'
                = c_local item exposure
                  ─────────────────────────────────────────────
> ──────────────────────────── end _eqspec._check_eq_item_name ──────────
              – local value `"'`.`item''"'
              = local value `"0"'
              – sreturn local value `"'`value'"'
              = sreturn local value `"0"'
              – class exit `"'`value'"'
              = class exit `"0"'
                ─────────────────────────────────────────────
> ──────────────────────────────── end _eqspec.item ─────────────
```

```
                      – class exit `"`s(value)'"'
                      = class exit `"0"'
                      _____

> ─────────────────────────────────── end _eqlist.eq ──────────────
              = local eq_exposure1 0
              – local eq_freeparm`i' `.`eqlist'.eq freeparm `i''
                      _____

> ─────────────────────────────────── begin _eqlist.eq ────────────
              – version 9.2
              – args item idx
              – if "`item'" == "count" {
              = if "freeparm" == "count" {
                sreturn local value `"`.n_eq'"'
                class exit `"`s(value)'"'
                }
              – else if 0 < `idx' & `idx' <= `.n_eq' {
              = else if 0 < 1 & 1 <= 2 {
              – .eq_list[`idx'].item `item'
              = .eq_list[1].item freeparm
                      _____

> ─────────────────────────────────── begin _eqspec.item ──────────
              – version 9.2
              – args item
              – ._check_eq_item_name item, `item'
              = ._check_eq_item_name item, freeparm
                      _____

> ─────────────────────────── begin _eqspec._check_eq_item_name ───
                – version 9.2
                – capture syntax name(name=c_item) [, NAME DEPvars INDEPvars
>  IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
                – if c(rc) error 198
                – if `:list sizeof other' {
                = if 0 {
                  local other other_markvars
                  }
                – local item `name' `depvars' `indepvars' `if' `in' `wgt' `o
> ther' `nocons' `offset' `exposure' `freeparm' `options'
                = local item              freeparm
                – if `:list sizeof item' != 1 {
                = if 1 != 1 {
                  error 198
                  }
                – c_local `c_item' `item'
                = c_local item freeparm
                      _____

> ─────────────────────────── end _eqspec._check_eq_item_name ─────
```

```
                 – local value `"`.`item''"'
                 = local value `"0"'
                 – sreturn local value `"`value'"'
                 = sreturn local value `"0"'
                 – class exit `"`value'"'
                 = class exit `"0"'
                 ─────────────────────────────────────────
> ─────────────────────────────────── end _eqspec.item ───────────────
                 – class exit `"`s(value)'"'
                 = class exit `"0"'
                 ─────────────────────────────────────────
> ─────────────────────────────────── end _eqlist.eq ───────────────
                 = local eq_freeparm1 0
                 – local lhs `lhs' `depvars'
                 = local lhs  piq_timing_max
                 – local eq_names `eq_names' `eq'
                 = local eq_names  piq_timing_max
                 – local nxvars :list sizeof eq_rhs`i'
                 = local nxvars :list sizeof eq_rhs1
                 – local TMP : copy local eq_rhs`i'
                 = local TMP : copy local eq_rhs1
                 – forval j = 1/`nxvars' {
                 = forval j = 1/8 {
                 – gettoken xvar TMP : TMP
                 – local colna `"`colna' `eq':`xvar'"'
                 = local colna `" piq_timing_max:ln_neq"'
                 – }
                 – gettoken xvar TMP : TMP
                 – local colna `"`colna' `eq':`xvar'"'
                 = local colna `" piq_timing_max:ln_neq piq_timing_max:cb_authors_e
> xt"'
                 – }
                 – gettoken xvar TMP : TMP
                 – local colna `"`colna' `eq':`xvar'"'
                 = local colna `" piq_timing_max:ln_neq piq_timing_max:cb_authors_e
> xt piq_timing_max:estimated"'
                 – }
                 – gettoken xvar TMP : TMP
                 – local colna `"`colna' `eq':`xvar'"'
                 = local colna `" piq_timing_max:ln_neq piq_timing_max:cb_authors_e
> xt piq_timing_max:estimated piq_timing_max:est_late"'
                 – }
                 – gettoken xvar TMP : TMP
                 – local colna `"`colna' `eq':`xvar'"'
                 = local colna `" piq_timing_max:ln_neq piq_timing_max:cb_authors_e
> xt piq_timing_max:estimated piq_timing_max:est_late piq_timing_max:o.est_ear
```

```
> ly"'
          - }
          - gettoken xvar TMP : TMP
          - local colna `"'colna' `eq':`xvar'"'
          = local colna `" piq_timing_max:ln_neq piq_timing_max:cb_authors_e
> xt piq_timing_max:estimated piq_timing_max:est_late piq_timing_max:o.est_ear
> ly piq_timing_max:wg_ndx_other"'
          - }
          - gettoken xvar TMP : TMP
          - local colna `"'colna' `eq':`xvar'"'
          = local colna `" piq_timing_max:ln_neq piq_timing_max:cb_authors_e
> xt piq_timing_max:estimated piq_timing_max:est_late piq_timing_max:o.est_ear
> ly piq_timing_max:wg_ndx_other piq_timing_max:stky_pr_rotemberg"'
          - }
          - gettoken xvar TMP : TMP
          - local colna `"'colna' `eq':`xvar'"'
          = local colna `" piq_timing_max:ln_neq piq_timing_max:cb_authors_e
> xt piq_timing_max:estimated piq_timing_max:est_late piq_timing_max:o.est_ear
> ly piq_timing_max:wg_ndx_other piq_timing_max:stky_pr_rotemberg piq_timing_m
> ax:stky_pr_calvo"'
          - }
          - if `eq_freeparm`i'' {
          = if 0 {
            if `nxvars' {
            di as err "{it:xvars} not allowed with option {bf:freeparm}"
            exit 198
            }
            if strpos(`"'`eq'"', ":") {
            local colna `"'colna' /`eq'"'
            }
            else {
            local colna `"'colna' /:`eq'"'
            }
            }
          - else if !`eq_nocons`i'' {
          = else if !0 {
          - local colna `"'colna' `eq':_cons"'
          = local colna `" piq_timing_max:ln_neq piq_timing_max:cb_authors_e
> xt piq_timing_max:estimated piq_timing_max:est_late piq_timing_max:o.est_ear
> ly piq_timing_max:wg_ndx_other piq_timing_max:stky_pr_rotemberg piq_timing_m
> ax:stky_pr_calvo piq_timing_max:_cons"'
          - }
          - if "`moptobj'" != "" {
          = if "" != "" {
            if "`eq_offset`i''" != "" {
            if usubstr("`eq_offset`i''",1,2)=="__" {
```

```
                  capture clonevar `moptobj'`eq_offset`i'' = `eq_offset`i''
                  local dropmetoo `dropmetoo' `moptobj'`eq_offset`i''
                  }
                  }
                  }
            - }
          - local depvars `.`eqlist'.eq depvars `i''
          ─────────────────────────────────────────────────────────────
>  ───────────────────────────────── begin _eqlist.eq ─────────────────
          - version 9.2
          - args item idx
          - if "`item'" == "count" {
          = if "depvars" == "count" {
            sreturn local value `"`.n_eq'"'
            class exit `"`s(value)'"'
            }
          - else if 0 < `idx' & `idx' <= `.n_eq' {
          = else if 0 < 2 & 2 <= 2 {
          - .eq_list[`idx'].item `item'
          = .eq_list[2].item depvars
          ────────────────────────────────────────────────────────────
>  ──────────────────────────────── begin _eqspec.item ────────────────
          - version 9.2
          - args item
          - ._check_eq_item_name item, `item'
          = ._check_eq_item_name item, depvars
          ────────────────────────────────────────────────────────────
>  ──────────────────────── begin _eqspec._check_eq_item_name ─────────────
            - version 9.2
            - capture syntax name(name=c_item) [, NAME DEPvars INDEPvars
>   IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
            - if c(rc) error 198
            - if `:list sizeof other' {
            = if 0 {
              local other other_markvars
              }
            - local item `name' `depvars' `indepvars' `if' `in' `wgt' `o
> ther' `nocons' `offset' `exposure' `freeparm' `options'
            = local item  depvars
            - if `:list sizeof item' != 1 {
            = if 1 != 1 {
              error 198
              }
            - c_local `c_item' `item'
            = c_local item depvars
            ──────────────────────────────────────────────────────────
```

```
> ──────────────────────── end _eqspec._check_eq_item_name ────────────
              - local value `"`.`item''"'
              = local value `""'
              - sreturn local value `"`value'"'
              = sreturn local value `""'
              - class exit `"`value'"'
              = class exit `""'
              ────────────────────────────────────────────────────────────

> ──────────────────────────────────────── end _eqspec.item ───────────
              - class exit `"`s(value)'"'
              = class exit `""'
              ────────────────────────────────────────────────────────────

> ─────────────────────────────────────────── end _eqlist.eq ──────────
            = local depvars
            - local eq `.`eqlist'.eq name `i''
              ────────────────────────────────────────────────────────────

> ───────────────────────────────────────── begin _eqlist.eq ──────────
            - version 9.2
            - args item idx
            - if "`item'" == "count" {
            = if "name" == "count" {
              sreturn local value `"`.n_eq'"'
              class exit `"`s(value)'"'
              }
            - else if 0 < `idx' & `idx' <= `.n_eq' {
            = else if 0 < 2 & 2 <= 2 {
            - .eq_list[`idx'].item `item'
            = .eq_list[2].item name
              ────────────────────────────────────────────────────────────

> ───────────────────────────────────────── begin _eqspec.item ────────
            - version 9.2
            - args item
            - ._check_eq_item_name item, `item'
            = ._check_eq_item_name item, name
              ────────────────────────────────────────────────────────────

> ─────────────────────────── begin _eqspec._check_eq_item_name ───────
              - version 9.2
              - capture syntax name(name=c_item) [, NAME DEPvars INDEPvars
>   IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
              - if c(rc) error 198
              - if `:list sizeof other' {
              = if 0 {
                local other other_markvars
                }
              - local item `name' `depvars' `indepvars' `if' `in' `wgt' `o
> ther' `nocons' `offset' `exposure' `freeparm' `options'
```

```
                = local item name
                – if `:list sizeof item' != 1 {
                = if 1 != 1 {
                  error 198
                  }
                – c_local `c_item' `item'
                = c_local item name
              ─────────────────────────────────────────────
>  ──────────────────────────── end _eqspec._check_eq_item_name ─────────────
              – local value `"`.`item''"'
              = local value `"lnalpha"'
              – sreturn local value `"`value'"'
              = sreturn local value `"lnalpha"'
              – class exit `"`value'"'
              = class exit `"lnalpha"'
              ─────────────────────────────────────────────
>  ──────────────────────────────────────── end _eqspec.item ───────────────
              – class exit `"`s(value)'"'
              = class exit `"lnalpha"'
              ─────────────────────────────────────────────
>  ──────────────────────────────────────── end _eqlist.eq ───────────
            = local eq lnalpha
            – if !`:length local eq' {
            = if !7 {
              local eq eq`i'
              }
            – if `:list eq in eqnames' {
            = if 0 {
              di as err "equation '`eq'' multiply defined"
              exit 110
              }
            – local eqnames `eqnames' `eq'
            = local eqnames piq_timing_max lnalpha
            – fvexpand `.`eqlist'.eq indepvars `i'' if $ML_samp
            ─────────────────────────────────────────────
>  ──────────────────────────────────────── begin _eqlist.eq ───────────
            – version 9.2
            – args item idx
            – if "`item'" == "count" {
            = if "indepvars" == "count" {
              sreturn local value `"`.n_eq'"'
              class exit `"`s(value)'"'
              }
            – else if 0 < `idx' & `idx' <= `.n_eq' {
            = else if 0 < 2 & 2 <= 2 {
            – .eq_list[`idx'].item `item'
```

```
              = .eq_list[2].item indepvars
              ────────────────────────────────────────────────────
>  ──────────────────────────────────────── begin _eqspec.item ────────────
              – version 9.2
              – args item
              – ._check_eq_item_name item, `item'
              = ._check_eq_item_name item, indepvars
              ────────────────────────────────────────────────────
>  ─────────────────────── begin _eqspec._check_eq_item_name ──────────────
              – version 9.2
              – capture syntax name(name=c_item) [, NAME DEPvars INDEPvars
>   IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
              – if c(rc) error 198
              – if `:list sizeof other' {
              = if 0 {
                local other other_markvars
                }
              – local item `name' `depvars' `indepvars' `if' `in' `wgt' `o
> ther' `nocons' `offset' `exposure' `freeparm' `options'
              = local item   indepvars
              – if `:list sizeof item' != 1 {
              = if 1 != 1 {
                error 198
                }
              – c_local `c_item' `item'
              = c_local item indepvars
              ────────────────────────────────────────────────────
>  ────────────────────── end _eqspec._check_eq_item_name ───────────────
              – local value `"`.`item''"'
              = local value `""'
              – sreturn local value `"`value'"'
              = sreturn local value `""'
              – class exit `"`value'"'
              = class exit `""'
              ────────────────────────────────────────────────────
>  ──────────────────────────────────────── end _eqspec.item ────────────
              – class exit `"`s(value)'"'
              = class exit `""'
              ────────────────────────────────────────────────────
>  ──────────────────────────────────────── end _eqlist.eq ────────────
          = fvexpand  if __000006
          – if "`r(tsops)'" == "true" {
          = if "" == "true" {
            global ML_preserve no
            }
          – local eq_rhs`i' `"`r(varlist)'"'
```

```
                = local eq_rhs2 `""'
                - local eq_nocons`i' `.`eqlist'.eq nocons `i''
                ───────────────────────────────────────────────────
> ───────────────────────────────────────── begin _eqlist.eq ─────────────────
                - version 9.2
                - args item idx
                - if "`item'" == "count" {
                = if "nocons" == "count" {
                  sreturn local value `"`.n_eq'"'
                  class exit `"`s(value)'"'
                  }
                - else if 0 < `idx' & `idx' <= `.n_eq' {
                = else if 0 < 2 & 2 <= 2 {
                - .eq_list[`idx'].item `item'
                = .eq_list[2].item nocons
                ───────────────────────────────────────────────────
> ────────────────────────────────────────── begin _eqspec.item ──────────────
                - version 9.2
                - args item
                - ._check_eq_item_name item, `item'
                = ._check_eq_item_name item, nocons
                ───────────────────────────────────────────────────
> ──────────────────────────────── begin _eqspec._check_eq_item_name ──────────
                - version 9.2
                - capture syntax name(name=c_item) [, NAME DEPvars INDEPvars
>   IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
                - if c(rc) error 198
                - if `:list sizeof other' {
                = if 0 {
                  local other other_markvars
                  }
                - local item `name' `depvars' `indepvars' `if' `in' `wgt' `o
> ther' `nocons' `offset' `exposure' `freeparm' `options'
                = local item           nocons
                - if `:list sizeof item' != 1 {
                = if 1 != 1 {
                  error 198
                  }
                - c_local `c_item' `item'
                = c_local item nocons
                ───────────────────────────────────────────────────
> ───────────────────────────── end _eqspec._check_eq_item_name ───────────────
                - local value `"`.`item''"'
                = local value `"0"'
                - sreturn local value `"`value'"'
                = sreturn local value `"0"'
```

```
                    – class exit `"`value'"'
                    = class exit `"0"'
                _____
>   ————————————————————————————————————————— end _eqspec.item ————————————————
              – class exit `"`s(value)'"'
              = class exit `"0"'
                _____
>   ———————————————————————————————————————————— end _eqlist.eq ————————————————
            = local eq_nocons2 0
            – local eq_offset`i' `.`eqlist'.eq offset `i''
                _____
>   ———————————————————————————————————————————— begin _eqlist.eq ————————————————
            – version 9.2
            – args item idx
            – if "`item'" == "count" {
            = if "offset" == "count" {
              sreturn local value `"`.n_eq'"'
              class exit `"`s(value)'"'
              }
            – else if 0 < `idx' & `idx' <= `.n_eq' {
            = else if 0 < 2 & 2 <= 2 {
            – .eq_list[`idx'].item `item'
            = .eq_list[2].item offset
                _____
>   ———————————————————————————————————————————— begin _eqspec.item ————————————————
            – version 9.2
            – args item
            – ._check_eq_item_name item, `item'
            = ._check_eq_item_name item, offset
                _____
>   ——————————————————————————————————— begin _eqspec._check_eq_item_name ————————————————
                – version 9.2
                – capture syntax name(name=c_item) [, NAME DEPvars INDEPvars
>  IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
                – if c(rc) error 198
                – if `:list sizeof other' {
                = if 0 {
                  local other other_markvars
                  }
                – local item `name' `depvars' `indepvars' `if' `in' `wgt' `o
> ther' `nocons' `offset' `exposure' `freeparm' `options'
                = local item           offset
                – if `:list sizeof item' != 1 {
                = if 1 != 1 {
                  error 198
                  }
```

```
                 - c_local `c_item' `item'
                 = c_local item offset
                 ─────────────────────────────────────────────────
>  ──────────────────────────── end _eqspec._check_eq_item_name ───────────────
            - local value `"`.`item''"'
            = local value `""'
            - sreturn local value `"`value'"'
            = sreturn local value `""'
            - class exit `"`value'"'
            = class exit `""'
            ─────────────────────────────────────────────────
>  ─────────────────────────────────────── end _eqspec.item ───────────────────
            - class exit `"`s(value)'"'
            = class exit `""'
            ─────────────────────────────────────────────────
>  ─────────────────────────────────────── end _eqlist.eq ─────────────────────
         = local eq_offset2
         - local eq_exposure`i' `.`eqlist'.eq exposure `i''
            ─────────────────────────────────────────────────
>  ─────────────────────────────────────── begin _eqlist.eq ───────────────────
         - version 9.2
         - args item idx
         - if "`item'" == "count" {
         = if "exposure" == "count" {
            sreturn local value `"`.n_eq'"'
            class exit `"`s(value)'"'
            }
         - else if 0 < `idx' & `idx' <= `.n_eq' {
         = else if 0 < 2 & 2 <= 2 {
         - .eq_list[`idx'].item `item'
         = .eq_list[2].item exposure
            ─────────────────────────────────────────────────
>  ─────────────────────────────────────── begin _eqspec.item ─────────────────
         - version 9.2
         - args item
         - ._check_eq_item_name item, `item'
         = ._check_eq_item_name item, exposure
            ─────────────────────────────────────────────────
>  ──────────────────────── begin _eqspec._check_eq_item_name ─────────────────
            - version 9.2
            - capture syntax name(name=c_item) [, NAME DEPvars INDEPvars
>  IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
            - if c(rc) error 198
            - if `:list sizeof other' {
            = if 0 {
               local other other_markvars
```

```
                    }
                  – local item `name' `depvars' `indepvars' `if' `in' `wgt' `o
> ther' `nocons' `offset' `exposure' `freeparm' `options'
                  = local item           exposure
                  – if `:list sizeof item' != 1 {
                  = if 1 != 1 {
                    error 198
                    }
                  – c_local `c_item' `item'
                  = c_local item exposure
                  ────────────────────────────────────────────────────────────
> ───────────────────────── end _eqspec._check_eq_item_name ──────────────────
                  – local value `"`.`item''"'
                  = local value `"0"'
                  – sreturn local value `"`value'"'
                  = sreturn local value `"0"'
                  – class exit `"`value'"'
                  = class exit `"0"'
                  ────────────────────────────────────────────────────────────
> ───────────────────────────────────────────────── end _eqspec.item ─────────
                  – class exit `"`s(value)'"'
                  = class exit `"0"'
                  ────────────────────────────────────────────────────────────
> ─────────────────────────────────────────────────── end _eqlist.eq ─────────
                = local eq_exposure2 0
                – local eq_freeparm`i' `.`eqlist'.eq freeparm `i''
                  ────────────────────────────────────────────────────────────
> ────────────────────────────────────────────────── begin _eqlist.eq ────────
                – version 9.2
                – args item idx
                – if "`item'" == "count" {
                = if "freeparm" == "count" {
                  sreturn local value `"`.n_eq'"'
                  class exit `"`s(value)'"'
                  }
                – else if 0 < `idx' & `idx' <= `.n_eq' {
                = else if 0 < 2 & 2 <= 2 {
                – .eq_list[`idx'].item `item'
                = .eq_list[2].item freeparm
                  ────────────────────────────────────────────────────────────
> ───────────────────────────────────────────────── begin _eqspec.item ───────
                – version 9.2
                – args item
                – ._check_eq_item_name item, `item'
                = ._check_eq_item_name item, freeparm
                  ────────────────────────────────────────────────────────────
```

```
> ──────────────────────── begin _eqspec._check_eq_item_name ───────────────
                    - version 9.2
                    - capture syntax name(name=c_item) [, NAME DEPvars INDEPvars
>  IF IN WGT OTHER NOCONS OFFset EXPosure FREEParm OPTions ]
                    - if c(rc) error 198
                    - if `:list sizeof other' {
                    = if 0 {
                      local other other_markvars
                      }
                    - local item `name' `depvars' `indepvars' `if' `in' `wgt' `o
> ther' `nocons' `offset' `exposure' `freeparm' `options'
                    = local item              freeparm
                    - if `:list sizeof item' != 1 {
                    = if 1 != 1 {
                      error 198
                      }
                    - c_local `c_item' `item'
                    = c_local item freeparm
                    ─────────────────────────────────────────────────────────
> ──────────────────────── end _eqspec._check_eq_item_name ─────────────────
                    - local value `"`.`item''"'
                    = local value `"1"'
                    - sreturn local value `"`value'"'
                    = sreturn local value `"1"'
                    - class exit `"`value'"'
                    = class exit `"1"'
                    ─────────────────────────────────────────────────────────
> ──────────────────────────────────────────── end _eqspec.item ───────────
                    - class exit `"`s(value)'"'
                    = class exit `"1"'
                    ─────────────────────────────────────────────────────────
> ──────────────────────────────────────────── end _eqlist.eq ─────────────
                  = local eq_freeparm2 1
                  - local lhs `lhs' `depvars'
                  = local lhs piq_timing_max
                  - local eq_names `eq_names' `eq'
                  = local eq_names piq_timing_max lnalpha
                  - local nxvars :list sizeof eq_rhs`i'
                  = local nxvars :list sizeof eq_rhs2
                  - local TMP : copy local eq_rhs`i'
                  = local TMP : copy local eq_rhs2
                  - forval j = 1/`nxvars' {
                  = forval j = 1/0 {
                    gettoken xvar TMP : TMP
                    local colna `"`colna' `eq':`xvar'"'
                    }
```

```stata
    - if `eq_freeparm`i'' {
    = if 1 {
    - if `nxvars' {
    = if 0 {
      di as err "{it:xvars} not allowed with option {bf:freeparm}"
      exit 198
      }
    - if strpos(`"`eq'"', ":") {
    = if strpos(`"lnalpha"', ":") {
      local colna `"`colna' /`eq'"'
      }
    - else {
    - local colna `"`colna' /:`eq'"'
    = local colna `" piq_timing_max:ln_neq piq_timing_max:cb_authors_e
> xt piq_timing_max:estimated piq_timing_max:est_late piq_timing_max:o.est_ear
> ly piq_timing_max:wg_ndx_other piq_timing_max:stky_pr_rotemberg piq_timing_m
> ax:stky_pr_calvo piq_timing_max:_cons /:lnalpha"'
    - }
    - }
    - else if !`eq_nocons`i'' {
    = else if !0 {
      local colna `"`colna' `eq':_cons"'
      }
    - if "`moptobj'" != "" {
    = if "" != "" {
      if "`eq_offset`i''" != "" {
      if usubstr("`eq_offset`i''",1,2)=="__" {
      capture clonevar `moptobj'`eq_offset`i'' = `eq_offset`i''
      local dropmetoo `dropmetoo' `moptobj'`eq_offset`i''
      }
      }
      }
    - }
    - if "`moptobj'" != "" {
    = if "" != "" {
      foreach y of local lhs {
      if usubstr("`y'",1,2)=="__" {
      capture clonevar `moptobj'`y' = `y'
      local tmp `tmp' `moptobj'`y'
      local dropmetoo `dropmetoo' `moptobj'`y'
      }
      else {
      local tmp `tmp' `y'
      }
      }
      local lhs `tmp'
```

```
                     }
             - if `waldtest' > 0 & `:length local lf0' {
             = if -1 > 0 & 0 {
               opts_exclusive "waldtest() lf0()"
               }
             - if `:length local continue' {
             = if 8 {
             - if !`:length local init' {
             = if !8 {
               tempname init
               local ub0 `init'
               }
             - else tempname ub0
             - mat `ub0' = e(b)
             = mat __000008 = e(b)
             - tempname v0 iv0
             - mat `v0' = e(V)
             = mat __000009 = e(V)
             - mat `iv0' = syminv(`v0')
             = mat __00000A = syminv(__000009)
             - global ML_rank0 = colsof(`v0') - diag0cnt(`iv0')
             = global ML_rank0 = colsof(__000009) - diag0cnt(__00000A)
             - if !`:length local lf0' & !missing(e(ll)) {
             = if !0 & !missing(e(ll)) {
             - local lf0 `=colsof(`ub0')' `e(ll)'
             = local lf0 2 -322.2358665861632
             - }
             - local ub0
             - }
             - if `:length local init' {
             = if 8 {
             - tempname b0
             - local dim : list sizeof colna
             - matrix `b0' = J(1,`dim',0)
             = matrix __00000B = J(1,10,0)
             - matrix colna `b0' = `colna'
             = matrix colna __00000B =  piq_timing_max:ln_neq piq_timing_max:cb
  > _authors_ext piq_timing_max:estimated piq_timing_max:est_late piq_timing_max
  > :o.est_early piq_timing_max:wg_ndx_other piq_timing_max:stky_pr_rotemberg pi
  > q_timing_max:stky_pr_calvo piq_timing_max:_cons /:lnalpha
             - `vv' _mkvec `b0', from(`init') update first error("initial vecto
  > r")
             = version 18: _mkvec __00000B, from(__000002) update first error("
  > initial vector")
             ─────────────────────────────────────────────────────────────────
  > ─────────────────────────────────────────── begin _mkvec ─────────────────
```

```
            - local vv : display "version " string(_caller()) ":"
            - version 6
            - gettoken matout 0 : 0, parse(", ")
            - if "`matout'"=="" | "`matout'"=="," {
            = if "__00000B"=="" | "__00000B"=="," {
              error 198
              }
            - syntax [, FROM(str) UPdate COLnames(str) ERRor(str) FIRST ]
            - if "`update'"!="" {
            = if "update"!="" {
            - if "`colname'"!="" {
            = if ""!="" {
              di in red "update and colnames() cannot both be " "specified"
              exit 198
              }
            - capture local colname : colfullnames `matout'
            = capture local colname : colfullnames __00000B
            - if _rc {
              di in red "matrix `matout' not found"
              exit 111
              }
            - if rowsof(matrix(`matout')) != 1 {
            = if rowsof(matrix(__00000B)) != 1 {
              di in red "`matout' matrix to be updated must be " "a row vect
> or"

              exit 503
              }
            - local matin `matout'
            = local matin __00000B
            - }
            - if `"`error'"'!="" {
            = if `"initial vector"'!="" {
            - local error `"`error': "'
            = local error `"initial vector: "'
            - }
            - tempname mat
            - if `"`from'"'!="" {
            = if `"__000002"'!="" {
            - From `from'
            = From __000002
          ———————————————————————————————————————————————————————
> ——————————————————————————————————————— begin _mkvec.From ——————————————
            - gettoken from 0 : 0, parse(",") bind
            - sret clear
            - sret local from `from'
            = sret local from __000002
```

```
                    – if `"`0'"'!="" {
                    = if `""'!="" {
                      syntax [, COPY SKIP ]
                      }
                    – sret local copy `copy'
                    = sret local copy
                    – sret local skip `skip'
                    = sret local skip
                  ───────────────────────────────────────────────
>  ──────────────────────────────── end _mkvec.From ──────────────────
                  – local copy `s(copy)'
                  = local copy
                  – local skip `s(skip)'
                  = local skip
                  – if "`copy'"!="" {
                  = if ""!="" {
                    CopyMat `mat' `"`error'"' `s(from)'
                    if `"`colname'"'!="" {
                    local dim : list sizeof colname
                    if `dim' != colsof(matrix(`mat')) {
                    di in red `"`error'matrix must "' `"be dimension "' `dim'
                    exit 503
                    }
                    `vv' mat colnames `mat' = `colname'
                    }
                    }
                  – else {
                  – `vv' BuildMat `mat' `"`error'"' "`skip'" `s(from)'
                  = version 18: BuildMat __00000C `"initial vector: "' "" __000002
                  ───────────────────────────────────────────────
>  ──────────────────────────────── begin _mkvec.BuildMat ──────────────
                  – local vv : display "version " string(_caller()) ":"
                  – version 6
                  – args matall error skip
                  – macro shift 3
                  – tokenize `"`*'"', parse(" =")
                  = tokenize `"__000002"', parse(" =")
                  – tempname matadd
                  – local i 1
                  – while "`i'"!="" {
                  = while "__000002"!="" {
                  – local k = `i' + 1
                  = local k = 1 + 1
                  – if "`k'"=="=" {
                  = if ""=="=" {
                    local j = `i' + 2
```

```
                      `vv' MkMat `matadd' ``i'' ``j'' `skip'
                      local i = `i' + 3
                      }
                  - else {
                  - ChkMat `matadd' ``i'' `"`error'"'
                  = ChkMat __00000D __000002 `"initial vector: "'
                      ─────────────────────────────────────────

> ───────────────────────────────── begin _mkvec.ChkMat ─────────────
                  - args matout matin error
                  - capture di matrix(`matin'[1,1])
                  = capture di matrix(__000002[1,1])
                  - if _rc {
                      capture confirm number `matin'
                      if _rc {
                      di in red `"`error'matrix `matin' not found"'
                      exit 111
                      }
                      di in red `"`error'list of numbers requires copy option"'
                      exit 198
                      }
                  - if matrix(rowsof(`matin')!=1 & colsof(`matin')!=1) {
                  = if matrix(rowsof(__000002)!=1 & colsof(__000002)!=1) {
                      di in red "`matin' " matrix(rowsof(`matin')) " x " matrix(
> colsof(`matin')) " is not a vector"
                      exit 503
                      }
                  - if matrix(rowsof(`matin')) == 1 {
                  = if matrix(rowsof(__000002)) == 1 {
                  - mat `matout' = `matin'
                  = mat __00000D = __000002
                  - }
                  - else mat `matout' = `matin''
                  = else mat __00000D = __000002'
                      ─────────────────────────────────────────

> ───────────────────────────────── end _mkvec.ChkMat ─────────────
                  - local i = `i' + 1
                  = local i = 1 + 1
                  - }
                  - mat `matall' = nullmat(`matall') , `matadd'
                  = mat __00000C = nullmat(__00000C) , __00000D
                  - }
                  - while "``i''"!="" {
                  = while ""!="" {
                      local k = `i' + 1
                      if "``k''"=="=" {
                      local j = `i' + 2
```

```
`vv' MkMat `matadd' ``i'' ``j'' `skip'
local i = `i' + 3
}
else {
ChkMat `matadd' ``i'' `"`error'"'
local i = `i' + 1
}
mat `matall' = nullmat(`matall') , `matadd'
}
```

> ———————————————————————————— end _mkvec.BuildMat ———————————

```
      - if `"`colname'"'!="" {
      = if `"piq_timing_max:ln_neq piq_timing_max:cb_authors_ext piq_t
> iming_max:estimated piq_timing_max:est_late piq_timing_max:o.est_early piq_t
> iming_max:wg_ndx_other piq_timing_max:stky_pr_rotemberg piq_timing_max:stky_
> pr_calvo piq_timing_max:_cons /lnalpha"'!="" {
          - `vv' ChkNames `mat' "`matin'" `"`colname'"' `"`error'"' "`skip
> '" "`first'"
          = version 18: ChkNames __00000C "__00000B" `"piq_timing_max:ln_n
> eq piq_timing_max:cb_authors_ext piq_timing_max:estimated piq_timing_max:est
> _late piq_timing_max:o.est_early piq_timing_max:wg_ndx_other piq_timing_max:
> stky_pr_rotemberg piq_timing_max:stky_pr_calvo piq_timing_max:_cons /lnalpha
> "' `"initial vector: "' "" "first"
```

> ———————————————————————————— begin _mkvec.ChkNames ———————————

```
      - local vv : display "version " string(_caller()) ":"
      - version 6
      - args mat matin names error skip first
      - local dim = colsof(matrix(`mat'))
      = local dim = colsof(matrix(__00000C))
      - if "`first'"!="" {
      = if "first"!="" {
      - gettoken name : names
      - local eq1 = bsubstr(`"`name'"',1,index(`"`name'"',":"))
      = local eq1 = bsubstr(`"piq_timing_max:ln_neq"',1,index(`"piq_
> timing_max:ln_neq"',":"))
      - }
      - tempname new fill x
      - local k : list sizeof names
      - if "`matin'"!="" {
      = if "__00000B"!="" {
      - mat `new' = `matin'
      = mat __00000D = __00000B
      - }
      - else {
        mat `new' = J(1,`k',0)
```

```
  `vv' mat colnames `new' = `names'
  }
- mat `fill' = J(1,`k',0)
= mat __00000E = J(1,10,0)
- local i 1
- while `i' <= `dim' {
= while 1 <= 10 {
- mat `x' = `mat'[1,`i'..`i']
= mat __00000F = __00000C[1,1..1]
- local eq : coleq `x'
= local eq : coleq __00000F
- local name : colname `x'
= local name : colname __00000F
- if "`eq'" == "/" {
= if "piq_timing_max" == "/" {
  local spec "/`name'"
  }
- else {
- local spec "`eq':`name'"
= local spec "piq_timing_max:ln_neq"
- if (usubstr("`eq'",1,1) != "/") {
= if (usubstr("piq_timing_max",1,1) != "/") {
- local sspec "/`eq':`name'"
= local sspec "/piq_timing_max:ln_neq"
- }
- }
- local oname
- local ospec
- capture _msparse `name', noomit
= capture _msparse ln_neq, noomit
- if c(rc) == 0 {
- if r(omit) {
  local oname `"`r(stripe)'"'
  local ospec "`eq':`oname'"
  }
- }
- `vv' local j = colnumb(`new',`"`spec'"')
= version 18: local j = colnumb(__00000D,`"piq_timing_max:ln_n
> eq"')

- if `j' == . & "`oname'" != "" {
= if 1 == . & "" != "" {
  `vv' local j = colnumb(`new',`"`ospec'"')
  }
- if `j' == . & "`sspec'" != "" {
= if 1 == . & "/piq_timing_max:ln_neq" != "" {
  `vv' local j = colnumb(`new',`"`sspec'"')
```

```
                              }
              - if `j'==. & `"`eq'"'=="_" & `"`eq1'"'!="" {
              = if 1==. & `"piq_timing_max"'=="_" & `"piq_timing_max:"'!=""
> {

                  `vv' local j = colnumb(`new',`"`eq1'`name'"')
                  if `j' == . & "`oname'" != "" {
                  `vv' local j = colnumb(`new',`"`eq1'`oname'"')
                  }
                  }
              - if `j'!=. {
              = if 1!=. {
              - if `fill'[1,`j'] {
              = if __00000E[1,1] {
                _ms_parse_parts `name'
                if !r(omit) {
                if "`eq'"=="_" {
                di in red `"`error'duplicate "' `"entries for `name' found"'
                }
                else di in red `"`error'"' `"duplicate entries for `eq':`nam
> e' found"'

                exit 507
                }
                else if !missing(`new'[1,`j']) {
                matrix `mat'[1,`i'] = `new'[1,`j']
                }
                }
              - else mat `fill'[1,`j'] = 1
              = else mat __00000E[1,1] = 1
              - mat `new'[1,`j'] = `mat'[1,`i']
              = mat __00000D[1,1] = __00000C[1,1]
              - }
              - else if "`skip'"=="" {
              = else if ""=="" {
                if "`eq'"=="_" {
                local spec : copy local name
                }
                di in red `"`error'extra parameter "' `"`spec' found"' _n "s
> pecify skip option if necessary"
                exit 111
                }
              - local i = `i' + 1
              = local i = 1 + 1
              - }
              - while `i' <= `dim' {
              = while 2 <= 10 {
              - mat `x' = `mat'[1,`i'..`i']
```

```
                   = mat __00000F = __00000C[1,2..2]
                   - local eq : coleq `x'
                   = local eq : coleq __00000F
                   - local name : colname `x'
                   = local name : colname __00000F
                   - if "`eq'" == "/" {
                   = if "piq_timing_max" == "/" {
                     local spec "/`name'"
                     }
                   - else {
                   - local spec "`eq':`name'"
                   = local spec "piq_timing_max:cb_authors_ext"
                   - if (usubstr("`eq'",1,1) != "/") {
                   = if (usubstr("piq_timing_max",1,1) != "/") {
                   - local sspec "/`eq':`name'"
                   = local sspec "/piq_timing_max:cb_authors_ext"
                   - }
                   - }
                   - local oname
                   - local ospec
                   - capture _msparse `name', noomit
                   = capture _msparse cb_authors_ext, noomit
                   - if c(rc) == 0 {
                   - if r(omit) {
                     local oname `"`r(stripe)'"'
                     local ospec "`eq':`oname'"
                     }
                   - }
                   - `vv' local j = colnumb(`new',`"`spec'"')
                   = version 18: local j = colnumb(__00000D,`"piq_timing_max:cb_a
> uthors_ext"')
                   - if `j' == . & "`oname'" != "" {
                   = if 2 == . & "" != "" {
                     `vv' local j = colnumb(`new',`"`ospec'"')
                     }
                   - if `j' == . & "`sspec'" != "" {
                   = if 2 == . & "/piq_timing_max:cb_authors_ext" != "" {
                     `vv' local j = colnumb(`new',`"`sspec'"')
                     }
                   - if `j'==. & `"`eq'"'=="_" & `"`eq1'"'!="" {
                   = if 2==. & `"piq_timing_max"'=="_" & `"piq_timing_max:"'!=""
> {
                     `vv' local j = colnumb(`new',`"`eq1'`name'"')
                     if `j' == . & "`oname'" != "" {
                     `vv' local j = colnumb(`new',`"`eq1'`oname'"')
                     }
```

```
                    }
            - if `j'!=. {
            = if 2!=. {
            - if `fill'[1,`j'] {
            = if __00000E[1,2] {
              _ms_parse_parts `name'
              if !r(omit) {
              if "`eq'"=="_" {
              di in red `"`error'duplicate "' `"entries for `name' found"'
              }
              else di in red `"`error'"' `"duplicate entries for `eq':`nam
> e' found"'
              exit 507
              }
              else if !missing(`new'[1,`j']) {
              matrix `mat'[1,`i'] = `new'[1,`j']
              }
              }
            - else mat `fill'[1,`j'] = 1
            = else mat __00000E[1,2] = 1
            - mat `new'[1,`j'] = `mat'[1,`i']
            = mat __00000D[1,2] = __00000C[1,2]
            - }
            - else if "`skip'"=="" {
            = else if ""=="" {
              if "`eq'"=="_" {
              local spec : copy local name
              }
              di in red `"`error'extra parameter "' `"`spec' found"' _n "s
> pecify skip option if necessary"
              exit 111
              }
            - local i = `i' + 1
            = local i = 2 + 1
            - }
            - while `i' <= `dim' {
            = while 3 <= 10 {
            - mat `x' = `mat'[1,`i'..`i']
            = mat __00000F = __00000C[1,3..3]
            - local eq : coleq `x'
            = local eq : coleq __00000F
            - local name : colname `x'
            = local name : colname __00000F
            - if "`eq'" == "/" {
            = if "piq_timing_max" == "/" {
              local spec "/`name'"
```

```
                    }
        – else {
        – local spec "`eq':`name'"
        = local spec "piq_timing_max:estimated"
        – if (usubstr("`eq'",1,1) != "/") {
        = if (usubstr("piq_timing_max",1,1) != "/") {
        – local sspec "/`eq':`name'"
        = local sspec "/piq_timing_max:estimated"
        – }
        – }
        – local oname
        – local ospec
        – capture _msparse `name', noomit
        = capture _msparse estimated, noomit
        – if c(rc) == 0 {
        – if r(omit) {
          local oname `"`r(stripe)'"'
          local ospec "`eq':`oname'"
          }
        – }
        – `vv' local j = colnumb(`new',`"`spec'"')
        = version 18: local j = colnumb(__00000D,`"piq_timing_max:esti
> mated"')
        – if `j' == . & "`oname'" != "" {
        = if 3 == . & "" != "" {
          `vv' local j = colnumb(`new',`"`ospec'"')
          }
        – if `j' == . & "`sspec'" != "" {
        = if 3 == . & "/piq_timing_max:estimated" != "" {
          `vv' local j = colnumb(`new',`"`sspec'"')
          }
        – if `j'==. & `"`eq'"'=="_" & `"`eq1'"'!="" {
        = if 3==. & `"piq_timing_max"'=="_" & `"piq_timing_max:"'!=""
> {
          `vv' local j = colnumb(`new',`"`eq1'`name'"')
          if `j' == . & "`oname'" != "" {
          `vv' local j = colnumb(`new',`"`eq1'`oname'"')
          }
          }
        – if `j'!=. {
        = if 3!=. {
        – if `fill'[1,`j'] {
        = if __00000E[1,3] {
          _ms_parse_parts `name'
          if !r(omit) {
          if "`eq'"=="_" {
```

```
                  di in red `"'`error'duplicate "' `"entries for `name' found"'
                  }
                  else di in red `"'`error'"' `"duplicate entries for `eq':`nam
> e' found"'
                  exit 507
                  }
                  else if !missing(`new'[1,`j']) {
                  matrix `mat'[1,`i'] = `new'[1,`j']
                  }
                  }
        -      else mat `fill'[1,`j'] = 1
        =      else mat __00000E[1,3] = 1
        -      mat `new'[1,`j'] = `mat'[1,`i']
        =      mat __00000D[1,3] = __00000C[1,3]
        -      }
        -      else if "`skip'"=="" {
        =      else if ""=="" {
                  if "`eq'"=="_" {
                  local spec : copy local name
                  }
                  di in red `"'`error'extra parameter "' `"'`spec' found"' _n "s
> pecify skip option if necessary"
                  exit 111
                  }
        -      local i = `i' + 1
        =      local i = 3 + 1
        -      }
        -      while `i' <= `dim' {
        =      while 4 <= 10 {
        -      mat `x' = `mat'[1,`i'..`i']
        =      mat __00000F = __00000C[1,4..4]
        -      local eq : coleq `x'
        =      local eq : coleq __00000F
        -      local name : colname `x'
        =      local name : colname __00000F
        -      if "`eq'" == "/" {
        =      if "piq_timing_max" == "/" {
                  local spec "/`name'"
                  }
        -      else {
        -      local spec "`eq':`name'"
        =      local spec "piq_timing_max:est_late"
        -      if (usubstr("`eq'",1,1) != "/") {
        =      if (usubstr("piq_timing_max",1,1) != "/") {
        -      local sspec "/`eq':`name'"
        =      local sspec "/piq_timing_max:est_late"
```

```
- }
- }
- local oname
- local ospec
- capture _msparse `name', noomit
= capture _msparse est_late, noomit
- if c(rc) == 0 {
- if r(omit) {
  local oname `"`r(stripe)'"'
  local ospec "`eq':`oname'"
  }
- }
- `vv' local j = colnumb(`new',`"`spec'"')
= version 18: local j = colnumb(__00000D,`"piq_timing_max:est_
> late"')

- if `j' == . & "`oname'" != "" {
= if 4 == . & "" != "" {
  `vv' local j = colnumb(`new',`"`ospec'"')
  }
- if `j' == . & "`sspec'" != "" {
= if 4 == . & "/piq_timing_max:est_late" != "" {
  `vv' local j = colnumb(`new',`"`sspec'"')
  }
- if `j'==. & `"`eq'"'=="_" & `"`eq1'"'!="" {
= if 4==. & `"piq_timing_max"'=="_" & `"piq_timing_max:"'!=""
> {
  `vv' local j = colnumb(`new',`"`eq1'`name'"')
  if `j' == . & "`oname'" != "" {
  `vv' local j = colnumb(`new',`"`eq1'`oname'"')
  }
  }
- if `j'!=. {
= if 4!=. {
- if `fill'[1,`j'] {
= if __00000E[1,4] {
  _ms_parse_parts `name'
  if !r(omit) {
  if "`eq'"=="_" {
  di in red `"`error'duplicate "' `"entries for `name' found"'
  }
  else di in red `"`error'"' `"duplicate entries for `eq':`nam
> e' found"'

  exit 507
  }
  else if !missing(`new'[1,`j']) {
  matrix `mat'[1,`i'] = `new'[1,`j']
```

```
                      }
                      }
          - else mat `fill'[1,`j'] = 1
          = else mat __00000E[1,4] = 1
          - mat `new'[1,`j'] = `mat'[1,`i']
          = mat __00000D[1,4] = __00000C[1,4]
          - }
          - else if "`skip'"=="" {
          = else if ""=="" {
            if "`eq'"=="_" {
            local spec : copy local name
            }
            di in red `"`error'extra parameter "' `"`spec' found"' _n "s
> pecify skip option if necessary"
            exit 111
            }
          - local i = `i' + 1
          = local i = 4 + 1
          - }
          - while `i' <= `dim' {
          = while 5 <= 10 {
          - mat `x' = `mat'[1,`i'..`i']
          = mat __00000F = __00000C[1,5..5]
          - local eq : coleq `x'
          = local eq : coleq __00000F
          - local name : colname `x'
          = local name : colname __00000F
          - if "`eq'" == "/" {
          = if "piq_timing_max" == "/" {
            local spec "/`name'"
            }
          - else {
          - local spec "`eq':`name'"
          = local spec "piq_timing_max:o.est_early"
          - if (usubstr("`eq'",1,1) != "/") {
          = if (usubstr("piq_timing_max",1,1) != "/") {
          - local sspec "/`eq':`name'"
          = local sspec "/piq_timing_max:o.est_early"
          - }
          - }
          - local oname
          - local ospec
          - capture _msparse `name', noomit
          = capture _msparse o.est_early, noomit
          - if c(rc) == 0 {
          - if r(omit) {
```

```
                    - local oname `"`r(stripe)'"'
                    = local oname `"est_early"'
                    - local ospec "`eq':`oname'"
                    = local ospec "piq_timing_max:est_early"
                    - }
                    - }
                    - `vv' local j = colnumb(`new',`"`spec'"')
                    = version 18: local j = colnumb(__00000D,`"piq_timing_max:o.es
> t_early"')
                    - if `j' == . & "`oname'" != "" {
                    = if 5 == . & "est_early" != "" {
                      `vv' local j = colnumb(`new',`"`ospec'"')
                      }
                    - if `j' == . & "`sspec'" != "" {
                    = if 5 == . & "/piq_timing_max:o.est_early" != "" {
                      `vv' local j = colnumb(`new',`"`sspec'"')
                      }
                    - if `j'==. & `"`eq'"'=="_" & `"`eq1'"'!="" {
                    = if 5==. & `"piq_timing_max"'=="_" & `"piq_timing_max:"'!=""
> {
                      `vv' local j = colnumb(`new',`"`eq1'`name'"')
                      if `j' == . & "`oname'" != "" {
                      `vv' local j = colnumb(`new',`"`eq1'`oname'"')
                      }
                      }
                    - if `j'!=. {
                    = if 5!=. {
                    - if `fill'[1,`j'] {
                    = if __00000E[1,5] {
                      _ms_parse_parts `name'
                      if !r(omit) {
                      if "`eq'"=="_" {
                      di in red `"`error'duplicate "' `"entries for `name' found"'
                      }
                      else di in red `"`error'"' `"duplicate entries for `eq':`nam
> e' found"'
                      exit 507
                      }
                      else if !missing(`new'[1,`j']) {
                      matrix `mat'[1,`i'] = `new'[1,`j']
                      }
                      }
                    - else mat `fill'[1,`j'] = 1
                    = else mat __00000E[1,5] = 1
                    - mat `new'[1,`j'] = `mat'[1,`i']
                    = mat __00000D[1,5] = __00000C[1,5]
```

```
-             }
-           else if "`skip'"=="" {
=           else if ""=="" {
              if "`eq'"=="_" {
              local spec : copy local name
              }
              di in red `"`error'extra parameter "' `"`spec' found"' _n "s
> pecify skip option if necessary"
              exit 111
              }
-           local i = `i' + 1
=           local i = 5 + 1
-           }
-         while `i' <= `dim' {
=         while 6 <= 10 {
-         mat `x' = `mat'[1,`i'..`i']
=         mat __00000F = __00000C[1,6..6]
-         local eq : coleq `x'
=         local eq : coleq __00000F
-         local name : colname `x'
=         local name : colname __00000F
-         if "`eq'" == "/" {
=         if "piq_timing_max" == "/" {
            local spec "/`name'"
            }
-         else {
-         local spec "`eq':`name'"
=         local spec "piq_timing_max:wg_ndx_other"
-         if (usubstr("`eq'",1,1) != "/") {
=         if (usubstr("piq_timing_max",1,1) != "/") {
-         local sspec "/`eq':`name'"
=         local sspec "/piq_timing_max:wg_ndx_other"
-         }
-         }
-         local oname
-         local ospec
-         capture _msparse `name', noomit
=         capture _msparse wg_ndx_other, noomit
-         if c(rc) == 0 {
-         if r(omit) {
            local oname `"`r(stripe)'"'
            local ospec "`eq':`oname'"
            }
-         }
-         `vv' local j = colnumb(`new',`"`spec'"')
=         version 18: local j = colnumb(__00000D,`"piq_timing_max:wg_n
```

```
> dx_other"')
                 - if `j' == . & "`oname'" != "" {
                 = if 6 == . & "" != "" {
                   `vv' local j = colnumb(`new',`"`ospec'"')
                   }
                 - if `j' == . & "`sspec'" != "" {
                 = if 6 == . & "/piq_timing_max:wg_ndx_other" != "" {
                   `vv' local j = colnumb(`new',`"`sspec'"')
                   }
                 - if `j'==. & `"`eq'"'=="_" & `"`eq1'"'!="" {
                 = if 6==. & `"piq_timing_max"'=="_" & `"piq_timing_max:"'!=""
> {
                   `vv' local j = colnumb(`new',`"`eq1'`name'"')
                   if `j' == . & "`oname'" != "" {
                   `vv' local j = colnumb(`new',`"`eq1'`oname'"')
                   }
                   }
                 - if `j'!=. {
                 = if 6!=. {
                 - if `fill'[1,`j'] {
                 = if __00000E[1,6] {
                   _ms_parse_parts `name'
                   if !r(omit) {
                   if "`eq'"=="_" {
                   di in red `"`error'duplicate "' `"entries for `name' found"'
                   }
                   else di in red `"`error'"' `"duplicate entries for `eq':`nam
> e' found"'

                   exit 507
                   }
                   else if !missing(`new'[1,`j']) {
                   matrix `mat'[1,`i'] = `new'[1,`j']
                   }
                   }
                 - else mat `fill'[1,`j'] = 1
                 = else mat __00000E[1,6] = 1
                 - mat `new'[1,`j'] = `mat'[1,`i']
                 = mat __00000D[1,6] = __00000C[1,6]
                 - }
                 - else if "`skip'"=="" {
                 = else if ""=="" {
                   if "`eq'"=="_" {
                   local spec : copy local name
                   }
                   di in red `"`error'extra parameter "' `"`spec' found"' _n "s
> pecify skip option if necessary"
```

```
                    exit 111
                    }
       -  local i = `i' + 1
       =  local i = 6 + 1
       -  }
       -  while `i' <= `dim' {
       =  while 7 <= 10 {
       -  mat `x' = `mat'[1,`i'..`i']
       =  mat __00000F = __00000C[1,7..7]
       -  local eq : coleq `x'
       =  local eq : coleq __00000F
       -  local name : colname `x'
       =  local name : colname __00000F
       -  if "`eq'" == "/" {
       =  if "piq_timing_max" == "/" {
          local spec "/`name'"
          }
       -  else {
       -  local spec "`eq':`name'"
       =  local spec "piq_timing_max:stky_pr_rotemberg"
       -  if (usubstr("`eq'",1,1) != "/") {
       =  if (usubstr("piq_timing_max",1,1) != "/") {
       -  local sspec "/`eq':`name'"
       =  local sspec "/piq_timing_max:stky_pr_rotemberg"
       -  }
       -  }
       -  local oname
       -  local ospec
       -  capture _msparse `name', noomit
       =  capture _msparse stky_pr_rotemberg, noomit
       -  if c(rc) == 0 {
       -  if r(omit) {
          local oname `"`r(stripe)'"'
          local ospec "`eq':`oname'"
          }
       -  }
       -  `vv' local j = colnumb(`new',`"`spec'"')
       =  version 18: local j = colnumb(__00000D,`"piq_timing_max:stky
>  _pr_rotemberg"')
       -  if `j' == . & "`oname'" != "" {
       =  if 7 == . & "" != "" {
          `vv' local j = colnumb(`new',`"`ospec'"')
          }
       -  if `j' == . & "`sspec'" != "" {
       =  if 7 == . & "/piq_timing_max:stky_pr_rotemberg" != "" {
          `vv' local j = colnumb(`new',`"`sspec'"')
```

```
                        }
                    - if `j'==. & `"`eq'"'=="_" & `"`eq1'"'!="" {
                    = if 7==. & `"piq_timing_max"'=="_" & `"piq_timing_max:"'!=""
> {

                        `vv' local j = colnumb(`new',`"`eq1'`name'"')
                        if `j' == . & "`oname'" != "" {
                        `vv' local j = colnumb(`new',`"`eq1'`oname'"')
                        }
                        }
                    - if `j'!=. {
                    = if 7!=. {
                    - if `fill'[1,`j'] {
                    = if __00000E[1,7] {
                      _ms_parse_parts `name'
                      if !r(omit) {
                      if "`eq'"=="_" {
                      di in red `"`error'duplicate "' `"entries for `name' found"'
                      }
                      else di in red `"`error'"' `"duplicate entries for `eq':`nam
> e' found"'
                      exit 507
                      }
                      else if !missing(`new'[1,`j']) {
                      matrix `mat'[1,`i'] = `new'[1,`j']
                      }
                      }
                    - else mat `fill'[1,`j'] = 1
                    = else mat __00000E[1,7] = 1
                    - mat `new'[1,`j'] = `mat'[1,`i']
                    = mat __00000D[1,7] = __00000C[1,7]
                    - }
                    - else if "`skip'"=="" {
                    = else if ""=="" {
                      if "`eq'"=="_" {
                      local spec : copy local name
                      }
                      di in red `"`error'extra parameter "' `"`spec' found"' _n "s
> pecify skip option if necessary"
                      exit 111
                      }
                    - local i = `i' + 1
                    = local i = 7 + 1
                    - }
                    - while `i' <= `dim' {
                    = while 8 <= 10 {
                    - mat `x' = `mat'[1,`i'..`i']
```

```
= mat __00000F = __00000C[1,8..8]
- local eq : coleq `x'
= local eq : coleq __00000F
- local name : colname `x'
= local name : colname __00000F
- if "`eq'" == "/" {
= if "piq_timing_max" == "/" {
  local spec "/`name'"
  }
- else {
- local spec "`eq':`name'"
= local spec "piq_timing_max:stky_pr_calvo"
- if (usubstr("`eq'",1,1) != "/") {
= if (usubstr("piq_timing_max",1,1) != "/") {
- local sspec "/`eq':`name'"
= local sspec "/piq_timing_max:stky_pr_calvo"
- }
- }
- local oname
- local ospec
- capture _msparse `name', noomit
= capture _msparse stky_pr_calvo, noomit
- if c(rc) == 0 {
- if r(omit) {
  local oname `"`r(stripe)'"'
  local ospec "`eq':`oname'"
  }
- }
- `vv' local j = colnumb(`new',`"`spec'"')
= version 18: local j = colnumb(__00000D,`"piq_timing_max:stky
> _pr_calvo"')

- if `j' == . & "`oname'" != "" {
= if 8 == . & "" != "" {
  `vv' local j = colnumb(`new',`"`ospec'"')
  }
- if `j' == . & "`sspec'" != "" {
= if 8 == . & "/piq_timing_max:stky_pr_calvo" != "" {
  `vv' local j = colnumb(`new',`"`sspec'"')
  }
- if `j'==. & `"`eq'"'=="_" & `"`eq1'"'!="" {
= if 8==. & `"piq_timing_max"'=="_" & `"piq_timing_max:"'!=""
> {
  `vv' local j = colnumb(`new',`"`eq1'`name'"')
  if `j' == . & "`oname'" != "" {
  `vv' local j = colnumb(`new',`"`eq1'`oname'"')
  }
```

```
                              }
                            - if `j'!=. {
                            = if 8!=. {
                            - if `fill'[1,`j'] {
                            = if __00000E[1,8] {
                              _ms_parse_parts `name'
                              if !r(omit) {
                              if "`eq'"=="_" {
                              di in red `"`error'duplicate "' `"entries for `name' found"'
                              }
                              else di in red `"`error'"' `"duplicate entries for `eq':`nam
> e' found"'
                              exit 507
                              }
                              else if !missing(`new'[1,`j']) {
                              matrix `mat'[1,`i'] = `new'[1,`j']
                              }
                              }
                            - else mat `fill'[1,`j'] = 1
                            = else mat __00000E[1,8] = 1
                            - mat `new'[1,`j'] = `mat'[1,`i']
                            = mat __00000D[1,8] = __00000C[1,8]
                            - }
                            - else if "`skip'"=="" {
                            = else if ""=="" {
                              if "`eq'"=="_" {
                              local spec : copy local name
                              }
                              di in red `"`error'extra parameter "' `"`spec' found"' _n "s
> pecify skip option if necessary"
                              exit 111
                              }
                            - local i = `i' + 1
                            = local i = 8 + 1
                            - }
                            - while `i' <= `dim' {
                            = while 9 <= 10 {
                            - mat `x' = `mat'[1,`i'..`i']
                            = mat __00000F = __00000C[1,9..9]
                            - local eq : coleq `x'
                            = local eq : coleq __00000F
                            - local name : colname `x'
                            = local name : colname __00000F
                            - if "`eq'" == "/" {
                            = if "piq_timing_max" == "/" {
                              local spec "/`name'"
```

```
            }
 −  else {
 −  local spec "`eq':`name'"
 =  local spec "piq_timing_max:_cons"
 −  if (usubstr("`eq'",1,1) != "/") {
 =  if (usubstr("piq_timing_max",1,1) != "/") {
 −  local sspec "/`eq':`name'"
 =  local sspec "/piq_timing_max:_cons"
 −  }
 −  }
 −  local oname
 −  local ospec
 −  capture _msparse `name', noomit
 =  capture _msparse _cons, noomit
 −  if c(rc) == 0 {
 −  if r(omit) {
            local oname `"`r(stripe)'"'
            local ospec "`eq':`oname'"
            }
 −  }
 −  `vv' local j = colnumb(`new',`"`spec'"')
 =  version 18: local j = colnumb(__00000D,`"piq_timing_max:_con
> s"')

 −  if `j' == . & "`oname'" != "" {
 =  if 9 == . & "" != "" {
            `vv' local j = colnumb(`new',`"`ospec'"')
            }
 −  if `j' == . & "`sspec'" != "" {
 =  if 9 == . & "/piq_timing_max:_cons" != "" {
            `vv' local j = colnumb(`new',`"`sspec'"')
            }
 −  if `j'==. & `"`eq'"'=="_" & `"`eq1'"'!="" {
 =  if 9==. & `"piq_timing_max"'=="_" & `"piq_timing_max:"'!=""
> {

            `vv' local j = colnumb(`new',`"`eq1'`name'"')
            if `j' == . & "`oname'" != "" {
            `vv' local j = colnumb(`new',`"`eq1'`oname'"')
            }
            }
 −  if `j'!=. {
 =  if 9!=. {
 −  if `fill'[1,`j'] {
 =  if __00000E[1,9] {
            _ms_parse_parts `name'
            if !r(omit) {
            if "`eq'"=="_" {
```

```
                    di in red `"'`error'duplicate "' `"entries for `name' found"'
                    }
                    else di in red `"'`error'"' `"duplicate entries for `eq':`nam
> e' found"'
                    exit 507
                    }
                    else if !missing(`new'[1,`j']) {
                    matrix `mat'[1,`i'] = `new'[1,`j']
                    }
                    }
              - else mat `fill'[1,`j'] = 1
              = else mat __00000E[1,9] = 1
              - mat `new'[1,`j'] = `mat'[1,`i']
              = mat __00000D[1,9] = __00000C[1,9]
              - }
              - else if "`skip'"=="" {
              = else if ""=="" {
                    if "`eq'"=="_" {
                    local spec : copy local name
                    }
                    di in red `"'`error'extra parameter "' `"'`spec' found"' _n "s
> pecify skip option if necessary"
                    exit 111
                    }
              - local i = `i' + 1
              = local i = 9 + 1
              - }
              - while `i' <= `dim' {
              = while 10 <= 10 {
              - mat `x' = `mat'[1,`i'..`i']
              = mat __00000F = __00000C[1,10..10]
              - local eq : coleq `x'
              = local eq : coleq __00000F
              - local name : colname `x'
              = local name : colname __00000F
              - if "`eq'" == "/" {
              = if "/" == "/" {
              - local spec "/`name'"
              = local spec "/lnalpha"
              - }
              - else {
                    local spec "`eq':`name'"
                    if (usubstr("`eq'",1,1) != "/") {
                    local sspec "/`eq':`name'"
                    }
                    }
```

```
- local oname
- local ospec
- capture _msparse `name', noomit
= capture _msparse lnalpha, noomit
- if c(rc) == 0 {
- if r(omit) {
  local oname `"`r(stripe)'"'
  local ospec "`eq':`oname'"
  }
- }
- `vv' local j = colnumb(`new',`"`spec'"')
= version 18: local j = colnumb(__00000D,`"/lnalpha"')
- if `j' == . & "`oname'" != "" {
= if 10 == . & "" != "" {
  `vv' local j = colnumb(`new',`"`ospec'"')
  }
- if `j' == . & "`sspec'" != "" {
= if 10 == . & "/piq_timing_max:_cons" != "" {
  `vv' local j = colnumb(`new',`"`sspec'"')
  }
- if `j'==. & `"`eq'"'=="_" & `"`eq1'"'!="" {
= if 10==. & `"/"'=="_" & `"piq_timing_max:"'!="" {
  `vv' local j = colnumb(`new',`"`eq1'`name'"')
  if `j' == . & "`oname'" != "" {
  `vv' local j = colnumb(`new',`"`eq1'`oname'"')
  }
  }
- if `j'!=. {
= if 10!=. {
- if `fill'[1,`j'] {
= if __00000E[1,10] {
  _ms_parse_parts `name'
  if !r(omit) {
  if "`eq'"=="_" {
  di in red `"`error'duplicate "' `"entries for `name' found"'
  }
  else di in red `"`error'"' `"duplicate entries for `eq':`nam
> e' found"'

  exit 507
  }
  else if !missing(`new'[1,`j']) {
  matrix `mat'[1,`i'] = `new'[1,`j']
  }
  }
- else mat `fill'[1,`j'] = 1
= else mat __00000E[1,10] = 1
```

```
- mat `new'[1,`j'] = `mat'[1,`i']
= mat __00000D[1,10] = __00000C[1,10]
- }
- else if "`skip'"=="" {
= else if ""=="" {
  if "`eq'"=="_" {
  local spec : copy local name
  }
  di in red `"'error'extra parameter "' `"'spec' found"' _n "s
> pecify skip option if necessary"
  exit 111
  }
- local i = `i' + 1
= local i = 10 + 1
- }
- while `i' <= `dim' {
= while 11 <= 10 {
  mat `x' = `mat'[1,`i'..`i']
  local eq : coleq `x'
  local name : colname `x'
  if "`eq'" == "/" {
  local spec "/`name'"
  }
  else {
  local spec "`eq':`name'"
  if (usubstr("`eq'",1,1) != "/") {
  local sspec "/`eq':`name'"
  }
  }
  local oname
  local ospec
  capture _msparse `name', noomit
  if c(rc) == 0 {
  if r(omit) {
  local oname `"'`r(stripe)'"'
  local ospec "`eq':`oname'"
  }
  }
  `vv' local j = colnumb(`new',`"'spec'"')
  if `j' == . & "`oname'" != "" {
  `vv' local j = colnumb(`new',`"'ospec'"')
  }
  if `j' == . & "`sspec'" != "" {
  `vv' local j = colnumb(`new',`"'sspec'"')
  }
  if `j'==. & `"'`eq'"'=="_" & `"'`eq1'"'!="" {
```

```
`vv' local j = colnumb(`new',`"`eq1'`name'"')
if `j' == . & "`oname'" != "" {
`vv' local j = colnumb(`new',`"`eq1'`oname'"')
}
}
if `j'!=. {
if `fill'[1,`j'] {
_ms_parse_parts `name'
if !r(omit) {
if "`eq'"=="_" {
di in red `"`error'duplicate "' `"entries for `name' found"'
}
else di in red `"`error'"' `"duplicate entries for `eq':`nam
> e' found"'
exit 507
}
else if !missing(`new'[1,`j']) {
matrix `mat'[1,`i'] = `new'[1,`j']
}
}
else mat `fill'[1,`j'] = 1
mat `new'[1,`j'] = `mat'[1,`i']
}
else if "`skip'"=="" {
if "`eq'"=="_" {
local spec : copy local name
}
di in red `"`error'extra parameter "' `"`spec' found"' _n "s
> pecify skip option if necessary"
exit 111
}
local i = `i' + 1
}
- mat `fill' = `fill'*`fill''
= mat __00000E = __00000E*__00000E'
- sret clear
- sret local k_fill = `fill'[1,1]
= sret local k_fill = __00000E[1,1]
- mat `mat' = `new'
= mat __00000C = __00000D
    ─────────────────────────────────────────────────────────
> ──────────────────────────────── end _mkvec.ChkNames ──────────────
- local fill `s(k_fill)'
= local fill 10
- }
- }
```

```
              - }
              - else {
                local fill 0
                if "`update'"!="" {
                mat `mat' = `matin'
                }
                else if `"`colname'"'!="" {
                local dim : list sizeof colname
                mat `mat' = J(1,`dim',0)
                `vv' mat colnames `mat' = `colname'
                }
                else {
                di in red "from() must be specified"
                exit 198
                }
                }
              - sret clear
              - sret local copy `copy'
              = sret local copy
              - sret local skip `skip'
              = sret local skip
              - sret local k = colsof(matrix(`mat'))
              = sret local k = colsof(matrix(__00000C))
              - if "`fill'"!="" {
              = if "10"!="" {
              - sret local k_fill `fill'
              = sret local k_fill 10
              - }
              - else sret local k_fill = colsof(matrix(`mat'))
              = else sret local k_fill = colsof(matrix(__00000C))
              - matrix rename `mat' `matout', replace
              = matrix rename __00000C __00000B, replace
              ───────────────────────────────────────────────────
>  ────────────────────────────────────────────── end _mkvec ──────────────────
              - }
              - tempname bomit
              - matrix `bomit' = J(1,`:list sizeof colna',0)
              = matrix __00000C = J(1,10,0)
              - matrix colna `bomit' = `colna'
              = matrix colna __00000C =  piq_timing_max:ln_neq piq_timing_max:cb
> _authors_ext piq_timing_max:estimated piq_timing_max:est_late piq_timing_max
> :o.est_early piq_timing_max:wg_ndx_other piq_timing_max:stky_pr_rotemberg pi
> q_timing_max:stky_pr_calvo piq_timing_max:_cons /:lnalpha
              - _ms_omit_info `bomit'
              = _ms_omit_info __00000C
              - if r(k_omit) | `:length local constraints' {
```

```
              = if r(k_omit) | 0 {
              - nobreak {
              - capture noisily break {
              - _b_post0 `colna'
              = _b_post0  piq_timing_max:ln_neq piq_timing_max:cb_authors_ext pi
> q_timing_max:estimated piq_timing_max:est_late piq_timing_max:o.est_early pi
> q_timing_max:wg_ndx_other piq_timing_max:stky_pr_rotemberg piq_timing_max:st
> ky_pr_calvo piq_timing_max:_cons /:lnalpha
                ─────────────────────────────────────────────
> ──────────────────────────────────────── begin _b_post0 ──────────────
              - version 11
              - tempname b V
              - local dim : list sizeof 0
              - matrix `b' = J( 1,`dim',0)
              = matrix __00000D = J( 1,10,0)
              - matrix `V' = J(`dim',`dim',0)
              = matrix __00000E = J(10,10,0)
              - matrix colnames `b' = `0'
              = matrix colnames __00000D = piq_timing_max:ln_neq piq_timing_ma
> x:cb_authors_ext piq_timing_max:estimated piq_timing_max:est_late piq_timing
> _max:o.est_early piq_timing_max:wg_ndx_other piq_timing_max:stky_pr_rotember
> g piq_timing_max:stky_pr_calvo piq_timing_max:_cons /:lnalpha
              - matrix colnames `V' = `0'
              = matrix colnames __00000E = piq_timing_max:ln_neq piq_timing_ma
> x:cb_authors_ext piq_timing_max:estimated piq_timing_max:est_late piq_timing
> _max:o.est_early piq_timing_max:wg_ndx_other piq_timing_max:stky_pr_rotember
> g piq_timing_max:stky_pr_calvo piq_timing_max:_cons /:lnalpha
              - matrix rownames `V' = `0'
              = matrix rownames __00000E = piq_timing_max:ln_neq piq_timing_ma
> x:cb_authors_ext piq_timing_max:estimated piq_timing_max:est_late piq_timing
> _max:o.est_early piq_timing_max:wg_ndx_other piq_timing_max:stky_pr_rotember
> g piq_timing_max:stky_pr_calvo piq_timing_max:_cons /:lnalpha
              - ereturn post `b' `V'
              = ereturn post __00000D __00000E
                ─────────────────────────────────────────────
> ──────────────────────────────────────── end _b_post0 ──────────────
            - local clist : subinstr local constraints "," " ", all
            - `vv' makecns `clist', `cnsnotes'
            = version 18: makecns ,
                ─────────────────────────────────────────────
> ──────────────────────────────────────── begin makecns ──────────────
            - if _caller() < 11 {
              MakeCns `0'
              exit
              }
            - _makecns `0'
```

```
              = _makecns ,
              _____
>  ─────────────────────────────────────────────── end makecns ───────────────
              – local constraints `"'`r(clist)'"'
              = local constraints `""'
              – local k_autoCns = e(k_autoCns)
              – tempname C
              – capture matrix `C' = e(Cns)
              = capture matrix __00000D = e(Cns)
              – local rcc = c(rc)
              – }
              – local rc = c(rc)
              – ereturn clear
              – }
              – if (`rc') exit `rc'
              = if (0) exit 0
              – if (`rcc') {
              = if (0) {
                local C
                local k_autoCns
                }
              – }
              – if `:length local constraints' {
              = if 0 {
                local lf0
                }
              – local vce `vce' `robust' `cluster'
              = local vce vce(robust) robust
              – if `:length local vce' {
              = if 18 {
              – _vce_parse, argoptlist(CLuster) optlist(OIM OPG Robust) old : `w
> t', `vce'
              = _vce_parse, argoptlist(CLuster) optlist(OIM OPG Robust) old : ,
> vce(robust) robust
              _____
>  ──────────────────────────────────────────────── begin _vce_parse ──────────
              – version 10
              – _on_colon_parse `0'
              = _on_colon_parse , argoptlist(CLuster) optlist(OIM OPG Robust)
> old : , vce(robust) robust
              _____
>  ───────────────────────────────────────────── begin _on_colon_parse ─────────
              – version 8.2
              – sreturn local before ""
              – sreturn local after ""
              – gettoken before after : 0, parse(":") bind match(par) quotes
```

```
- if "`par'" != "" {
= if "" != "" {
  local before `"(`before')"'
  }
- if `"`before'"' == ":" {
= if `", argoptlist(CLuster) optlist(OIM OPG Robust) old "' ==
>  ":" {

  sreturn local after `"`after'"'
  exit
  }
- while `"`COLON'"' != ":" & `"`after'"' != "" {
= while `""' != ":" & `": , vce(robust) robust"' != "" {
- gettoken COLON after : after, parse(":") bind match(par) quo
> tes

- if "`par'" != "" {
= if "" != "" {
  local before `before' (`COLON')
  local COLON
  }
- else if `"`COLON'"' != ":" {
= else if `":"' != ":" {
  local before `"`before' `COLON'"'
  local COLON
  }
- }
- while `"`COLON'"' != ":" & `"`after'"' != "" {
= while `":"' != ":" & `" , vce(robust) robust"' != "" {
  gettoken COLON after : after, parse(":") bind match(par) quo
> tes

  if "`par'" != "" {
  local before `before' (`COLON')
  local COLON
  }
  else if `"`COLON'"' != ":" {
  local before `"`before' `COLON'"'
  local COLON
  }
  }
- if `"`COLON'"' != ":" {
= if `":"' != ":" {
  di as err "'' found where ':' expected"
  exit 198
  }
- sreturn local before `"`before'"'
= sreturn local before `", argoptlist(CLuster) optlist(OIM OPG
>  Robust) old "'
```

```
              – sreturn local after `"'`after'"'
              = sreturn local after `" , vce(robust) robust"'
              ──────────────────────────────────────────────────
> ─────────────────────────────────── end _on_colon_parse ───────────────
              – local 0 `"'`s(before)'"'
              = local 0 `", argoptlist(CLuster) optlist(OIM OPG Robust) old "'
              – local user `"'`s(after)'"'
              = local user `" , vce(robust) robust"'
              – syntax [varname(default=none)], [ OPTlist(namelist) ARGOPTlist
> (namelist) PWallowed(namelist) OLD_is_ok NOARGOPT_is_ok ]
              – local touse `varlist'
              = local touse
              – tempname o a
              – .`o' = ._optlist.new
              = .__00000E = ._optlist.new
              – local optlist : list uniq optlist
              – foreach name of local optlist {
              – .`o'.addopt `name'
              = .__00000E.addopt OIM
              ──────────────────────────────────────────────────
> ──────────────────────────────────── begin _optlist.addopt ──────────────
              – version 9
              – syntax name(name=optspec) [, PASSthru]
              – local mname = lower("`optspec'")
              = local mname = lower("OIM")
              – if "`passthru'" != "" {
              = if "" != "" {
                local optspec `optspec'(passthru)
                }
              – .options.Arrpush "`optspec'"
              = .options.Arrpush "OIM"
              – .names.Arrpush "`mname'"
              = .names.Arrpush "oim"
              ──────────────────────────────────────────────────
> ───────────────────────────────────── end _optlist.addopt ───────────────
              – }
              – .`o'.addopt `name'
              = .__00000E.addopt OPG
              ──────────────────────────────────────────────────
> ──────────────────────────────────── begin _optlist.addopt ──────────────
              – version 9
              – syntax name(name=optspec) [, PASSthru]
              – local mname = lower("`optspec'")
              = local mname = lower("OPG")
              – if "`passthru'" != "" {
              = if "" != "" {
```

```
                      local optspec `optspec'(passthru)
                      }
             - .options.Arrpush "`optspec'"
             = .options.Arrpush "OPG"
             - .names.Arrpush "`mname'"
             = .names.Arrpush "opg"
            ──────────────────────────────────────────────────
> ───────────────────────────────── end _optlist.addopt ───────────────
             - }
             - .`o'.addopt `name'
             = .__00000E.addopt Robust
            ──────────────────────────────────────────────────
> ──────────────────────────────── begin _optlist.addopt ──────────────
             - version 9
             - syntax name(name=optspec) [, PASSthru]
             - local mname = lower("`optspec'")
             = local mname = lower("Robust")
             - if "`passthru'" != "" {
             = if "" != "" {
                      local optspec `optspec'(passthru)
                      }
             - .options.Arrpush "`optspec'"
             = .options.Arrpush "Robust"
             - .names.Arrpush "`mname'"
             = .names.Arrpush "robust"
            ──────────────────────────────────────────────────
> ───────────────────────────────── end _optlist.addopt ───────────────
             - }
             - .`a' = ._optlist.new
             = .__00000F = ._optlist.new
             - local argoptlist : list uniq argoptlist
             - foreach name of local argoptlist {
             - .`a'.addopt `name'
             = .__00000F.addopt CLuster
            ──────────────────────────────────────────────────
> ──────────────────────────────── begin _optlist.addopt ──────────────
             - version 9
             - syntax name(name=optspec) [, PASSthru]
             - local mname = lower("`optspec'")
             = local mname = lower("CLuster")
             - if "`passthru'" != "" {
             = if "" != "" {
                      local optspec `optspec'(passthru)
                      }
             - .options.Arrpush "`optspec'"
             = .options.Arrpush "CLuster"
```

```
              – .names.Arrpush "`mname'"
              = .names.Arrpush "cluster"
              ─────────────────────────────────────────────────
> ──────────────────────────────── end _optlist.addopt ─────────────
            – }
            – local OPTNAMES `"`.`o'.dumpnames'"'
              ─────────────────────────────────────────────────
> ─────────────────────────────── begin _optlist.dumpnames ──────────
            – version 9
            – forval i = 1/`.names.arrnels' {
            = forval i = 1/3 {
            – local namelist `namelist' `.names[`i']'
            = local namelist  oim
            – }
            – local namelist `namelist' `.names[`i']'
            = local namelist oim opg
            – }
            – local namelist `namelist' `.names[`i']'
            = local namelist oim opg robust
            – }
            – local namelist : list uniq namelist
            – sreturn local namelist `"`namelist'"'
            = sreturn local namelist `"oim opg robust"'
            – class exit `"`namelist'"'
            = class exit `"oim opg robust"'
              ─────────────────────────────────────────────────
> ──────────────────────────────── end _optlist.dumpnames ──────────
            = local OPTNAMES `"oim opg robust"'
            – local ARGOPTNAMES `"`.`a'.dumpnames'"'
              ─────────────────────────────────────────────────
> ─────────────────────────────── begin _optlist.dumpnames ──────────
            – version 9
            – forval i = 1/`.names.arrnels' {
            = forval i = 1/1 {
            – local namelist `namelist' `.names[`i']'
            = local namelist  cluster
            – }
            – local namelist : list uniq namelist
            – sreturn local namelist `"`namelist'"'
            = sreturn local namelist `"cluster"'
            – class exit `"`namelist'"'
            = class exit `"cluster"'
              ─────────────────────────────────────────────────
> ──────────────────────────────── end _optlist.dumpnames ──────────
          = local ARGOPTNAMES `"cluster"'
          – local AND : list OPTNAMES & ARGOPTNAMES
```

```
          - if `:list sizeof AND' {
          = if 0 {
            di as err "vcetype '`:word 1 of `AND''' specified twice"
            exit 198
            }
          - local pwallowed : list uniq pwallowed
          - local pwlist robust cluster
          - foreach n of local pwallowed {
            local lc = lower("`n'")
            local pwlist `pwlist' `lc'
            }
          - if "`old_is_ok'" != "" {
          = if "old_is_ok" != "" {
          - local ROBUST robust
          - if `:list ROBUST in OPTNAMES' {
          = if 1 {
          - local robust Robust
          - }
          - local CLUSTER cluster
          - if `:list CLUSTER in ARGOPTNAMES' {
          = if 1 {
          - local cluster CLuster(varname)
          - }
          - }
          - local 0 `"`user'"'
          = local 0 `" , vce(robust) robust"'
          - syntax [fw aw pw iw] [, VCE(string asis) `robust' `cluster' ]
          = syntax [fw aw pw iw] [, VCE(string asis) Robust CLuster(varnam
> e) ]
          - if `"`vce'"' != "" {
          = if `"robust"' != "" {
          - gettoken name args : vce, parse(" ,")
          - local args : list retok args
          - capture ParseVCE `o' `a' , `name'
          = capture ParseVCE __00000E __00000F , robust
          ─────────────────────────────────────────────────────
> ───────────────────────────── begin _vce_parse.ParseVCE ───────────────
            - gettoken O 0 : 0, parse(" ,")
            - gettoken A 0 : 0, parse(" ,")
            - local OPTSPECS `"`.`O'.dumpoptions' `.`A'.dumpoptions'"'
            ─────────────────────────────────────────────────────
> ───────────────────────────── begin _optlist.dumpoptions ──────────────
              - version 9
              - forval i = 1/`.options.arrnels' {
              = forval i = 1/3 {
              - local optlist `optlist' `.options[`i']'
```

```
                    =   local optlist  OIM
                    -   }
                    -   local optlist `optlist' `.options[`i']'
                    =   local optlist OIM OPG
                    -   }
                    -   local optlist `optlist' `.options[`i']'
                    =   local optlist OIM OPG Robust
                    -   }
                    -   local optlist : list uniq optlist
                    -   sreturn local optlist `"`optlist'"'
                    =   sreturn local optlist `"OIM OPG Robust"'
                    -   class exit `"`optlist'"'
                    =   class exit `"OIM OPG Robust"'
                ───────────────────────────────────────────────────────────
>   ───────────────────────────── end _optlist.dumpoptions ────────────────
                ───────────────────────────────────────────────────────────
>   ──────────────────────────── begin _optlist.dumpoptions ───────────────
                    -   version 9
                    -   forval i = 1/`.options.arrnels' {
                    =   forval i = 1/1 {
                    -   local optlist `optlist' `.options[`i']'
                    =   local optlist  CLuster
                    -   }
                    -   local optlist : list uniq optlist
                    -   sreturn local optlist `"`optlist'"'
                    =   sreturn local optlist `"CLuster"'
                    -   class exit `"`optlist'"'
                    =   class exit `"CLuster"'
                ───────────────────────────────────────────────────────────
>   ───────────────────────────── end _optlist.dumpoptions ────────────────
                =   local OPTSPECS `"OIM OPG Robust CLuster"'
                -   local OPTNAMES `"`.`O'.dumpnames' `.`A'.dumpnames'"'
                ───────────────────────────────────────────────────────────
>   ───────────────────────────── begin _optlist.dumpnames ────────────────
                    -   version 9
                    -   forval i = 1/`.names.arrnels' {
                    =   forval i = 1/3 {
                    -   local namelist `namelist' `.names[`i']'
                    =   local namelist  oim
                    -   }
                    -   local namelist `namelist' `.names[`i']'
                    =   local namelist oim opg
                    -   }
                    -   local namelist `namelist' `.names[`i']'
                    =   local namelist oim opg robust
                    -   }
```

```
                  – local namelist : list uniq namelist
                  – sreturn local namelist `"`namelist'"'
                  = sreturn local namelist `"oim opg robust"'
                  – class exit `"`namelist'"'
                  = class exit `"oim opg robust"'
                  ─────────────────────────────────────────────
> ───────────────────────────── end _optlist.dumpnames ──────────────
                  ─────────────────────────────────────────────
> ───────────────────────────── begin _optlist.dumpnames ────────────
                  – version 9
                  – forval i = 1/`.names.arrnels' {
                  = forval i = 1/1 {
                  – local namelist `namelist' `.names[`i']'
                  = local namelist  cluster
                  – }
                  – local namelist : list uniq namelist
                  – sreturn local namelist `"`namelist'"'
                  = sreturn local namelist `"cluster"'
                  – class exit `"`namelist'"'
                  = class exit `"cluster"'
                  ─────────────────────────────────────────────
> ───────────────────────────── end _optlist.dumpnames ──────────────
                  = local OPTNAMES `"oim opg robust cluster"'
                  – syntax [, `OPTSPECS']
                  = syntax [, OIM OPG Robust CLuster]
                  – foreach OPT of local OPTNAMES {
                  – if `"``OPT''"' != "" {
                  = if `""' != "" {
                    return local vce `OPT'
                    continue, break
                    }
                  – }
                  – if `"``OPT''"' != "" {
                  = if `""' != "" {
                    return local vce `OPT'
                    continue, break
                    }
                  – }
                  – if `"``OPT''"' != "" {
                  = if `"robust"' != "" {
                  – return local vce `OPT'
                  = return local vce robust
                  – continue, break
                    }
                    }
                  ─────────────────────────────────────────────
```

```
- if c(rc) {
  di as err "vcetype {bf:`name'} not allowed"
  exit 198
  }
- local name `r(vce)'
= local name robust
- if "`weight'" == "pweight" & !`:list name in pwlist' {
= if "" == "pweight" & !1 {
  di as err "pweights are not allowed with vce(`name')"
  exit 198
  }
- return add
- if `"`robust'"' != "" & !inlist("`name'","","robust","eim","oi
> m","cluster") {
= if `"robust"' != "" & !inlist("robust","","robust","eim","oim"
> ,"cluster") {
  opts_exclusive "`robust' vce(`name')"
  }
- if "`name'" == "cluster" {
= if "robust" == "cluster" {
  if `"`args'"' == "" {
  di as err "invalid vce(cluster) option"
  exit 198
  }
  confirm var `args'
  unab args : `args'
  local markout `args'
  if "`cluster'" != "" {
  if !`:list args == cluster' {
  di as err "options cluster() and vce(cluster) are in conflict"
  exit 100
  }
  }
  }
- else if "`cluster'" != "" & !inlist("`name'","eim","oim") {
= else if "" != "" & !inlist("robust","eim","oim") {
  opts_exclusive "cluster() vce(`name')"
  }
- if `"`args'"' != "" {
= if `""' != "" {
  if ! `:list name in ARGOPTNAMES' {
  di as err "invalid vce() option"
  exit 198
  }
  if "`name'" == "hc2" {
```

```
                      confirm var `args'
                      unab args : `args'
                      local markout `args'
                      }
                      return local vceargs `"`:list retok args'"'
                      }
-     else if `:list name in ARGOPTNAMES' {
=     else if 0 {
                      if "`noargopt_is_ok'" == "" {
                      di as err "invalid vce() option"
                      exit 198
                      }
                      }
-     }
-     else {
                      if "`weight'" == "pweight" | "`robust'" != "" {
                      local vce robust
                      }
                      if "`cluster'" != "" {
                      local vce cluster
                      local args `cluster'
                      local markout `cluster'
                      }
                      return local vce `"`vce'"'
                      return local vceargs `"`args'"'
                      }
-     if "`return(vce)'" != "" {
=     if "robust" != "" {
-     if `"`return(vceargs)'"' != "" {
=     if `""' != "" {
                      local ss " "
                      }
-     return local vceopt `"vce(`return(vce)'`ss'`return(vceargs)')"
> '

=     return local vceopt `"vce(robust)"'
-     }
-     if "`return(vce)'" == "cluster" {
=     if "robust" == "cluster" {
                      return local cluster `return(vceargs)'
                      }
-     if inlist("`return(vce)'", "robust", "cluster") {
=     if inlist("robust", "robust", "cluster") {
-     return local robust robust
-     }
-     if "`touse'" != "" {
=     if "" != "" {
```

```
                 if "`markout'" != "" {
                 markout `touse' `markout', strok
                 }
                 }
       _____
>  ─────────────────────────────────────── end _vce_parse ─────────────
           - local vce `r(vce)'
           = local vce robust
           - }
           - else if "`weight'" == "pweight" {
           = else if "" == "pweight" {
             local vce robust
             }
           - if `:length local svy' {
           = if 0 {
             local vce svy
             }
           - if `"`vce'"' == "cluster" {
           = if `"robust"' == "cluster" {
             local cluster `r(cluster)'
             markout $ML_sample `cluster', strok
             }
           - if `:length local group' {
           = if 0 {
             markout $ML_sample `group', strok
             global ML_group : copy local group
             if bsubstr("`:type `group''",1,3) == "str" {
             if `interactive' {
             SetGlobalVar ML_grp : _MLgr
             }
             else {
             global ML_grp : tempvar
             if `"`moptobj'"' != "" {
             global ML_grp `moptobj'$ML_grp
             }
             }
             quietly egen $ML_grp = group(`group')
             if ! `:length local cluster' {
             local cluster : copy global ML_grp
             }
             }
             else {
             if ! `:length local cluster' {
             local cluster : copy global ML_group
             }
             }
```

```
              }
          -   if "$ML_samp" != "$ML_sample" {
          =   if "__000006" != "__000006" {
              quietly replace $ML_samp = 0 if $ML_samp & $ML_sample == 0
              }
          -   if `:length local vce' == 0 {
          =   if 6 == 0 {
              if `"`technique'"' == "bhhh" {
              local vce opg
              }
              else local vce oim
              }
          -   if inlist("`vce'", "robust", "cluster") & bsubstr("`evaltype'",1
> ,1) == "d" {
          =   if inlist("robust", "robust", "cluster") & bsubstr("e2",1,1) ==
> "d" {
              local optname = cond("`svy'"=="","vce(`vce')","svy")
              di as err "option `optname' is not allowed with evaltype `evalty
> pe'"
              exit 198
              }
          -   if `:length local crittype' == 0 {
          =   if 0 == 0 {
          -   if inlist("`vce'", "cluster", "robust", "svy") {
          =   if inlist("robust", "cluster", "robust", "svy") {
          -   local crittype "log pseudolikelihood"
          -   }
          -   else local crittype "log likelihood"
          -   }
          -   global ML_waldtest `waldtest'
          =   global ML_waldtest -1
          -   if `:length local svy' | `:length local weight' {
          =   if 0 | 0 {
              if `interactive' {
              SetGlobalVar ML_w : _MLw
              }
              else {
              global ML_w : tempvar
              if `"`moptobj'"' != "" {
              global ML_w `moptobj'$ML_w
              }
              }
              }
          -   if `:length local weight' {
          =   if 0 {
              if `"`moptobj'"' != "" {
```

```
      cap drop $ML_w
      }
      quietly gen double $ML_w `exp' if $ML_samp
      local wtype `"`weight'"'
      local wexp `"`exp'"'
      global ML_wtyp : copy local wtype
      global ML_wexp : copy local wexp
      if "`wtype'" == "iweight" | "`svy'" != "" {
      local zeroweight zeroweight
      }
      }
-     if inlist("`vce'", "svy", "cluster") {
=     if inlist("robust", "svy", "cluster") {
      if `interactive' {
      SetGlobalVar ML_subv : _MLsu
      }
      else {
      global ML_subv : tempvar
      if `"`moptobj'"' != "" {
      global ML_subv `moptobj'$ML_subv
      }
      }
      }
-     quietly count if $ML_sample
=     quietly count if __000006
-     if r(N) == 0 {
      error 2000
      }
-     if `"`weight'"' != "" {
=     if `""' != "" {
      quietly count if $ML_sample & $ML_w != 0
      if r(N) == 0 {
      di in gr "all observation have zero weights"
      exit 2000
      }
      }
-     if `:length local lf0' {
=     if 20 {
-     if `:list sizeof lf0' != 2 {
=     if 2 != 2 {
      di as err "lf0(`lf0') invalid"
      exit 198
      }
-     global ML_k0 : word 1 of `lf0'
=     global ML_k0 : word 1 of 2 −322.2358665861632
-     global ML_ll_0 : word 2 of `lf0'
```

```
= global ML_ll_0 : word 2 of 2 -322.2358665861632
- confirm integer number $ML_k0
= confirm integer number 2
- confirm number $ML_ll_0
= confirm number -322.2358665861632
- if $ML_k0 < 0 {
= if 2 < 0 {
  di as err "lf0(`lf0') invalid"
  exit 198
  }
- }
- if "`obs'" == "" {
= if "" == "" {
- if "`wtype'" != "fweight" {
= if "" != "fweight" {
- quietly count if $ML_sample
= quietly count if __000006
- local obs = r(N)
- }
- else {
  sum $ML_w if $ML_sample, mean
  local obs = r(sum)
  }
- }
- if `:length local iterid' {
= if 0 {
  local iterid = trim(bsubstr(`"`iterid'"',1,32))
  }
- if `:length local crittype' {
= if 20 {
- local crittype = trim(bsubstr(`"`crittype'"',1,32))
= local crittype = trim(bsubstr(`"log pseudolikelihood"',1,32))
- }
- if `:length local derivscale' {
= if 0 {
  confirm matrix `derivscale'
  }
- if `:length local derivh' {
= if 0 {
  confirm matrix `derivh'
  }
- local l : strlen local deriv
- ParseUsemin, `deriv' len(`l')
= ParseUsemin,  len(0)
```

> ──────────────────────────── begin mopt.ParseUsemin ────────────────────

```
- syntax [, LEN(integer 0) MIN1(string) NOMIN MIN]
- if `"`min1'"' != "" & `"`nomin'"' != "" {
= if `""' != "" & `""' != "" {
  di as err "options min() and nomin are mutually exclusive"
  exit 198
  }
- if `"`min'"' != "" & `"`nomin'"' != "" {
= if `""' != "" & `""' != "" {
  di as err "options min and nomin are mutually exclusive"
  exit 198
  }
- if (`"`min1'"' != "") {
= if (`""' != "") {
  confirm matrix `min1'
  local deriv `min1'
  }
- else if (`"`min'"' != "") {
= else if (`""' != "") {
  if (`len' > length(`"`min'"')) {
  di as err "must specify a matrix of 2 columns in option min()"
  exit 198
  }
  local deriv 1
  }
- else {
- if (`len' > 0) {
= if (0 > 0) {
  if ("`nomin'" == "") {
  di as err "must specify a matrix of 2 columns in option min()"
  exit 198
  }
  else if (`len' > length(`"`nomin'"')) {
  di as err "options min() and nomin are mutually exclusive"
  exit 198
  }
  else {
  local deriv 0
  }
  }
- else {
- local deriv 0
- }
- }
- sreturn local deriv `deriv'
= sreturn local deriv 0
```
_____

```
>  ─────────────────────────────────── end mopt.ParseUsemin ───────────────
              - local deriv = s(deriv)
              - if `:length local gnwmatrix' {
              = if 0 {
                confirm matrix `gnwmatrix'
                }
              - `vv' mata: Mopt_model()
              = version 18: mata: Mopt_model()
                ────────────────────────────────────────────────────────────
>  ───────────────────────────────── begin mopt_check_program ──────────────
              - version 10
              - args name
              - capture confirm name `name'
              = capture confirm name nbreg_lf
              - if c(rc) {
                di as err "unrecognized command:    `name' invalid command name
>  "
                exit 199
                }
              - capture which `name'
              = capture which nbreg_lf
              - if !c(rc) {
              - exit
                ────────────────────────────────────────────────────────────
>  ────────────────────────────────── end mopt_check_program ──────────────
              - global ML_stat model
              - if !`interactive' {
              = if !0 {
              - `vv' MaxMin `maxmin', nooutput `score' `options' moptobj(`moptob
>  j')
              = version 18: MaxMin maximize, nooutput  search(off) moptobj()
                ────────────────────────────────────────────────────────────
>  ───────────────────────────────────── begin mopt.MaxMin ────────────────
              - local vv : di "version " string(_caller()) ":"
              - version 12
              - ChkMacros
                ────────────────────────────────────────────────────────────
>  ──────────────────────────────────── begin mopt.ChkMacros ──────────────
                - if "$ML_stat" != "model" {
                = if "model" != "model" {
                  di as err "you must issue -ml model- first"
                  exit 198
                  }
                - capture confirm var $ML_samp $ML_w $ML_subv
                = capture confirm var __000006 __000006
                - if c(rc) {
```

```
                     di as err "Since issuing the -ml model- statement, you have
> done something to drop" _n "temporary variables ml added to your data.  You
> must start again."
                     Clear
                     exit 111
                     }
                     ─────────────────────────────────────────────────────
> ───────────────────────────── end mopt.ChkMacros ─────────────────
                  - syntax name(name=maxmin) [, NEGH TOLerance(numlist max=1 >=0)
> LTOLerance(numlist max=1 >=0) NONRTOLerance NRTOLerance(numlist max=1 >=0) Q
> TOLerance(numlist max=1 >=0) GTOLerance(numlist max=1 >=0) ITERate(numlist m
> ax=1 >=0) NOTCONCAVE(numlist max=1 >=0) ndami DIFficult HALFSTEPonly DOOPT S
> EArch(name) Repeat(passthru) Bounds(string) SCore(string) noWARNing noCLEAR
> NOLOg LOg DOTs SHOWTOLerance SHOWNRtolerance SHOWSTEP TRace COEFDIffs GRADie
> nt HESSian noSKIPline noOUTput Level(cilevel) moptobj(string) * ]
                  - if `:length local nrtolerance' {
                  = if 0 {
                    opts_exclusive "nrtolerance() `nonrtolerance'"
                     }
                  - if `:length local qtolerance' {
                  = if 0 {
                    opts_exclusive "qtolerance() `nonrtolerance'"
                     }
                  - opts_exclusive "`nonrtolerance' `shownrtolerance'"
                  = opts_exclusive " "
                     ─────────────────────────────────────────────────────
> ───────────────────────────── begin opts_exclusive ─────────────────
                  - version 8.2
                  - args opts optname errcode optslab
                  - local opts `opts'
                  = local opts
                  - local n 0
                  - while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                     }
                  - if `n' < 2 {
                  = if 0 < 2 {
                  - exit
                     ─────────────────────────────────────────────────────
> ───────────────────────────── end opts_exclusive ─────────────────
                  - if `:length local shownrtolerance' {
                  = if 0 {
                    local showtolerance showtolerance
                     }
```

```
                - if "$ML_preserve" != "no" {
              = if "no" != "no" {
                if `:length local score' {
                di as smcl as err "May not specify {bf:score()} option unless"
>  _n "       a) estimation subsample is the entire data in memory, or" _n "
>  b) you specify option {bf:nopreserve} on {bf:ml model} statement (meaning"
> _n "          your evaluation program explicitly restricts itself to obs" _n
> "          for which {bf:$}" "{bf:ML_samp==1}."
                exit 198
                }
                preserve
                local N = c(N)
                quietly keep if $ML_sample
                if (`N' != c(N)) {
                mata: Mopt_init_regetviews()
                }
                }
              - if `:length local score' {
              = if 0 {
                SetupScore `"$ML_evaltype"' `"`score'"' $ML_n $ML_dim
                local scores "`s(scores)'"
                }
              - _parse_iterlog, `nolog' `log'
              = _parse_iterlog,
                ─────────────────────────────────────────
> ──────────────────────────────── begin _parse_iterlog ──────────────
              - version 16
              - syntax [, NOLOG LOG]
              - if "`log'`nolog'" != "" {
              = if "" != "" {
                opts_exclusive "`log' `nolog'"
                }
              - else if "`c(iterlog)'" == "on" {
              = else if "on" == "on" {
              - local log log
              - }
              - else {
                local nolog nolog
                }
              - sreturn local log `log'
              = sreturn local log log
              - sreturn local nolog `nolog'
              = sreturn local nolog
                ─────────────────────────────────────────
> ──────────────────────────────── end _parse_iterlog ──────────────
              - local log "`s(nolog)'"
```

```
                = local log ""
                - local tropts `log' `dots' `showtolerance' `showstep' `trace' `
> coefdiffs'
                = local tropts
                - if "`tropts'" != "nolog" {
                = if "" != "nolog" {
                - local tropts `tropts' `gradient' `hessian'
                = local tropts
                - if "`skipline'" == "" {
                = if "" == "" {
                - if "`iterate'" != "0" | `:length local tropts' {
                = if "" != "0" | 0 {
                - di

                - }
                - }
                - }
                - else {
                  local gradient
                  local hessian
                  local nolog nolog
                  }
                - if "`search'" != "off" & "`iterate'" != "0" {
                = if "off" != "off" & "" != "0" {
                  if "`search'" == "quietly" {
                  local sopts nolog
                  }
                  else {
                  if `:length local tropts' {
                  if "`tropts'" != "nolog" {
                  local sopts trace
                  }
                  else local sopts nolog
                  }
                  }
                  if "`search'" == "norescale" {
                  local sopts `sopts' norescale
                  }
                  Search `bounds', nopreserve `sopts' `repeat' `maxmin'
                  }
                - tempname value b V iV
                - `vv' mata: Mopt_maxmin()
                = version 18: mata: Mopt_maxmin()
                  ────────────────────────────────────────────────────────
> ─────────────────────────────────────────── begin nbreg_lf ──────────────
                - version 6.0
```

```
- args todo b lnf g H sc1 sc2
- tempvar xb
- tempname lnalpha m
- mleval `xb' = `b', eq(1)
= mleval __00000V = __000000, eq(1)
- mleval `lnalpha' = `b', eq(2) scalar
= mleval __00000W = __000000, eq(2) scalar
- local y "$ML_y1"
= local y "piq_timing_max"
- scalar `m' = exp(-`lnalpha')
= scalar __00000X = exp(-__00000W)
- if `lnalpha' < -20 {
= if __00000W < -20 {
    mlsum `lnf' = -lngamma(`y'+1) - exp(`xb') + `y'*`xb'
    }
- else {
- mlsum `lnf' = lngamma(`m'+`y') - lngamma(`y'+1) - lngamma(`m
> ') - `m'*ln1p(exp(`xb'+`lnalpha')) - `y'*ln1p(exp(-`xb'-`lnalpha'))
= mlsum __00000P = lngamma(__00000X+piq_timing_max) - lngamma(
> piq_timing_max+1) - lngamma(__00000X) - __00000X*ln1p(exp(__00000V+__00000W)
> ) - piq_timing_max*ln1p(exp(-__00000V-__00000W))
- }
- if `todo' == 0 | `lnf'==. { exit }
= if 2 == 0 | __00000P==. { exit }
- tempname alpha
- tempvar mu p
- quietly {
- gen double `mu' = exp(`xb') if $ML_samp
= gen double __00000Z = exp(__00000V) if __000006
- gen double `p' = 1/(1+exp(`xb'+`lnalpha')) if $ML_samp
= gen double __000010 = 1/(1+exp(__00000V+__00000W)) if __0000
> 06
- if `lnalpha'<-20 {
= if __00000W<-20 {
    replace `sc1' = `y'-`mu' if $ML_samp
    replace `sc2' = 0 if $ML_samp
    }
- else {
- replace `sc1' = `p'*(`y'-`mu') if $ML_samp
= replace __00000S = __000010*(piq_timing_max-__00000Z) if __0
> 00006
- replace `sc2' = `m'*(digamma(`m') - digamma(`y'+`m') - ln(`p
> ')) + `p'*(`y'-`mu') if $ML_samp
= replace __00000T = __00000X*(digamma(__00000X) - digamma(piq
> _timing_max+__00000X) - ln(__000010)) + __000010*(piq_timing_max-__00000Z) i
> f __000006
```

```
              – }
              – }
              – $ML_ec tempname g1 g2
              = * tempname g1 g2
              – $ML_ec mlvecsum `lnf' `g1' = `sc1', eq(1)
              = * mlvecsum __00000P  = __00000S, eq(1)
              – $ML_ec mlvecsum `lnf' `g2' = `sc2', eq(2)
              = * mlvecsum __00000P  = __00000T, eq(2)
              – $ML_ec matrix `g' = (`g1',`g2')
              = * matrix __00000Q = (,)
              – if `todo' == 1 | `lnf'==. { exit }
              = if 2 == 1 | __00000P==. { exit }
              – tempname alpha d11 d12 d22
              – scalar `alpha' = exp(`lnalpha')
              = scalar __000011 = exp(__00000W)
              – if `lnalpha' < –20 {
              = if __00000W < –20 {
                mlmatsum `lnf' `d11' = `mu', eq(1)
                mlmatsum `lnf' `d12' = 0, eq(1,2)
                mlmatsum `lnf' `d22' = 0, eq(2)
                }
              – else {
              – mlmatsum `lnf' `d11' = `mu'*`p'*(`alpha'*`p'*(`y'–`mu')+1),
> eq(1)
              = mlmatsum __00000P __000012 = __00000Z*__000010*(__000011*__0
> 00010*(piq_timing_max–__00000Z)+1), eq(1)
              – mlmatsum `lnf' `d12' = `alpha'*`mu'*`p'^2*(`y'–`mu'), eq(1,2
> )
              = mlmatsum __00000P __000013 = __000011*__00000Z*__000010^2*(p
> iq_timing_max–__00000Z), eq(1,2)
              – mlmatsum `lnf' `d22' = `m'*(digamma(`m') – digamma(`y'+`m')
> – ln(`p') – `m'*(trigamma(`y'+`m') – trigamma(`m'))) + `mu'*`p'*(`alpha'*`p'
> *(`y'–`mu')– 1), eq(2)
              = mlmatsum __00000P __000014 = __00000X*(digamma(__00000X) – d
> igamma(piq_timing_max+__00000X) – ln(__000010) – __00000X*(trigamma(piq_timi
> ng_max+__00000X) – trigamma(__00000X))) + __00000Z*__000010*(__000011*__0000
> 10*(piq_timing_max–__00000Z)– 1), eq(2)
              – }
              – matrix `H' = (`d11',`d12' \ `d12'',`d22')
              = matrix __00000R = (__000012,__000013 \ __000013',__000014)
             ─────────────────────────────────────────────────────────────
> ──────────────────────────────────── end nbreg_lf ─────────────────
Iteration 0:  Log pseudolikelihood = –289.35699
             ─────────────────────────────────────────────────────────────
> ──────────────────────────────────── begin nbreg_lf ───────────────
              – version 6.0
```

```
              - args todo b lnf g H sc1 sc2
              - tempvar xb
              - tempname lnalpha m
              - mleval `xb' = `b', eq(1)
              = mleval __00000V = __000000, eq(1)
              - mleval `lnalpha' = `b', eq(2) scalar
              = mleval __00000W = __000000, eq(2) scalar
              - local y "$ML_y1"
              = local y "piq_timing_max"
              - scalar `m' = exp(-`lnalpha')
              = scalar __00000X = exp(-__00000W)
              - if `lnalpha' < -20 {
              = if __00000W < -20 {
                mlsum `lnf' = -lngamma(`y'+1) - exp(`xb') + `y'*`xb'
                }
              - else {
              - mlsum `lnf' = lngamma(`m'+`y') - lngamma(`y'+1) - lngamma(`m
>  ') - `m'*ln1p(exp(`xb'+`lnalpha')) - `y'*ln1p(exp(-`xb'-`lnalpha'))
              = mlsum __00000P = lngamma(__00000X+piq_timing_max) - lngamma(
> piq_timing_max+1) - lngamma(__00000X) - __00000X*ln1p(exp(__00000V+__00000W)
> ) - piq_timing_max*ln1p(exp(-__00000V-__00000W))
              - }
              - if `todo' == 0 | `lnf'==. { exit }
              = if 0 == 0 | __00000P==. { exit }
             ────────────────────────────────────────────────────────────
>  ─────────────────────────────────────────────── end nbreg_lf ──────────────
             ────────────────────────────────────────────────────────────
>  ───────────────────────────────────────────── begin nbreg_lf ──────────────
              - version 6.0
              - args todo b lnf g H sc1 sc2
              - tempvar xb
              - tempname lnalpha m
              - mleval `xb' = `b', eq(1)
              = mleval __00000V = __000000, eq(1)
              - mleval `lnalpha' = `b', eq(2) scalar
              = mleval __00000W = __000000, eq(2) scalar
              - local y "$ML_y1"
              = local y "piq_timing_max"
              - scalar `m' = exp(-`lnalpha')
              = scalar __00000X = exp(-__00000W)
              - if `lnalpha' < -20 {
              = if __00000W < -20 {
                mlsum `lnf' = -lngamma(`y'+1) - exp(`xb') + `y'*`xb'
                }
              - else {
              - mlsum `lnf' = lngamma(`m'+`y') - lngamma(`y'+1) - lngamma(`m
```

```
> ') − `m'*ln1p(exp(`xb'+`lnalpha')) − `y'*ln1p(exp(−`xb'−`lnalpha'))
                = mlsum __00000P = lngamma(__00000X+piq_timing_max) − lngamma(
> piq_timing_max+1) − lngamma(__00000X) − __00000X*ln1p(exp(__00000V+__00000W)
> ) − piq_timing_max*ln1p(exp(−__00000V−__00000W))
                − }
                − if `todo' == 0 | `lnf'==. { exit }
                = if 0 == 0 | __00000P==. { exit }
                ───────────────────────────────────────────────────────
> ──────────────────────────────────────────────── end nbreg_lf ─────────────
                ───────────────────────────────────────────────────────
> ──────────────────────────────────────────────── begin nbreg_lf ───────────
                − version 6.0
                − args todo b lnf g H sc1 sc2
                − tempvar xb
                − tempname lnalpha m
                − mleval `xb' = `b', eq(1)
                = mleval __00000V = __000000, eq(1)
                − mleval `lnalpha' = `b', eq(2) scalar
                = mleval __00000W = __000000, eq(2) scalar
                − local y "$ML_y1"
                = local y "piq_timing_max"
                − scalar `m' = exp(−`lnalpha')
                = scalar __00000X = exp(−__00000W)
                − if `lnalpha' < −20 {
                = if __00000W < −20 {
                  mlsum `lnf' = −lngamma(`y'+1) − exp(`xb') + `y'*`xb'
                  }
                − else {
                − mlsum `lnf' = lngamma(`m'+`y') − lngamma(`y'+1) − lngamma(`m
> ') − `m'*ln1p(exp(`xb'+`lnalpha')) − `y'*ln1p(exp(−`xb'−`lnalpha'))
                = mlsum __00000P = lngamma(__00000X+piq_timing_max) − lngamma(
> piq_timing_max+1) − lngamma(__00000X) − __00000X*ln1p(exp(__00000V+__00000W)
> ) − piq_timing_max*ln1p(exp(−__00000V−__00000W))
                − }
                − if `todo' == 0 | `lnf'==. { exit }
                = if 2 == 0 | __00000P==. { exit }
                − tempname alpha
                − tempvar mu p
                − quietly {
                − gen double `mu' = exp(`xb') if $ML_samp
                = gen double __00000Z = exp(__00000V) if __000006
                − gen double `p' = 1/(1+exp(`xb'+`lnalpha')) if $ML_samp
                = gen double __000010 = 1/(1+exp(__00000V+__00000W)) if __0000
> 06
                − if `lnalpha'<−20 {
                = if __00000W<−20 {
```

```
                replace `sc1' = `y'-`mu' if $ML_samp
                replace `sc2' = 0 if $ML_samp
                }
        -  else {
        -  replace `sc1' = `p'*(`y'-`mu') if $ML_samp
        =  replace __00000S = __000010*(piq_timing_max-__00000Z) if __0
> 00006
        -  replace `sc2' = `m'*(digamma(`m') - digamma(`y'+`m') - ln(`p
> ')) + `p'*(`y'-`mu') if $ML_samp
        =  replace __00000T = __00000X*(digamma(__00000X) - digamma(piq
> _timing_max+__00000X) - ln(__000010)) + __000010*(piq_timing_max-__00000Z) i
> f __000006
        -  }
        -  }
        -  $ML_ec tempname g1 g2
        =  * tempname g1 g2
        -  $ML_ec mlvecsum `lnf' `g1' = `sc1', eq(1)
        =  * mlvecsum __00000P  = __00000S, eq(1)
        -  $ML_ec mlvecsum `lnf' `g2' = `sc2', eq(2)
        =  * mlvecsum __00000P  = __00000T, eq(2)
        -  $ML_ec matrix `g' = (`g1',`g2')
        =  * matrix __00000Q = (,)
        -  if `todo' == 1 | `lnf'==. { exit }
        =  if 2 == 1 | __00000P==. { exit }
        -  tempname alpha d11 d12 d22
        -  scalar `alpha' = exp(`lnalpha')
        =  scalar __000011 = exp(__00000W)
        -  if `lnalpha' < -20 {
        =  if __00000W < -20 {
          mlmatsum `lnf' `d11' = `mu', eq(1)
          mlmatsum `lnf' `d12' = 0, eq(1,2)
          mlmatsum `lnf' `d22' = 0, eq(2)
          }
        -  else {
        -  mlmatsum `lnf' `d11' = `mu'*`p'*(`alpha'*`p'*(`y'-`mu')+1),
> eq(1)
        =  mlmatsum __00000P __000012 = __00000Z*__000010*(__000011*__0
> 00010*(piq_timing_max-__00000Z)+1), eq(1)
        -  mlmatsum `lnf' `d12' = `alpha'*`mu'*`p'^2*(`y'-`mu'), eq(1,2
> )
        =  mlmatsum __00000P __000013 = __000011*__00000Z*__000010^2*(p
> iq_timing_max-__00000Z), eq(1,2)
        -  mlmatsum `lnf' `d22' = `m'*(digamma(`m') - digamma(`y'+`m')
> - ln(`p') - `m'*(trigamma(`y'+`m') - trigamma(`m'))) + `mu'*`p'*(`alpha'*`p'
> *(`y'-`mu')- 1), eq(2)
        =  mlmatsum __00000P __000014 = __00000X*(digamma(__00000X) - d
```

```
> igamma(piq_timing_max+__00000X) − ln(__000010) − __00000X*(trigamma(piq_timi
> ng_max+__00000X) − trigamma(__00000X))) + __00000Z*__000010*(__000011*__0000
> 10*(piq_timing_max−__00000Z)− 1), eq(2)
                    − }
                    − matrix `H' = (`d11',`d12' \ `d12'',`d22')
                    = matrix __00000R = (__000012,__000013 \ __000013',__000014)
                    ───────────────────────────────────────────────────

> ─────────────────────────────────────── end nbreg_lf ──────────────
Iteration 1:  Log pseudolikelihood = −270.47206
                    ───────────────────────────────────────────────────

> ─────────────────────────────────────── begin nbreg_lf ────────────
                    − version 6.0
                    − args todo b lnf g H sc1 sc2
                    − tempvar xb
                    − tempname lnalpha m
                    − mleval `xb' = `b', eq(1)
                    = mleval __00000V = __000000, eq(1)
                    − mleval `lnalpha' = `b', eq(2) scalar
                    = mleval __00000W = __000000, eq(2) scalar
                    − local y "$ML_y1"
                    = local y "piq_timing_max"
                    − scalar `m' = exp(−`lnalpha')
                    = scalar __00000X = exp(−__00000W)
                    − if `lnalpha' < −20 {
                    = if __00000W < −20 {
                      mlsum `lnf' = −lngamma(`y'+1) − exp(`xb') + `y'*`xb'
                      }
                    − else {
                    − mlsum `lnf' = lngamma(`m'+`y') − lngamma(`y'+1) − lngamma(`m
> ') − `m'*ln1p(exp(`xb'+`lnalpha')) − `y'*ln1p(exp(−`xb'−`lnalpha'))
                    = mlsum __00000P = lngamma(__00000X+piq_timing_max) − lngamma(
> piq_timing_max+1) − lngamma(__00000X) − __00000X*ln1p(exp(__00000V+__00000W)
> ) − piq_timing_max*ln1p(exp(−__00000V−__00000W))
                    − }
                    − if `todo' == 0 | `lnf'==. { exit }
                    = if 0 == 0 | __00000P==. { exit }
                    ───────────────────────────────────────────────────

> ─────────────────────────────────────── end nbreg_lf ──────────────
                    ───────────────────────────────────────────────────

> ─────────────────────────────────────── begin nbreg_lf ────────────
                    − version 6.0
                    − args todo b lnf g H sc1 sc2
                    − tempvar xb
                    − tempname lnalpha m
                    − mleval `xb' = `b', eq(1)
                    = mleval __00000V = __000000, eq(1)
```

```
          - mleval `lnalpha' = `b', eq(2) scalar
          = mleval __00000W = __000000, eq(2) scalar
          - local y "$ML_y1"
          = local y "piq_timing_max"
          - scalar `m' = exp(-`lnalpha')
          = scalar __00000X = exp(-__00000W)
          - if `lnalpha' < -20 {
          = if __00000W < -20 {
            mlsum `lnf' = -lngamma(`y'+1) - exp(`xb') + `y'*`xb'
            }
          - else {
          - mlsum `lnf' = lngamma(`m'+`y') - lngamma(`y'+1) - lngamma(`m
>  ') - `m'*ln1p(exp(`xb'+`lnalpha')) - `y'*ln1p(exp(-`xb'-`lnalpha'))
          = mlsum __00000P = lngamma(__00000X+piq_timing_max) - lngamma(
> piq_timing_max+1) - lngamma(__00000X) - __00000X*ln1p(exp(__00000V+__00000W)
> ) - piq_timing_max*ln1p(exp(-__00000V-__00000W))
          - }
          - if `todo' == 0 | `lnf'==. { exit }
          = if 0 == 0 | __00000P==. { exit }
          ───────────────────────────────────────────────────────────────
>  ───────────────────────────────────────── end nbreg_lf ───────────────
          ───────────────────────────────────────────────────────────────
>  ─────────────────────────────────────── begin nbreg_lf ───────────────
          - version 6.0
          - args todo b lnf g H sc1 sc2
          - tempvar xb
          - tempname lnalpha m
          - mleval `xb' = `b', eq(1)
          = mleval __00000V = __000000, eq(1)
          - mleval `lnalpha' = `b', eq(2) scalar
          = mleval __00000W = __000000, eq(2) scalar
          - local y "$ML_y1"
          = local y "piq_timing_max"
          - scalar `m' = exp(-`lnalpha')
          = scalar __00000X = exp(-__00000W)
          - if `lnalpha' < -20 {
          = if __00000W < -20 {
            mlsum `lnf' = -lngamma(`y'+1) - exp(`xb') + `y'*`xb'
            }
          - else {
          - mlsum `lnf' = lngamma(`m'+`y') - lngamma(`y'+1) - lngamma(`m
>  ') - `m'*ln1p(exp(`xb'+`lnalpha')) - `y'*ln1p(exp(-`xb'-`lnalpha'))
          = mlsum __00000P = lngamma(__00000X+piq_timing_max) - lngamma(
> piq_timing_max+1) - lngamma(__00000X) - __00000X*ln1p(exp(__00000V+__00000W)
> ) - piq_timing_max*ln1p(exp(-__00000V-__00000W))
          - }
```

```
              - if `todo' == 0 | `lnf'==. { exit }
              = if 0 == 0 | __00000P==. { exit }
              ─────────────────────────────────────────────────────
```
```
> ──────────────────────────────────────── end nbreg_lf ─────────────
              ─────────────────────────────────────────────────────
> ──────────────────────────────────────── begin nbreg_lf ───────────
              - version 6.0
              - args todo b lnf g H sc1 sc2
              - tempvar xb
              - tempname lnalpha m
              - mleval `xb' = `b', eq(1)
              = mleval __00000V = __000000, eq(1)
              - mleval `lnalpha' = `b', eq(2) scalar
              = mleval __00000W = __000000, eq(2) scalar
              - local y "$ML_y1"
              = local y "piq_timing_max"
              - scalar `m' = exp(-`lnalpha')
              = scalar __00000X = exp(-__00000W)
              - if `lnalpha' < -20 {
              = if __00000W < -20 {
                mlsum `lnf' = -lngamma(`y'+1) - exp(`xb') + `y'*`xb'
                }
              - else {
              - mlsum `lnf' = lngamma(`m'+`y') - lngamma(`y'+1) - lngamma(`m
> ') - `m'*ln1p(exp(`xb'+`lnalpha')) - `y'*ln1p(exp(-`xb'-`lnalpha'))
              = mlsum __00000P = lngamma(__00000X+piq_timing_max) - lngamma(
> piq_timing_max+1) - lngamma(__00000X) - __00000X*ln1p(exp(__00000V+__00000W)
> ) - piq_timing_max*ln1p(exp(-__00000V-__00000W))
              - }
              - if `todo' == 0 | `lnf'==. { exit }
              = if 2 == 0 | __00000P==. { exit }
              - tempname alpha
              - tempvar mu p
              - quietly {
              - gen double `mu' = exp(`xb') if $ML_samp
              = gen double __00000Z = exp(__00000V) if __000006
              - gen double `p' = 1/(1+exp(`xb'+`lnalpha')) if $ML_samp
              = gen double __000010 = 1/(1+exp(__00000V+__00000W)) if __0000
> 06
              - if `lnalpha'<-20 {
              = if __00000W<-20 {
                replace `sc1' = `y'-`mu' if $ML_samp
                replace `sc2' = 0 if $ML_samp
                }
              - else {
              - replace `sc1' = `p'*(`y'-`mu') if $ML_samp
```

```
                = replace __00000S = __000010*(piq_timing_max-__00000Z) if __0
> 00006
                - replace `sc2' = `m'*(digamma(`m') - digamma(`y'+`m') - ln(`p
> ')) + `p'*(`y'-`mu') if $ML_samp
                = replace __00000T = __00000X*(digamma(__00000X) - digamma(piq
> _timing_max+__00000X) - ln(__000010)) + __000010*(piq_timing_max-__00000Z) i
> f __000006
                - }
                - }
                - $ML_ec tempname g1 g2
                = * tempname g1 g2
                - $ML_ec mlvecsum `lnf' `g1' = `sc1', eq(1)
                = * mlvecsum __00000P  = __00000S, eq(1)
                - $ML_ec mlvecsum `lnf' `g2' = `sc2', eq(2)
                = * mlvecsum __00000P  = __00000T, eq(2)
                - $ML_ec matrix `g' = (`g1',`g2')
                = * matrix __00000Q = (,)
                - if `todo' == 1 | `lnf'==. { exit }
                = if 2 == 1 | __00000P==. { exit }
                - tempname alpha d11 d12 d22
                - scalar `alpha' = exp(`lnalpha')
                = scalar __000011 = exp(__00000W)
                - if `lnalpha' < -20 {
                = if __00000W < -20 {
                  mlmatsum `lnf' `d11' = `mu', eq(1)
                  mlmatsum `lnf' `d12' = 0, eq(1,2)
                  mlmatsum `lnf' `d22' = 0, eq(2)
                  }
                - else {
                - mlmatsum `lnf' `d11' = `mu'*`p'*(`alpha'*`p'*(`y'-`mu')+1),
> eq(1)
                = mlmatsum __00000P __000012 = __00000Z*__000010*(__000011*__0
> 00010*(piq_timing_max-__00000Z)+1), eq(1)
                - mlmatsum `lnf' `d12' = `alpha'*`mu'*`p'^2*(`y'-`mu'), eq(1,2
> )
                = mlmatsum __00000P __000013 = __000011*__00000Z*__000010^2*(p
> iq_timing_max-__00000Z), eq(1,2)
                - mlmatsum `lnf' `d22' = `m'*(digamma(`m') - digamma(`y'+`m')
> - ln(`p') - `m'*(trigamma(`y'+`m') - trigamma(`m'))) + `mu'*`p'*(`alpha'*`p'
> *(`y'-`mu')- 1), eq(2)
                = mlmatsum __00000P __000014 = __00000X*(digamma(__00000X) - d
> igamma(piq_timing_max+__00000X) - ln(__000010) - __00000X*(trigamma(piq_timi
> ng_max+__00000X) - trigamma(__00000X))) + __00000Z*__000010*(__000011*__0000
> 10*(piq_timing_max-__00000Z)- 1), eq(2)
                - }
                - matrix `H' = (`d11',`d12' \ `d12'',`d22')
```

```
              = matrix __00000R = (__000012,__000013 \ __000013',__000014)
              ────────────────────────────────────────────────────────────
> ──────────────────────────────────────────── end nbreg_lf ─────────────
Iteration 2:   Log pseudolikelihood = −266.46334
              ────────────────────────────────────────────────────────────
> ──────────────────────────────────────────── begin nbreg_lf ───────────
              – version 6.0
              – args todo b lnf g H sc1 sc2
              – tempvar xb
              – tempname lnalpha m
              – mleval `xb' = `b', eq(1)
              = mleval __00000V = __000000, eq(1)
              – mleval `lnalpha' = `b', eq(2) scalar
              = mleval __00000W = __000000, eq(2) scalar
              – local y "$ML_y1"
              = local y "piq_timing_max"
              – scalar `m' = exp(−`lnalpha')
              = scalar __00000X = exp(−__00000W)
              – if `lnalpha' < −20 {
              = if __00000W < −20 {
                mlsum `lnf' = −lngamma(`y'+1) − exp(`xb') + `y'*`xb'
                }
              – else {
              – mlsum `lnf' = lngamma(`m'+`y') − lngamma(`y'+1) − lngamma(`m
> ') − `m'*ln1p(exp(`xb'+`lnalpha')) − `y'*ln1p(exp(−`xb'−`lnalpha'))
              = mlsum __00000P = lngamma(__00000X+piq_timing_max) − lngamma(
> piq_timing_max+1) − lngamma(__00000X) − __00000X*ln1p(exp(__00000V+__00000W)
> ) − piq_timing_max*ln1p(exp(−__00000V−__00000W))
              – }
              – if `todo' == 0 | `lnf'==. { exit }
              = if 0 == 0 | __00000P==. { exit }
              ────────────────────────────────────────────────────────────
> ──────────────────────────────────────────── end nbreg_lf ─────────────
              ────────────────────────────────────────────────────────────
> ──────────────────────────────────────────── begin nbreg_lf ───────────
              – version 6.0
              – args todo b lnf g H sc1 sc2
              – tempvar xb
              – tempname lnalpha m
              – mleval `xb' = `b', eq(1)
              = mleval __00000V = __000000, eq(1)
              – mleval `lnalpha' = `b', eq(2) scalar
              = mleval __00000W = __000000, eq(2) scalar
              – local y "$ML_y1"
              = local y "piq_timing_max"
              – scalar `m' = exp(−`lnalpha')
```

```
              = scalar __00000X = exp(-__00000W)
              - if `lnalpha' < -20 {
              = if __00000W < -20 {
                mlsum `lnf' = -lngamma(`y'+1) - exp(`xb') + `y'*`xb'
                }
              - else {
              - mlsum `lnf' = lngamma(`m'+`y') - lngamma(`y'+1) - lngamma(`m
> ') - `m'*ln1p(exp(`xb'+`lnalpha')) - `y'*ln1p(exp(-`xb'-`lnalpha'))
                = mlsum __00000P = lngamma(__00000X+piq_timing_max) - lngamma(
> piq_timing_max+1) - lngamma(__00000X) - __00000X*ln1p(exp(__00000V+__00000W)
> ) - piq_timing_max*ln1p(exp(-__00000V-__00000W))
                - }
              - if `todo' == 0 | `lnf'==. { exit }
              = if 0 == 0 | __00000P==. { exit }
              ──────────────────────────────────────────────────────────────
```
> ── end nbreg_lf ────────────────
              ──
> ── begin nbreg_lf ──────────────
```
              - version 6.0
              - args todo b lnf g H sc1 sc2
              - tempvar xb
              - tempname lnalpha m
              - mleval `xb' = `b', eq(1)
              = mleval __00000V = __000000, eq(1)
              - mleval `lnalpha' = `b', eq(2) scalar
              = mleval __00000W = __000000, eq(2) scalar
              - local y "$ML_y1"
              = local y "piq_timing_max"
              - scalar `m' = exp(-`lnalpha')
              = scalar __00000X = exp(-__00000W)
              - if `lnalpha' < -20 {
              = if __00000W < -20 {
                mlsum `lnf' = -lngamma(`y'+1) - exp(`xb') + `y'*`xb'
                }
              - else {
              - mlsum `lnf' = lngamma(`m'+`y') - lngamma(`y'+1) - lngamma(`m
> ') - `m'*ln1p(exp(`xb'+`lnalpha')) - `y'*ln1p(exp(-`xb'-`lnalpha'))
                = mlsum __00000P = lngamma(__00000X+piq_timing_max) - lngamma(
> piq_timing_max+1) - lngamma(__00000X) - __00000X*ln1p(exp(__00000V+__00000W)
> ) - piq_timing_max*ln1p(exp(-__00000V-__00000W))
                - }
              - if `todo' == 0 | `lnf'==. { exit }
              = if 2 == 0 | __00000P==. { exit }
              - tempname alpha
              - tempvar mu p
              - quietly {
```

Friday, January 10, 2025 at 11:33 AM   Page 707

```
- gen double `mu' = exp(`xb') if $ML_samp
= gen double __00000Z = exp(__00000V) if __000006
- gen double `p' = 1/(1+exp(`xb'+`lnalpha')) if $ML_samp
= gen double __000010 = 1/(1+exp(__00000V+__00000W)) if __0000
> 06
- if `lnalpha'<-20 {
= if __00000W<-20 {
  replace `sc1' = `y'-`mu' if $ML_samp
  replace `sc2' = 0 if $ML_samp
  }
- else {
- replace `sc1' = `p'*(`y'-`mu') if $ML_samp
= replace __00000S = __000010*(piq_timing_max-__00000Z) if __0
> 00006
- replace `sc2' = `m'*(digamma(`m') - digamma(`y'+`m') - ln(`p
> ')) + `p'*(`y'-`mu') if $ML_samp
= replace __00000T = __00000X*(digamma(__00000X) - digamma(piq
> _timing_max+__00000X) - ln(__000010)) + __000010*(piq_timing_max-__00000Z) i
> f __000006
- }
- }
- $ML_ec tempname g1 g2
= * tempname g1 g2
- $ML_ec mlvecsum `lnf' `g1' = `sc1', eq(1)
= * mlvecsum __00000P  = __00000S, eq(1)
- $ML_ec mlvecsum `lnf' `g2' = `sc2', eq(2)
= * mlvecsum __00000P  = __00000T, eq(2)
- $ML_ec matrix `g' = (`g1',`g2')
= * matrix __00000Q = (,)
- if `todo' == 1 | `lnf'==. { exit }
= if 2 == 1 | __00000P==. { exit }
- tempname alpha d11 d12 d22
- scalar `alpha' = exp(`lnalpha')
= scalar __000011 = exp(__00000W)
- if `lnalpha' < -20 {
= if __00000W < -20 {
  mlmatsum `lnf' `d11' = `mu', eq(1)
  mlmatsum `lnf' `d12' = 0, eq(1,2)
  mlmatsum `lnf' `d22' = 0, eq(2)
  }
- else {
- mlmatsum `lnf' `d11' = `mu'*`p'*(`alpha'*`p'*(`y'-`mu')+1),
> eq(1)
= mlmatsum __00000P __000012 = __00000Z*__000010*(__000011*__0
> 00010*(piq_timing_max-__00000Z)+1), eq(1)
- mlmatsum `lnf' `d12' = `alpha'*`mu'*`p'^2*(`y'-`mu'), eq(1,2
```

```
> )
                = mlmatsum __00000P __000013 = __000011*__00000Z*__000010^2*(p
> iq_timing_max-__00000Z), eq(1,2)
                – mlmatsum `lnf' `d22' = `m'*(digamma(`m') – digamma(`y'+`m')
> – ln(`p') – `m'*(trigamma(`y'+`m') – trigamma(`m'))) + `mu'*`p'*(`alpha'*`p'
> *(`y'–`mu')– 1), eq(2)
                = mlmatsum __00000P __000014 = __00000X*(digamma(__00000X) – d
> igamma(piq_timing_max+__00000X) – ln(__000010) – __00000X*(trigamma(piq_timi
> ng_max+__00000X) – trigamma(__00000X))) + __00000Z*__000010*(__000011*__0000
> 10*(piq_timing_max-__00000Z)– 1), eq(2)
                – }
                – matrix `H' = (`d11',`d12' \ `d12'',`d22')
                = matrix __00000R = (__000012,__000013 \ __000013',__000014)
                ────────────────────────────────────────────────────────────
> ────────────────────────────────── end nbreg_lf ────────────────────
Iteration 3:  Log pseudolikelihood = –266.13344
                ────────────────────────────────────────────────────────────
> ────────────────────────────────── begin nbreg_lf ──────────────────
                – version 6.0
                – args todo b lnf g H sc1 sc2
                – tempvar xb
                – tempname lnalpha m
                – mleval `xb' = `b', eq(1)
                = mleval __00000V = __000000, eq(1)
                – mleval `lnalpha' = `b', eq(2) scalar
                = mleval __00000W = __000000, eq(2) scalar
                – local y "$ML_y1"
                = local y "piq_timing_max"
                – scalar `m' = exp(–`lnalpha')
                = scalar __00000X = exp(–__00000W)
                – if `lnalpha' < –20 {
                = if __00000W < –20 {
                  mlsum `lnf' = –lngamma(`y'+1) – exp(`xb') + `y'*`xb'
                  }
                – else {
                – mlsum `lnf' = lngamma(`m'+`y') – lngamma(`y'+1) – lngamma(`m
> ') – `m'*ln1p(exp(`xb'+`lnalpha')) – `y'*ln1p(exp(–`xb'–`lnalpha'))
                = mlsum __00000P = lngamma(__00000X+piq_timing_max) – lngamma(
> piq_timing_max+1) – lngamma(__00000X) – __00000X*ln1p(exp(__00000V+__00000W)
> ) – piq_timing_max*ln1p(exp(–__00000V–__00000W))
                – }
                – if `todo' == 0 | `lnf'==. { exit }
                = if 0 == 0 | __00000P==. { exit }
                ────────────────────────────────────────────────────────────
> ──────────────────────────────────── end nbreg_lf ──────────────────
                ────────────────────────────────────────────────────────────
```

```
>  ─────────────────────────────────────── begin nbreg_lf ───────────────
               - version 6.0
               - args todo b lnf g H sc1 sc2
               - tempvar xb
               - tempname lnalpha m
               - mleval `xb' = `b', eq(1)
               = mleval __00000V = __00000O, eq(1)
               - mleval `lnalpha' = `b', eq(2) scalar
               = mleval __00000W = __00000O, eq(2) scalar
               - local y "$ML_y1"
               = local y "piq_timing_max"
               - scalar `m' = exp(-`lnalpha')
               = scalar __00000X = exp(-__00000W)
               - if `lnalpha' < -20 {
               = if __00000W < -20 {
                 mlsum `lnf' = -lngamma(`y'+1) - exp(`xb') + `y'*`xb'
                 }
               - else {
               - mlsum `lnf' = lngamma(`m'+`y') - lngamma(`y'+1) - lngamma(`m
> ') - `m'*ln1p(exp(`xb'+`lnalpha')) - `y'*ln1p(exp(-`xb'-`lnalpha'))
               = mlsum __00000P = lngamma(__00000X+piq_timing_max) - lngamma(
> piq_timing_max+1) - lngamma(__00000X) - __00000X*ln1p(exp(__00000V+__00000W)
> ) - piq_timing_max*ln1p(exp(-__00000V-__00000W))
               - }
               - if `todo' == 0 | `lnf'==. { exit }
               = if 0 == 0 | __00000P==. { exit }
               ──────────────────────────────────────────────────────
>  ─────────────────────────────────────── end nbreg_lf ─────────────────
               ──────────────────────────────────────────────────────
>  ─────────────────────────────────────── begin nbreg_lf ───────────────
               - version 6.0
               - args todo b lnf g H sc1 sc2
               - tempvar xb
               - tempname lnalpha m
               - mleval `xb' = `b', eq(1)
               = mleval __00000V = __00000O, eq(1)
               - mleval `lnalpha' = `b', eq(2) scalar
               = mleval __00000W = __00000O, eq(2) scalar
               - local y "$ML_y1"
               = local y "piq_timing_max"
               - scalar `m' = exp(-`lnalpha')
               = scalar __00000X = exp(-__00000W)
               - if `lnalpha' < -20 {
               = if __00000W < -20 {
                 mlsum `lnf' = -lngamma(`y'+1) - exp(`xb') + `y'*`xb'
                 }
```

```
- else {
- mlsum `lnf' = lngamma(`m'+`y') - lngamma(`y'+1) - lngamma(`m
> ') - `m'*ln1p(exp(`xb'+`lnalpha')) - `y'*ln1p(exp(-`xb'-`lnalpha'))
= mlsum __00000P = lngamma(__00000X+piq_timing_max) - lngamma(
> piq_timing_max+1) - lngamma(__00000X) - __00000X*ln1p(exp(__00000V+__00000W)
> ) - piq_timing_max*ln1p(exp(-__00000V-__00000W))
- }
- if `todo' == 0 | `lnf'==. { exit }
= if 2 == 0 | __00000P==. { exit }
- tempname alpha
- tempvar mu p
- quietly {
- gen double `mu' = exp(`xb') if $ML_samp
= gen double __00000Z = exp(__00000V) if __000006
- gen double `p' = 1/(1+exp(`xb'+`lnalpha')) if $ML_samp
= gen double __000010 = 1/(1+exp(__00000V+__00000W)) if __0000
> 06
- if `lnalpha'<-20 {
= if __00000W<-20 {
  replace `sc1' = `y'-`mu' if $ML_samp
  replace `sc2' = 0 if $ML_samp
  }
- else {
- replace `sc1' = `p'*(`y'-`mu') if $ML_samp
= replace __00000S = __000010*(piq_timing_max-__00000Z) if __0
> 00006
- replace `sc2' = `m'*(digamma(`m') - digamma(`y'+`m') - ln(`p
> ')) + `p'*(`y'-`mu') if $ML_samp
= replace __00000T = __00000X*(digamma(__00000X) - digamma(piq
> _timing_max+__00000X) - ln(__000010)) + __000010*(piq_timing_max-__00000Z) i
> f __000006
- }
- }
- $ML_ec tempname g1 g2
= * tempname g1 g2
- $ML_ec mlvecsum `lnf' `g1' = `sc1', eq(1)
= * mlvecsum __00000P  = __00000S, eq(1)
- $ML_ec mlvecsum `lnf' `g2' = `sc2', eq(2)
= * mlvecsum __00000P  = __00000T, eq(2)
- $ML_ec matrix `g' = (`g1',`g2')
= * matrix __00000Q = (,)
- if `todo' == 1 | `lnf'==. { exit }
= if 2 == 1 | __00000P==. { exit }
- tempname alpha d11 d12 d22
- scalar `alpha' = exp(`lnalpha')
= scalar __000011 = exp(__00000W)
```

```
                  - if `lnalpha' < -20 {
                  = if __00000W < -20 {
                    mlmatsum `lnf' `d11' = `mu', eq(1)
                    mlmatsum `lnf' `d12' = 0, eq(1,2)
                    mlmatsum `lnf' `d22' = 0, eq(2)
                    }
                  - else {
                  - mlmatsum `lnf' `d11' = `mu'*`p'*(`alpha'*`p'*(`y'-`mu')+1),
> eq(1)
                  = mlmatsum __00000P __000012 = __00000Z*__000010*(__000011*__0
> 00010*(piq_timing_max-__00000Z)+1), eq(1)
                  - mlmatsum `lnf' `d12' = `alpha'*`mu'*`p'^2*(`y'-`mu'), eq(1,2
> )
                  = mlmatsum __00000P __000013 = __000011*__00000Z*__000010^2*(p
> iq_timing_max-__00000Z), eq(1,2)
                  - mlmatsum `lnf' `d22' = `m'*(digamma(`m') - digamma(`y'+`m')
> - ln(`p') - `m'*(trigamma(`y'+`m') - trigamma(`m'))) + `mu'*`p'*(`alpha'*`p'
> *(`y'-`mu')- 1), eq(2)
                  = mlmatsum __00000P __000014 = __00000X*(digamma(__00000X) - d
> igamma(piq_timing_max+__00000X) - ln(__000010) - __00000X*(trigamma(piq_timi
> ng_max+__00000X) - trigamma(__00000X))) + __00000Z*__000010*(__000011*__0000
> 10*(piq_timing_max-__00000Z)- 1), eq(2)
                  - }
                  - matrix `H' = (`d11',`d12' \ `d12'',`d22')
                  = matrix __00000R = (__000012,__000013 \ __000013',__000014)
                 ──────────────────────────────────────────────────────────────
> ──────────────────────────────────────── end nbreg_lf ──────────────────
Iteration 4:  Log pseudolikelihood = -266.13093
                 ──────────────────────────────────────────────────────────────
> ──────────────────────────────────────── begin nbreg_lf ─────────────────
                  - version 6.0
                  - args todo b lnf g H sc1 sc2
                  - tempvar xb
                  - tempname lnalpha m
                  - mleval `xb' = `b', eq(1)
                  = mleval __00000V = __000000, eq(1)
                  - mleval `lnalpha' = `b', eq(2) scalar
                  = mleval __00000W = __000000, eq(2) scalar
                  - local y "$ML_y1"
                  = local y "piq_timing_max"
                  - scalar `m' = exp(-`lnalpha')
                  = scalar __00000X = exp(-__00000W)
                  - if `lnalpha' < -20 {
                  = if __00000W < -20 {
                    mlsum `lnf' = -lngamma(`y'+1) - exp(`xb') + `y'*`xb'
                    }
```

```
                     - else {
                     - mlsum `lnf' = lngamma(`m'+`y') - lngamma(`y'+1) - lngamma(`m
> ') - `m'*ln1p(exp(`xb'+`lnalpha')) - `y'*ln1p(exp(-`xb'-`lnalpha'))
                     = mlsum __00000P = lngamma(__00000X+piq_timing_max) - lngamma(
> piq_timing_max+1) - lngamma(__00000X) - __00000X*ln1p(exp(__00000V+__00000W)
> ) - piq_timing_max*ln1p(exp(-__00000V-__00000W))
                     - }
                     - if `todo' == 0 | `lnf'==. { exit }
                     = if 0 == 0 | __00000P==. { exit }
                     ─────────────────────────────────────────────────
  > ──────────────────────────────────────── end nbreg_lf ─────────────────
                     ─────────────────────────────────────────────────
  > ──────────────────────────────────────── begin nbreg_lf ───────────────
                     - version 6.0
                     - args todo b lnf g H sc1 sc2
                     - tempvar xb
                     - tempname lnalpha m
                     - mleval `xb' = `b', eq(1)
                     = mleval __00000V = __00000O, eq(1)
                     - mleval `lnalpha' = `b', eq(2) scalar
                     = mleval __00000W = __00000O, eq(2) scalar
                     - local y "$ML_y1"
                     = local y "piq_timing_max"
                     - scalar `m' = exp(-`lnalpha')
                     = scalar __00000X = exp(-__00000W)
                     - if `lnalpha' < -20 {
                     = if __00000W < -20 {
                       mlsum `lnf' = -lngamma(`y'+1) - exp(`xb') + `y'*`xb'
                       }
                     - else {
                     - mlsum `lnf' = lngamma(`m'+`y') - lngamma(`y'+1) - lngamma(`m
> ') - `m'*ln1p(exp(`xb'+`lnalpha')) - `y'*ln1p(exp(-`xb'-`lnalpha'))
                     = mlsum __00000P = lngamma(__00000X+piq_timing_max) - lngamma(
> piq_timing_max+1) - lngamma(__00000X) - __00000X*ln1p(exp(__00000V+__00000W)
> ) - piq_timing_max*ln1p(exp(-__00000V-__00000W))
                     - }
                     - if `todo' == 0 | `lnf'==. { exit }
                     = if 0 == 0 | __00000P==. { exit }
                     ─────────────────────────────────────────────────
  > ──────────────────────────────────────── end nbreg_lf ─────────────────
                     ─────────────────────────────────────────────────
  > ──────────────────────────────────────── begin nbreg_lf ───────────────
                     - version 6.0
                     - args todo b lnf g H sc1 sc2
                     - tempvar xb
                     - tempname lnalpha m
```

```
- mleval `xb' = `b', eq(1)
= mleval __00000V = __00000O, eq(1)
- mleval `lnalpha' = `b', eq(2) scalar
= mleval __00000W = __00000O, eq(2) scalar
- local y "$ML_y1"
= local y "piq_timing_max"
- scalar `m' = exp(-`lnalpha')
= scalar __00000X = exp(-__00000W)
- if `lnalpha' < -20 {
= if __00000W < -20 {
  mlsum `lnf' = -lngamma(`y'+1) - exp(`xb') + `y'*`xb'
  }
- else {
- mlsum `lnf' = lngamma(`m'+`y') - lngamma(`y'+1) - lngamma(`m
> ') - `m'*ln1p(exp(`xb'+`lnalpha')) - `y'*ln1p(exp(-`xb'-`lnalpha'))
= mlsum __00000P = lngamma(__00000X+piq_timing_max) - lngamma(
> piq_timing_max+1) - lngamma(__00000X) - __00000X*ln1p(exp(__00000V+__00000W)
> ) - piq_timing_max*ln1p(exp(-__00000V-__00000W))
- }
- if `todo' == 0 | `lnf'==. { exit }
= if 2 == 0 | __00000P==. { exit }
- tempname alpha
- tempvar mu p
- quietly {
- gen double `mu' = exp(`xb') if $ML_samp
= gen double __00000Z = exp(__00000V) if __000006
- gen double `p' = 1/(1+exp(`xb'+`lnalpha')) if $ML_samp
= gen double __000010 = 1/(1+exp(__00000V+__00000W)) if __0000
> 06
- if `lnalpha'<-20 {
= if __00000W<-20 {
  replace `sc1' = `y'-`mu' if $ML_samp
  replace `sc2' = 0 if $ML_samp
  }
- else {
- replace `sc1' = `p'*(`y'-`mu') if $ML_samp
= replace __00000S = __000010*(piq_timing_max-__00000Z) if __0
> 00006
- replace `sc2' = `m'*(digamma(`m') - digamma(`y'+`m') - ln(`p
> ')) + `p'*(`y'-`mu') if $ML_samp
= replace __00000T = __00000X*(digamma(__00000X) - digamma(piq
> _timing_max+__00000X) - ln(__000010)) + __000010*(piq_timing_max-__00000Z) i
> f __000006
- }
- }
- $ML_ec tempname g1 g2
```

```
              = * tempname g1 g2
              – $ML_ec mlvecsum `lnf' `g1' = `sc1', eq(1)
              = * mlvecsum __00000P  = __00000S, eq(1)
              – $ML_ec mlvecsum `lnf' `g2' = `sc2', eq(2)
              = * mlvecsum __00000P  = __00000T, eq(2)
              – $ML_ec matrix `g' = (`g1',`g2')
              = * matrix __00000Q = (,)
              – if `todo' == 1 | `lnf'==. { exit }
              = if 2 == 1 | __00000P==. { exit }
              – tempname alpha d11 d12 d22
              – scalar `alpha' = exp(`lnalpha')
              = scalar __000011 = exp(__00000W)
              – if `lnalpha' < –20 {
              = if __00000W < –20 {
                mlmatsum `lnf' `d11' = `mu', eq(1)
                mlmatsum `lnf' `d12' = 0, eq(1,2)
                mlmatsum `lnf' `d22' = 0, eq(2)
                }
              – else {
              – mlmatsum `lnf' `d11' = `mu'*`p'*(`alpha'*`p'*(`y'–`mu')+1),
> eq(1)
              = mlmatsum __00000P __000012 = __00000Z*__000010*(__000011*__0
> 00010*(piq_timing_max–__00000Z)+1), eq(1)
              – mlmatsum `lnf' `d12' = `alpha'*`mu'*`p'^2*(`y'–`mu'), eq(1,2
> )
              = mlmatsum __00000P __000013 = __000011*__00000Z*__000010^2*(p
> iq_timing_max–__00000Z), eq(1,2)
              – mlmatsum `lnf' `d22' = `m'*(digamma(`m') – digamma(`y'+`m')
> – ln(`p') – `m'*(trigamma(`y'+`m') – trigamma(`m'))) + `mu'*`p'*(`alpha'*`p'
> *(`y'–`mu')– 1), eq(2)
              = mlmatsum __00000P __000014 = __00000X*(digamma(__00000X) – d
> igamma(piq_timing_max+__00000X) – ln(__000010) – __00000X*(trigamma(piq_timi
> ng_max+__00000X) – trigamma(__00000X))) + __00000Z*__000010*(__000011*__0000
> 10*(piq_timing_max–__00000Z)– 1), eq(2)
              – }
              – matrix `H' = (`d11',`d12' \ `d12'',`d22')
              = matrix __00000R = (__000012,__000013 \ __000013',__000014)
              ──────────────────────────────────────────────────────────
> ──────────────────────────────────── end nbreg_lf ────────────────
Iteration 5:  Log pseudolikelihood = –266.13093
              ──────────────────────────────────────────────────────────
> ──────────────────────────────────── begin mopt_post ─────────────
              – args b V C wgt touse depvar
              – if `:length local touse' {
              = if 8 {
              – tempname esamp
```

```
                  - quietly gen byte `esamp' = `touse'
                  = quietly gen byte __00000Y = __000006
                  - }
                  - ereturn post `b' `V' `C' `wgt', esample(`esamp') depname(`de
> pvar') buildfvinfo
                  = ereturn post __00000V __00000W __00000X [], esample(__00000Y
> ) depname(piq_timing_max) buildfvinfo
                  ────────────────────────────────────────────
> ──────────────────────────────── end mopt_post ────────────
                  - ereturn scalar k_eq_model = abs($ML_waldtest)
                  = ereturn scalar k_eq_model = abs(-1)
                  - if `:length global ML_ll_0' {
                  = if 18 {
                  - ereturn scalar ll_0 = $ML_ll_0
                  = ereturn scalar ll_0 = -322.2358665861632
                  - if `:length global ML_rank0' {
                  = if 1 {
                  - ereturn scalar rank0 = $ML_rank0
                  = ereturn scalar rank0 = 2
                  - ereturn scalar df_m = e(rank) - $ML_rank0
                  = ereturn scalar df_m = e(rank) - 2
                  - }
                  - else ereturn scalar df_m = e(rank) - $ML_k0
                  = else ereturn scalar df_m = e(rank) - 2
                  - }
                  - if !`:length global ML_ll_0' | inlist(e(vce), "robust", "clust
> er", "linearized") {
                  = if !18 | inlist(e(vce), "robust", "cluster", "linearized") {
                  - if "$ML_svy" == "" {
                  = if "" == "" {
                  - _prefix_model_test, minimum
                  ────────────────────────────────────────────
> ───────────────────────────── begin _prefix_model_test ────────
                  - version 9
                  - syntax [name(name=cmd)] [, svy noADJust noSVYadjust MINimum
> ]
                  - if (inlist("`cmd'","asmixlogit","cmmixlogit","cmxtmixlogit")
> ) {
                  = if (inlist("","asmixlogit","cmmixlogit","cmxtmixlogit")) {
                    _asmixtest, `svy' `adjust' `svyadjust'
                    exit
                    }
                  - local K = 1
                  - if "`e(k_eq_model)'" != "" {
                  = if "1" != "" {
                  - capture confirm integer number `e(k_eq_model)'
```

```
= capture confirm integer number 1
- if ! c(rc) {
- local K = e(k_eq_model)
- }
- }
- if "`e(k_eq_model_skip)'" != "" {
= if "" != "" {
  capture confirm integer number `e(k_eq_model_skip)'
  if ! c(rc) {
  local skip = e(k_eq_model_skip)
  }
  }
- ereturn local df_m
- ereturn local F
- ereturn local chi2
- ereturn local chi2type
- ereturn local p
- if (`K' == 0) {
= if (1 == 0) {
  exit
  }
- forval i = 1/`K' {
= forval i = 1/1 {
- if !`:list i in skip' {
= if !0 {
- local spec "`spec' ([#`i'])"
= local spec " ([#1])"
- }
- }
- tempname cns omit
- capture matrix `cns' = get(Cns)
= capture matrix __00000Y = get(Cns)
- if (c(rc)) local cns
- if "`cns'" != "" {
= if "__00000Y" != "" {
- local k_autoCns = e(k_autoCns)
- if missing(`k_autoCns') {
= if missing(1) {
  local k_autoCns 0
  }
- if rowsof(`cns') == `k_autoCns' {
= if rowsof(__00000Y) == 1 {
- local cns
- }
- }
- if "`svy'" != "" & "`adjust'`svyadjust'" != "" {
```

```
                  = if "" != "" & "" != "" {
                    local adjust nosvyadjust
                    }
                  - else local adjust
                  - _ms_omit_info e(b), nocons
                  - matrix `omit' = r(omit)
                  = matrix __00000Z = r(omit)
                  - capture test `spec', `adjust'
                  = capture test  ([#1]),
                    ─────────────────────────────────────────────────
  > ─────────────────────────────────────────── begin test ───────────────
                    - if "`e(cmd)'" == "anova" | "`e(cmd)'" == "manova" {
                    = if "mopt" == "anova" | "mopt" == "manova" {
                      AnovaTestChooser `0'
                      return add
                      exit
                      }
                    - if "`e(cmd)'" == "mixed" {
                    = if "mopt" == "mixed" {
                      MixedTestChooser `0'
                      return add
                      exit
                      }
                    - if _caller() < 8 {
                      _test `0'
                      return add
                      exit
                      }
                    - is_svy
                      ─────────────────────────────────────────────────
  > ─────────────────────────────────────────── begin is_svy ─────────────
                      - version 8
                      - syntax [, Regression]
                      - if `"`e(prefix)'"' == "svy" {
                      = if `""' == "svy" {
                        return scalar is_svy = 1
                        }
                      - else if "`regression'" == "" {
                      = else if "" == "" {
                      - return scalar is_svy = ("`e(N_psu)'" != "")
                      = return scalar is_svy = ("" != "")
                      - }
                      - else {
                        capt mat list e(b)
                        local rc = _rc
                        return scalar is_svy = ("`e(N_psu)'" != "") & (`rc' == 0
```

```
> )
                         }
                    _____
> ─────────────────────────────────────── end is_svy ─────────────
                    – local is_svy = r(is_svy)
                    – if replay() & `is_svy' == 0 {
                    = if replay() & 0 == 0 {
                      _test `0'
                      return add
                      exit
                      }
                    – version 8
                    – WaldTest `is_svy' `0'
                    = WaldTest 0 ([#1]),
                    _____

> ─────────────────────────────────── begin test.WaldTest ────────────
                    – gettoken is_svy 0 : 0
                    – if "`is_svy'" == "1" {
                    = if "0" == "1" {
                      if "`e(complete)'" == "available" {
                      di as err `"must run svy command with "complete" "' "opt
> ion before using this command"
                      exit 301
                      }
                      }
                    – gettoken tok : 0, parse(" (,") bind
                    – local single single
                    – local zero `"`0'"'
                    = local zero `" ([#1]), "'
                    – if `"`tok'"' == "(" {
                    = if `"("' == "(" {
                    – local single
                    – while `"`tok'"' == "(" {
                    = while `"("' == "(" {
                    – gettoken tok 0 : 0, parse(" (,") match(paren) bind
                    – local eqns `"`eqns' `"`tok'"'"'
                    = local eqns `" `"[#1]"'"'
                    – gettoken tok : 0, parse(" (,") bind
                    – }
                    – while `"`tok'"' == "(" {
                    = while `","' == "(" {
                      gettoken tok 0 : 0, parse(" (,") match(paren) bind
                      local eqns `"`eqns' `"`tok'"'"'
                      gettoken tok : 0, parse(" (,") bind
                      }
                    – if `"`tok'"' != "," & `"`tok'"' != "" {
```

```
                              = if `","' != "," & `","' != "" {
                                local single single
                                }
                              - }
                              - if "`single'"=="single" {
                              = if ""=="single" {
                                local eqns
                                local 0 `"`zero'"'
                                while `"`tok'"' != "" & `"`tok'"' != "," {
                                gettoken tok 0 : 0, parse(" ,") bind
                                local eqns `"`eqns' `tok'"'
                                gettoken tok : 0, parse(" ,") bind
                                }
                                local eqns `"`"`eqns'"'"'
                                }
                              - syntax [, Accumulate noSVYadjust common CONStant MINimum
    >  Mtest Mtest2(passthru) noTest COEF matvlc(passthru) DF(numlist max=1 >0) ]
                              - if "`df'" != "" {
                              = if "" != "" {
                                local dof = `df'
                                }
                              - else if "`e(df_r)'" !="" {
                              = else if "" !="" {
                                local dof = e(df_r)
                                }
                              - else {
                              - local dof = .
                              - }
                              - if `"`mtest'`mtest2'"' != "" {
                              = if `""' != "" {
                                if inlist("`e(cmd)'", "svymean", "svytotal", "svyratio")
    >  {
                                di as err `"mtest option not allowed after `e(cmd)'"'
                                exit 301
                                }
                                _mtest syntax, `mtest' `mtest2'
                                local mtmethod `r(method)'
                                }
                              - if "`mtmethod'" != "" {
                              = if "" != "" {
                                if "`test'" != "" {
                                di as err "options mtest and notest may not be combined"
                                exit 198
                                }
                                if "`accumulate'" != "" {
                                di as err "options mtest and accumulate may not be combi
```

```
> ned"
                             exit 198
                             }
                             }
                         - if `is_svy' {
                         = if 0 {
                             if `"`e(cmd)'"' == "margins" {
                             local vce `"`e(model_vce)'"'
                             }
                             else local vce `"`e(vce)'"'
                             if inlist(`"`vce'"', "bootstrap", "sdr") {
                             if missing(`dof') {
                             local svyadjust nosvyadjust
                             }
                             }
                             }
                         - if !`is_svy' & "`svyadjust'" != "" {
                         = if !0 & "" != "" {
                             di as err "option nosvyadjust is allowed only with svy d
> ata"
                             exit 198
                             }
                         - local svy_adjust = `is_svy' & "`svyadjust'" == ""
                         = local svy_adjust = 0 & "" == ""
                         - if `svy_adjust' & missing(`dof') & (missing(e(N_psu)) |
> missing(e(N_strata))) {
                         = if 0 & missing(.) & (missing(e(N_psu)) | missing(e(N_str
> ata))) {
                             di as err "impossible to adjust p-values"
                             exit 198
                             }
                         - if `is_svy' & `"`test'"' == "" {
                         = if 0 & `""' == "" {
                             if "`svyadjust'" == "" {
                             di _n as txt "Adjusted Wald test"
                             }
                             else di _n as txt "Unadjusted Wald test"
                             }
                         - local tmp : subinstr local eqns "===" "", all count(loca
> l nch)
                         - if `nch' > 0 {
                         = if 0 > 0 {
                             di as err "=== invalid operator"
                             exit 198
                             }
                         - local eqns : subinstr local eqns "==" "=", all
```

```
                – ExpandExpns `"'`eqns'"' "`common'" "`constant'"
                = ExpandExpns `"  `"[#1]"'"' "" ""
                _____
> ─────────────────────────────── begin test.ExpandExpns ─────────────
                – args expns common constant
                – gettoken exp expns : expns
                – while `"'`exp'"' != "" {
                = while `"[#1]"' != "" {
                – Expand `"'`exp'"' "`common'" "`constant'"
                = Expand `"[#1]"' "" ""
                _____
> ──────────────────────────────── begin test.Expand ─────────────────
                – args exp common constant
                – local junk : subinstr local exp "=" "=", count(local
>  nch) all

                – if `nch' <= 1 {
                = if 0 <= 1 {
                – return local explist `"'`"'`exp'"'"'
                = return local explist `"'`"[#1]"'"'
                – return local nexp 1
                – exit
                _____
> ───────────────────────────────── end test.Expand ─────────────────
                – local explist `"'`explist' `r(explist)'"'
                = local explist `"  `"[#1]"'"'
                – local nexp = `nexp' + `r(nexp)'
                = local nexp =  + 1
                – gettoken exp expns : expns
                – }
                – while `"'`exp'"' != "" {
                = while `""' != "" {
                  Expand `"'`exp'"' "`common'" "`constant'"
                  local explist `"'`explist' `r(explist)'"'
                  local nexp = `nexp' + `r(nexp)'
                  gettoken exp expns : expns
                  }
                – return local explist `"'`explist'"'
                = return local explist `"  `"[#1]"'"'
                – return local nexp `nexp'
                = return local nexp 1
                _____
> ──────────────────────────────── end test.ExpandExpns ─────────────
                – local explist `"'`r(explist)'"'
                = local explist `"  `"[#1]"'"'
                – local nexp `r(nexp)'
                = local nexp 1
```

```
- local acc `accumulate'
= local acc
- foreach exp of local explist {
- quietly _test `exp' , `acc' `common' `constant' notest
= quietly _test [#1] ,     notest
- local acc acc
- }
- if "`test'" == "notest" {
= if "" == "notest" {
  _test , notest
  exit
  }
- quietly _test , `matvlc'
= quietly _test ,
- if `dof' < . {
= if . < . {
  local testtype F
  tempname F df1 df2 p drop
  if "`r(F)'" != "" {
  scalar `F' = r(F)
  }
  else {
  scalar `F' = r(chi2)/r(df)
  }
  scalar `df1' = r(df)
  scalar `df2' = `dof'
  scalar `p' = Ftail(`df1', `df2', `F')
  scalar `drop' = r(drop)
  }
- else {
- local testtype chi2
- tempname chi2 df1 p drop
- scalar `chi2' = r(chi2)
= scalar __000010 = r(chi2)
- scalar `df1' = r(df)
= scalar __000011 = r(df)
- scalar `p' = r(p)
= scalar __000012 = r(p)
- scalar `drop' = r(drop)
= scalar __000013 = r(drop)
- }
- local i 1
- while "`r(dropped_`i')'" != "" {
= while "5" != "" {
- local dropped_`i' `r(dropped_`i')'
= local dropped_1 5
```

```
-    local ++i
-    }
-    while "`r(dropped_`i')'" != "" {
=    while "" != "" {
     local dropped_`i' `r(dropped_`i')'
     local ++i
     }
-    if `svy_adjust' {
=    if 0 {
     if "`df'" != "" {
     local svy_d = `df'
     }
     else if !missing(e(df_r)) {
     local svy_d = e(df_r)
     }
     else local svy_d = e(N_psu)-e(N_strata)
     if missing(`svy_d') {
     di as err "internal error in adjustment for svy"
     exit 10001
     }
     if "`testtype'" == "F" {
     scalar `F' = ((`svy_d'-`df1'+1)/`svy_d') * `F'
     }
     else {
     tempname F df2
     scalar `F' = ((`svy_d'-`df1'+1)/(`svy_d'*`df1')) * `chi2
> '

     }
     scalar `df2' = `svy_d' - `df1' + 1
     if `df2' < 0 {
     scalar `F' = .
     }
     scalar `p' = Ftail(`df1', `df2', `F')
     local testtype F
     }
-    if "`mtmethod'" != "" {
=    if "" != "" {
     tempname R r Rr V b VR tm Wald
     mat `V' = e(V)
     mat `b' = e(b)
     mat `Rr' = get(Rr)
     local nb = rowsof(`V')
     local nr = rowsof(`Rr')
     mat `R' = `Rr'[1...,1..`nb']
     mat `VR' = `R'*`V'*`R''
     mat `r' = `R'*`b'' - `Rr'[1...,`=`nb'+1']
```

```
                    mat `Wald' = `r''*syminv(`VR')*`r'
                    mat `tm' = J(`nr', 3, .)
                    mat colnames `tm' = `testtype' df p
                    forvalues it = 1 / `nr' {
                    mat `Wald' = `r'[`it',1]^2 / `VR'[`it',`it']
                    mat `tm'[`it',1] = `Wald'[1,1]
                    mat `tm'[`it',2] = 1
                    if `svy_adjust' {
                    mat `tm'[`it',3] = Ftail(1,`svy_d',`tm'[`it',1])
                    }
                    else if "`testtype'" == "chi2" {
                    mat `tm'[`it',3] = chi2tail(1,`tm'[`it',1])
                    }
                    else {
                    mat `tm'[`it',3] = Ftail(1,`df2',`tm'[`it',1])
                    }
                    }
                    if "`mtmethod'" != "noadjust" {
                    _mtest adjust `tm', mtest(`mtmethod') pindex(3) append
                    mat `tm' = r(result)
                    local pindex 4
                    }
                    else local pindex 3
                    }
          - _test, notest
          - local i 1
          - while "`dropped_`i''" != "" {
          = while "5" != "" {
          - di as txt "        Constraint `dropped_`i'' dropped"
          = di as txt "        Constraint 5 dropped"
          - local ++i
          - }
          - while "`dropped_`i''" != "" {
          = while "" != "" {
            di as txt "        Constraint `dropped_`i'' dropped"
            local ++i
            }
          - if "`mtmethod'" == "" {
          = if "" == "" {
          - di
          - if "`testtype'" == "chi2" {
          = if "chi2" == "chi2" {
          - di as txt _col(12) "chi2(" %3.0f `df1' ") =" as res %8.2
> f `chi2'
          = di as txt _col(12) "chi2(" %3.0f __000011 ") =" as res %
> 8.2f __000010
```

```
- di as txt _col(10) "Prob > chi2 =  " as res %8.4f `p'
= di as txt _col(10) "Prob > chi2 =  " as res %8.4f __0000
> 12
- }
- else {
  di as txt "        F(" %3.0f `df1' "," %6.0f `df2' ") ="
> as res %8.2f `F'
  di as txt _col(13) "Prob > F =" as res %10.4f `p'
  }
- }
- else {
  local nexp = rowsof(`tm')
  local nc = colsof(`tm')
  if "`testtype'" == "F" {
  local d "F(df,`=`df2'')"
  local dip "p > F"
  }
  else {
  local d chi2
  local dip "p > chi2"
  }
  di
  di as txt "{hline 7}{c TT}{hline 30}"
  di as txt "       {c |}{ralign 12:`d'}     df{ralign 11:
> `dip'}"
  di as txt "{hline 7}{c  +}{hline 30}"
  forvalues it = 1 / `nexp' {
  di as txt "   (`it') {c |}" as res _col(12) %9.2f `tm'[`
> it',1] _col(22) %6.0f `tm'[`it',2] _col(33) %6.4f `tm'[`it',`pindex'] as txt
>  "*"
  }
  di as txt "{hline 7}{c +}{hline 30}"
  di as txt "   All {c |}" as res _col(12) %9.2f ``testtyp
> e'' _col(22) %6.0f `df1' _col(33) %6.4f `p'
  di as txt "{hline 7}{c BT}{hline 30}"
  _mtest footer 1 "`mtmethod'" "* "
  }
- if "`coef'" != "" {
= if "" != "" {
  Table
  }
- return scalar p = `p'
= return scalar p = __000012
- return scalar df = `df1'
= return scalar df = __000011
- if "`testtype'" == "F" {
```

```
                     = if "chi2" == "F" {
                       return scalar F = `F'
                       return scalar df_r = `df2'
                       }
                     - else return scalar chi2 = `chi2'
                     = else return scalar chi2 = __000010
                     - return scalar drop = `drop'
                     = return scalar drop = __000013
                     - local i 1
                     - while "`dropped_`i''" != "" {
                     = while "5" != "" {
                     - return scalar dropped_`i' = `dropped_`i''
                     = return scalar dropped_1 = 5
                     - local ++i
                     - }
                     - while "`dropped_`i''" != "" {
                     = while "" != "" {
                       return scalar dropped_`i' = `dropped_`i''
                       local ++i
                       }
                     - if "`mtmethod'" != "" {
                     = if "" != "" {
                       return matrix mtest `tm'
                       return local mtmethod `mtmethod'
                       }
                     ──────────────────────────────────────────────────
>  ───────────────────────────────── end test.WaldTest ───────────────
                     - return add
                     ──────────────────────────────────────────────────
>  ───────────────────────────────── end test ────────────────
                     - if !c(rc) {
                     - if `:length local minimum' {
                     = if 7 {
                     - quietly test, min
                     ──────────────────────────────────────────────────
>  ───────────────────────────────── begin test ───────────────
                     - if "`e(cmd)'" == "anova" | "`e(cmd)'" == "manova" {
                     = if "mopt" == "anova" | "mopt" == "manova" {
                       AnovaTestChooser `0'
                       return add
                       exit
                       }
                     - if "`e(cmd)'" == "mixed" {
                     = if "mopt" == "mixed" {
                       MixedTestChooser `0'
                       return add
```

```
                    exit
                    }
        ─ if _caller() < 8 {
          _test `0'
          return add
          exit
          }
        ─ is_svy
```

───

> ──────────────────────────────── begin is_svy ─────────────────

```
        ─ version 8
        ─ syntax [, Regression]
        ─ if `"`e(prefix)'"' == "svy" {
        = if `""' == "svy" {
          return scalar is_svy = 1
          }
        ─ else if "`regression'" == "" {
        = else if "" == "" {
        ─ return scalar is_svy = ("`e(N_psu)'" != "")
        = return scalar is_svy = ("" != "")
        ─ }
        ─ else {
          capt mat list e(b)
          local rc = _rc
          return scalar is_svy = ("`e(N_psu)'" != "") & (`rc' == 0
```
>)
```
          }
```

───

> ──────────────────────────────── end is_svy ───────────────────

```
        ─ local is_svy = r(is_svy)
        ─ if replay() & `is_svy' == 0 {
        = if replay() & 0 == 0 {
        ─ _test `0'
        = _test , min
        ─ return add
        ─ exit
```

───

> ──────────────────────────────── end test ─────────────────────

```
      ─ }
      ─ ereturn scalar df_m = r(df)
      ─ local drop = r(drop)
      ─ if `drop' {
      = if 1 {
      ─ local drop 0
      ─ local i 1
      ─ local idrop `"`r(dropped_`i')'"'
```

```
= local idrop `"5"'
- while "`idrop'" != "" {
= while "5" != "" {
- if !`omit'[1,`idrop'] {
= if !__00000Z[1,5] {
  local ++drop
  }
- local ++i
- local idrop `"`r(dropped_`i')'"'
= local idrop `""'
- }
- while "`idrop'" != "" {
= while "" != "" {
  if !`omit'[1,`idrop'] {
  local ++drop
  }
  local ++i
  local idrop `"`r(dropped_`i')'"'
  }
- }
- if `drop' == 0 | "`cns'" != "" {
= if 0 == 0 | "" != "" {
- if !missing(e(df_r)) {
  ereturn scalar F = r(F)
  }
- else {
- ereturn scalar chi2 = r(chi2)
- ereturn local chi2type Wald
- }
- ereturn scalar p = r(p)
- }
- else {
  if !missing(e(df_r)) {
  ereturn scalar F = .
  }
  else {
  ereturn scalar chi2 = .
  ereturn local chi2type Wald
  }
  ereturn scalar p = .
  }
- }
- else {
  if missing(e(df_r)) {
  ereturn local chi2type Wald
  }
```

```
                      ereturn scalar df_m = 0
                      }
          _____
> ─────────────────────────────── end _prefix_model_test ──────────────
          - }
          - else {
            _prefix_model_test, $ML_svy $ML_noadj
            }
          - }
          - else if `:length global ML_ll_0' {
          = else if 18 {
            if `"`maxmin'"' == "minimize" {
            ereturn scalar chi2 = -2*(e(ll)-e(ll_0))
            }
            else {
            ereturn scalar chi2 = 2*(e(ll)-e(ll_0))
            }
            ereturn scalar p = chi2tail(e(df_m), e(chi2))
            ereturn local chi2type "LR"
            }
          - if `:length global ML_wexp' {
          = if 0 {
            ereturn local wtype `"$ML_wtyp"'
            ereturn local wexp `"$ML_wexp"'
            }
          - if `:length global ML_group' {
          = if 0 {
            ereturn local group `"$ML_group"'
            if `"`e(clustvar)'"' == "$ML_grp" & "$ML_grp" != "" {
            ereturn local clustvar `"$ML_group"'
            }
            }
          - ereturn local cmd "ml"
          - if `:length local score' {
          = if 0 {
            mata: Mopt_score(0)
            ereturn local scorevars `scores'
            }
          - if "$ML_preserve" != "no" {
          = if "no" != "no" {
            restore
            if "`e(prefix)'" == "svy" & e(N_strata_omit) {
            tempname v
            quietly _svy2 $ML_sample if $ML_sample, type(total) svy v(`v')
> subpop(`e(subpop)') touse($ML_sample)
            }
```

```
              ereturn repost, esample($ML_sample)
              }
        — if `"`moptobj'"' != "" {
        = if `""' != "" {
          local clear noclear
          }
        — if !`:length local clear' {
        = if !0 {
        — Clear
```

```
        — syntax [, NOTANOPTION]
        — capture drop $ML_w
        = capture drop __000006
        — capture drop $ML_samp
        = capture drop __000006
        — capture drop $ML_sample
        = capture drop __000006
        — capture drop $ML_subv
        = capture drop
        — capture drop $ML_grp
        = capture drop
        — mata: Mopt_drop_external()
        — macro drop ML_*
```

```
        — }
        — else {
          capture confirm var $ML_sample
          if c(rc) {
          quietly gen byte $ML_sample = e(sample)
          }
          }
        — if `:length local output' == 0 {
        = if 8 == 0 {
          Display, level(`level') `options'
          }
```

```
      — }
```

```
      — if c(rc) {
        local rc = c(rc)
        Clear
        exit `rc'
```

```
              }
            – exit
      _____
  >  _____ end mopt _____
          – exit
      _____
  >  _____ end ml _____
        – est local cmd
        – if "`score'"!="" {
        = if ""!="" {
          label var `scvar1' "Score index for x∗b from nbreg"
          rename `scvar1' `scname1'
          label var `scvar2' "Score index for /ln`parm' from nbreg"
          rename `scvar2' `scname2'
          est local scorevars `scname1' `scname2'
          }
        – _b_pclass PCDEF : default
      _____
  >  _____ begin _b_pclass _____
        – version 15
        – args c_value COLON key
        – _on_colon_parse `0'
        = _on_colon_parse PCDEF : default
      _____
  >  _____ begin _on_colon_parse _____
        – version 8.2
        – sreturn local before ""
        – sreturn local after ""
        – gettoken before after : 0, parse(":") bind match(par) quotes
        – if "`par'" != "" {
        = if "" != "" {
          local before `"(`before')"'
          }
        – if `"`before'"' == ":" {
        = if `"PCDEF "' == ":" {
          sreturn local after `"`after'"'
          exit
          }
        – while `"`COLON'"' != ":" & `"`after'"' != "" {
        = while `""' != ":" & `": default"' != "" {
        – gettoken COLON after : after, parse(":") bind match(par) quotes
        – if "`par'" != "" {
        = if "" != "" {
          local before `before' (`COLON')
          local COLON
          }
```

```
        – else if `"`COLON'"' != ":" {
        = else if `":"' != ":" {
          local before `"`before' `COLON'"'
          local COLON
          }
        – }
        – while `"`COLON'"' != ":" & `"`after'"' != "" {
        = while `":"' != ":" & `" default"' != "" {
          gettoken COLON after : after, parse(":") bind match(par) quotes
          if "`par'" != "" {
          local before `before' (`COLON')
          local COLON
          }
          else if `"`COLON'"' != ":" {
          local before `"`before' `COLON'"'
          local COLON
          }
          }
        – if `"`COLON'"' != ":" {
        = if `":"' != ":" {
          di as err "'' found where ':' expected"
          exit 198
          }
        – sreturn local before `"`before'"'
        = sreturn local before `"PCDEF "'
        – sreturn local after `"`after'"'
        = sreturn local after `" default"'
```
───

> ── end _on_colon_parse ─────────────

```
        – local c_value `"`s(before)'"'
        = local c_value `"PCDEF "'
        – local key `"`s(after)'"'
        = local key `" default"'
        – confirm name `c_value'
        = confirm name PCDEF
        – mata: st_b_pclass("`:list retok key'")
        = mata: st_b_pclass("default")
        – c_local `c_value' `value'
        = c_local PCDEF  0
```
───

> ── end _b_pclass ──────────────

```
      – _b_pclass PCAUX : aux
```
───

> ── begin _b_pclass ──────────────

```
        – version 15
        – args c_value COLON key
```

```
        - _on_colon_parse `0'
      = _on_colon_parse PCAUX : aux
      ─────────────────────────────────────────────────────────────
  > ───────────────────────────────────── begin _on_colon_parse ───────────────────
        - version 8.2
        - sreturn local before ""
        - sreturn local after ""
        - gettoken before after : 0, parse(":") bind match(par) quotes
        - if "`par'" != "" {
        = if "" != "" {
          local before `"(`before')"'
          }
        - if `"`before'"' == ":" {
        = if `"PCAUX "' == ":" {
          sreturn local after `"`after'"'
          exit
          }
        - while `"`COLON'"' != ":" & `"`after'"' != "" {
        = while `""' != ":" & `": aux"' != "" {
        - gettoken COLON after : after, parse(":") bind match(par) quotes
        - if "`par'" != "" {
        = if "" != "" {
          local before `before' (`COLON')
          local COLON
          }
        - else if `"`COLON'"' != ":" {
        = else if `":"' != ":" {
          local before `"`before' `COLON'"'
          local COLON
          }
        - }
        - while `"`COLON'"' != ":" & `"`after'"' != "" {
        = while `":"' != ":" & `" aux"' != "" {
          gettoken COLON after : after, parse(":") bind match(par) quotes
          if "`par'" != "" {
          local before `before' (`COLON')
          local COLON
          }
          else if `"`COLON'"' != ":" {
          local before `"`before' `COLON'"'
          local COLON
          }
          }
        - if `"`COLON'"' != ":" {
        = if `":"' != ":" {
          di as err "'' found where ':' expected"
```

```
        exit 198
        }
     − sreturn local before `"`before'"'
     = sreturn local before `"PCAUX "'
     − sreturn local after `"`after'"'
     = sreturn local after `" aux"'
  ─────────────────────────────────────────
> ──────────────────────────────── end _on_colon_parse ──────────────
     − local c_value `"`s(before)'"'
     = local c_value `"PCAUX "'
     − local key `"`s(after)'"'
     = local key `" aux"'
     − confirm name `c_value'
     = confirm name PCAUX
     − mata: st_b_pclass("`:list retok key'")
     = mata: st_b_pclass("aux")
     − c_local `c_value' `value'
     = c_local PCAUX  2
  ─────────────────────────────────────────
> ──────────────────────────────── end _b_pclass ──────────────
   − tempname pclass
   − matrix `pclass' = e(b)
   = matrix __000006 = e(b)
   − local dim = colsof(`pclass')
   = local dim = colsof(__000006)
   − matrix `pclass'[1,1] = J(1,`dim',`PCDEF')
   = matrix __000006[1,1] = J(1,10,0)
   − matrix `pclass'[1,`dim'] = `PCAUX'
   = matrix __000006[1,10] = 2
   − est hidden matrix b_pclass `pclass'
   = est hidden matrix b_pclass __000006
   − if "`llp'"!="" {
   = if ""!="" {
     est local chi2_ct "LR"
     est scalar ll_c = `llp'
     if (e(ll) < e(ll_c)) | (_b[/ln`parm'] < −20) {
     est scalar chi2_c = 0
     }
     else est scalar chi2_c = 2*(e(ll)−e(ll_c))
     }
   − est scalar r2_p = 1 − e(ll)/e(ll_0)
   − est scalar k_aux = 1
   − est hidden local diparm_opt2 noprob
   − est scalar `parm' = exp(_b[/ln`parm'])
   = est scalar alpha = exp(_b[/lnalpha])
   − est local dispers "`dispers'"
```

```
          = est local dispers "mean"
          − est local offset "`offvar'"
          = est local offset ""
          − est local offset1
          − est hidden local marginsderiv default N IR
          − est local predict "nbreg_p"
          − est local cmd "nbreg"
          − global S_E_ll = e(ll)
          − global S_E_ll0 `e(ll_0)'
          = global S_E_ll0 −322.2358665861632
          − global S_E_llc `e(ll_c)'
          = global S_E_llc
          − global S_1 `e(chi2_c)'
          = global S_1
          − global S_E_chi2 = e(chi2)
          − global S_E_mdf = e(df_m)
          − global S_E_pr2 `e(r2_p)'
          = global S_E_pr2 .1741114087870568
          − global S_E_nobs = e(N)
          − global S_E_tdf = e(N)
          − global S_E_off `e(offset)'
          = global S_E_off
          − global S_E_depv `e(depvar)'
          = global S_E_depv piq_timing_max
          − global S_E_cmd `e(cmd)'
          = global S_E_cmd nbreg
          − if "`display'"=="" {
          = if ""=="" {
          − Display,  `irr' level(`level') `diopts'
          = Display,  level(95)
            ────────────────────────────────────────────────────
>  ───────────────────────────────────────── begin nbreg.Display ─────────────
          − syntax [, Level(cilevel) IRr *]
          − _get_diopts diopts, `options'
          = _get_diopts diopts,
            ────────────────────────────────────────────────────
>  ───────────────────────────────────────── begin _get_diopts ─────────────
          − version 11
          − syntax namelist(max=2) [, *]
          − gettoken name1 namelist : namelist
          − gettoken name2 namelist : namelist
          − GetDiopts diopts options, `options'
          = GetDiopts diopts options,
            ────────────────────────────────────────────────────
>  ───────────────────────────────────── begin _get_diopts.GetDiopts ─────────────
          − local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLBASElevel
```

```
> s NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMPTYcells
> NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(string) sf
> ormat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru) FVWRAPO
> N(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru) NOABBRE
> V ABBREV
              - syntax namelist(max=2) [, `DIOPTS' *]
              = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBASElevels
>  ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcell
> s EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cform
> at(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(pass
> thru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(pass
> thru) NOABBREV ABBREV *]
              - opts_exclusive "`allbaselevels' `noallbaselevels'"
              = opts_exclusive " "
              ────────────────────────────────────────────────────
> ──────────────────────────────────── begin opts_exclusive ────────────────
              - version 8.2
              - args opts optname errcode optslab
              - local opts `opts'
              = local opts
              - local n 0
              - while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              - if `n' < 2 {
              = if 0 < 2 {
              - exit
              ────────────────────────────────────────────────────
> ──────────────────────────────────── end opts_exclusive ──────────────────
              - opts_exclusive "`allbaselevels' `nobaselevels'"
              = opts_exclusive " "
              ────────────────────────────────────────────────────
> ──────────────────────────────────── begin opts_exclusive ────────────────
              - version 8.2
              - args opts optname errcode optslab
              - local opts `opts'
              = local opts
              - local n 0
              - while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              - if `n' < 2 {
```

```
        = if 0 < 2 {
        - exit
        _____
> ───────────────────────────────── end opts_exclusive ─────────────
        - opts_exclusive "`baselevels' `nobaselevels'"
        = opts_exclusive " "
        _____
> ──────────────────────────────── begin opts_exclusive ─────────────
        - version 8.2
        - args opts optname errcode optslab
        - local opts `opts'
        = local opts
        - local n 0
        - while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
        - if `n' < 2 {
        = if 0 < 2 {
        - exit
        _____
> ───────────────────────────────── end opts_exclusive ─────────────
        - opts_exclusive "`emptycells' `noemptycells'"
        = opts_exclusive " "
        _____
> ──────────────────────────────── begin opts_exclusive ─────────────
        - version 8.2
        - args opts optname errcode optslab
        - local opts `opts'
        = local opts
        - local n 0
        - while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
        - if `n' < 2 {
        = if 0 < 2 {
        - exit
        _____
> ───────────────────────────────── end opts_exclusive ─────────────
        - opts_exclusive "`fvlabel' `nofvlabel'"
        = opts_exclusive " "
        _____
> ──────────────────────────────── begin opts_exclusive ─────────────
```

```
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
              ────────────────────────────────────────────
>  ──────────────────────────────────── end opts_exclusive ────────────
              – opts_exclusive "`omitted' `noomitted'"
              = opts_exclusive " "
              ────────────────────────────────────────────
>  ──────────────────────────────────── begin opts_exclusive ────────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
              ────────────────────────────────────────────
>  ──────────────────────────────────── end opts_exclusive ────────────
              – opts_exclusive "`lstretch' `nolstretch'"
              = opts_exclusive " "
              ────────────────────────────────────────────
>  ──────────────────────────────────── begin opts_exclusive ────────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
```

```
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
```

> ─────────────────────────────── end opts_exclusive ─────────────
```
            – opts_exclusive "`cnsreport' `fullcnsreport'"
            = opts_exclusive " "
```

> ─────────────────────────────── begin opts_exclusive ────────────
```
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
```

> ─────────────────────────────── end opts_exclusive ─────────────
```
            – opts_exclusive "`coeflegend' `selegend'"
            = opts_exclusive " "
```

> ─────────────────────────────── begin opts_exclusive ────────────
```
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
```

> ─────────────────────────────── end opts_exclusive ─────────────
```
            – opts_exclusive "`noci' `nopvalues'"
```

```
          = opts_exclusive " "
          _____
>  ──────────────────────────── begin opts_exclusive ────────────
          – version 8.2
          – args opts optname errcode optslab
          – local opts `opts'
          = local opts
          – local n 0
          – while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          – if `n' < 2 {
          = if 0 < 2 {
          – exit
          _____
>  ──────────────────────────── end opts_exclusive ──────────────
          – local K : list sizeof namelist
          – gettoken c_diopts c_opts : namelist
          – opts_exclusive "`coding' `compare'"
          = opts_exclusive " "
          _____
>  ──────────────────────────── begin opts_exclusive ────────────
          – version 8.2
          – args opts optname errcode optslab
          – local opts `opts'
          = local opts
          – local n 0
          – while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          – if `n' < 2 {
          = if 0 < 2 {
          – exit
          _____
>  ──────────────────────────── end opts_exclusive ──────────────
          – opts_exclusive "`versus' `compare'"
          = opts_exclusive " "
          _____
>  ──────────────────────────── begin opts_exclusive ────────────
          – version 8.2
          – args opts optname errcode optslab
          – local opts `opts'
```

```
                 = local opts
                 — local n 0
                 — while `"`opts'"' != "" {
                 = while `""' != "" {
                   local ++n
                   gettoken item`n' opts : opts, bind
                   }
                 — if `n' < 2 {
                 = if 0 < 2 {
                 — exit
                 ————————————————————————————————————————————
```
> —— end opts_exclusive ——————————————
```
                 — opts_exclusive "`abbrev' `noabbrev'"
                 = opts_exclusive " "
                 ————————————————————————————————————————————
```
> —— begin opts_exclusive ————————————
```
                 — version 8.2
                 — args opts optname errcode optslab
                 — local opts `opts'
                 = local opts
                 — local n 0
                 — while `"`opts'"' != "" {
                 = while `""' != "" {
                   local ++n
                   gettoken item`n' opts : opts, bind
                   }
                 — if `n' < 2 {
                 = if 0 < 2 {
                 — exit
                 ————————————————————————————————————————————
```
> —— end opts_exclusive ——————————————
```
                 — local allbaselevels `allbaselevels' `noallbaselevels'
                 = local allbaselevels
                 — local baselevels `baselevels' `nobaselevels'
                 = local baselevels
                 — local emptycells `emptycells' `noemptycells'
                 = local emptycells
                 — local omitted `omitted' `noomitted'
                 = local omitted
                 — local lstretch `lstretch' `nolstretch'
                 = local lstretch
                 — local fvlabel `fvlabel' `nofvlabel'
                 = local fvlabel
                 — local abbrev `abbrev' `noabbrev'
                 = local abbrev
                 — if "`allbaselevels'`baselevels'" == "" {
```

```
= if "" == "" {
- if c(showbaselevels) == "all" {
  local allbaselevels allbaselevels
  }
- else if c(showbaselevels) == "on" {
  local baselevels baselevels
  }
- }
- if "`emptycells'" == "" {
= if "" == "" {
- if c(showemptycells) == "off" {
  local emptycells noemptycells
  }
- }
- if "`omitted'" == "" {
= if "" == "" {
- if c(showomitted) == "off" {
  local omitted noomitted
  }
- }
- if "`lstretch'" == "" {
= if "" == "" {
- if c(lstretch) == "off" {
  local lstretch nolstretch
  }
- }
- if `:length local cformat' {
= if 0 {
  confirm numeric format `cformat'
  if fmtwidth(`"`cformat'"') > 9 {
  local cformat "%9.0g"
  di "{txt}note: invalid cformat(), using default"
  }
  sreturn local cformat `"`cformat'"'
  local cformat `"cformat(`cformat')"'
  }
- if `:length local sformat' {
= if 0 {
  confirm numeric format `sformat'
  if fmtwidth(`"`sformat'"') > 8 {
  local sformat "%8.2f"
  di "{txt}note: invalid sformat(), using default"
  }
  sreturn local sformat `"`sformat'"'
  local sformat `"sformat(`sformat')"'
  }
```

```
              – if `:length local pformat' {
            = if 0 {
              confirm numeric format `pformat'
              if fmtwidth(`"`pformat'"') > 5 {
              local pformat "%5.3f"
              di "{txt}note: invalid pformat(), using default"
              }
              sreturn local pformat `"`pformat'"'
              local pformat `"pformat(`pformat')"'
              }
            – if `K' == 1 & `:length local options' {
            = if 2 == 1 & 0 {
              syntax namelist(max=2) [, `DIOPTS']
              }
            – if reldif(`level', c(level)) > 1e–3 {
            = if reldif(95, c(level)) > 1e–3 {
              local levelopt level(`level')
              }
            – Wrapon , `fvwrapon'
            = Wrapon ,
            ───────────────────────────────────────────
> ───────────────────────────── begin _get_diopts.Wrapon ─────────────
            – capture syntax [, WOrd WIdth]
            – if c(rc) {
              di as err "invalid fvwrapon() option;"
              syntax [, WOrd WIdth]
              exit 198
              }
            – opts_exclusive "`word' `width'" fvwrapon
            = opts_exclusive " " fvwrapon
            ───────────────────────────────────────────
> ───────────────────────────── begin opts_exclusive ─────────────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
            ───────────────────────────────────────────
```

```
            – local fvwrapon `word' `width'
            = local fvwrapon
            – if `:length local fvwrapon' {
            = if 0 {
              c_local fvwrapon fvwrapon(`fvwrapon')
               }
            ─────────────────────────────────────────────────
```
```
            – if "`fvwrap'" != "" {
            = if "" != "" {
              FVWrap, `fvwrap'
               }
            – c_local `c_diopts' `levelopt' `vsquish' `allbaselevels' `baselev
> els' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `coeflege
> nd' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `compare' `fv
> wrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `abbrev'
            = c_local diopts
            – if `K' == 2 {
            = if 2 == 2 {
            – c_local `c_opts' `"`options'"'
            = c_local  options `""'
            – }
            – sreturn local coding `coding'
            = sreturn local coding
            – sreturn local versus `versus'
            = sreturn local versus
            – sreturn local compare `compare'
            = sreturn local compare
            – sreturn local level `level'
            = sreturn local level 95
            ─────────────────────────────────────────────────
```
```
          – c_local `name1' `"`diopts'"'
          = c_local diopts `""'
          – local snames : s(macros)
          – foreach sname of local snames {
          – local S_`sname' = s(`sname')
          = local S_level = s(level)
          – }
          – local S_`sname' = s(`sname')
          = local S_after = s(after)
          – }
          – local S_`sname' = s(`sname')
          = local S_before = s(before)
          – }
```

```
          - local S_`sname' = s(`sname')
          = local S_log = s(log)
          - }
          - local S_`sname' = s(`sname')
          = local S_deriv = s(deriv)
          - }
          - local S_`sname' = s(`sname')
          = local S_namelist = s(namelist)
          - }
          - local S_`sname' = s(`sname')
          = local S_optlist = s(optlist)
          - }
          - local S_`sname' = s(`sname')
          = local S_k_fill = s(k_fill)
          - }
          - local S_`sname' = s(`sname')
          = local S_k = s(k)
          - }
          - sreturn clear
          - GetDiopts DEFAULT
          ────────────────────────────────────────────────────────────
>  ───────────────────────────────── begin _get_diopts.GetDiopts ─────────────────
          - local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLBASElevel
> s NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMPTYcells
> NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(string) sf
> ormat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru) FVWRAPO
> N(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru) NOABBRE
> V ABBREV
          - syntax namelist(max=2) [, `DIOPTS' *]
          = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBASElevels
>  ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcell
> s EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cform
> at(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(pass
> thru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(pass
> thru) NOABBREV ABBREV *]
          - opts_exclusive "`allbaselevels' `noallbaselevels'"
          = opts_exclusive " "
          ────────────────────────────────────────────────────────────
>  ───────────────────────────────── begin opts_exclusive ─────────────────
          - version 8.2
          - args opts optname errcode optslab
          - local opts `opts'
          = local opts
          - local n 0
          - while `"`opts'"' != "" {
          = while `""' != "" {
```

```
                 local ++n
                 gettoken item`n' opts : opts, bind
                 }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
            ────────────────────────────────────────────
> ───────────────────────────────── end opts_exclusive ───────────
            – opts_exclusive "`allbaselevels' `nobaselevels'"
            = opts_exclusive " "
            ────────────────────────────────────────────
> ───────────────────────────────── begin opts_exclusive ──────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
            ────────────────────────────────────────────
> ───────────────────────────────── end opts_exclusive ───────────
            – opts_exclusive "`baselevels' `nobaselevels'"
            = opts_exclusive " "
            ────────────────────────────────────────────
> ───────────────────────────────── begin opts_exclusive ──────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
            ────────────────────────────────────────────
> ───────────────────────────────── end opts_exclusive ───────────
```

```
          - opts_exclusive "`emptycells' `noemptycells'"
          = opts_exclusive " "
          ────────────────────────────────────────────────
> ─────────────────────────────────────── begin opts_exclusive ──────────
          - version 8.2
          - args opts optname errcode optslab
          - local opts `opts'
          = local opts
          - local n 0
          - while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          - if `n' < 2 {
          = if 0 < 2 {
          - exit
          ────────────────────────────────────────────────
> ──────────────────────────────────────── end opts_exclusive ──────────
          - opts_exclusive "`fvlabel' `nofvlabel'"
          = opts_exclusive " "
          ────────────────────────────────────────────────
> ─────────────────────────────────────── begin opts_exclusive ──────────
          - version 8.2
          - args opts optname errcode optslab
          - local opts `opts'
          = local opts
          - local n 0
          - while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          - if `n' < 2 {
          = if 0 < 2 {
          - exit
          ────────────────────────────────────────────────
> ──────────────────────────────────────── end opts_exclusive ──────────
          - opts_exclusive "`omitted' `noomitted'"
          = opts_exclusive " "
          ────────────────────────────────────────────────
> ─────────────────────────────────────── begin opts_exclusive ──────────
          - version 8.2
          - args opts optname errcode optslab
          - local opts `opts'
          = local opts
```

```
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
            ─────────────────────────────────────────────────
>  ──────────────────────────────────── end opts_exclusive ──────────────
            – opts_exclusive "`lstretch' `nolstretch'"
            = opts_exclusive " "
            ─────────────────────────────────────────────────
>  ──────────────────────────────────── begin opts_exclusive ──────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
            ─────────────────────────────────────────────────
>  ──────────────────────────────────── end opts_exclusive ──────────────
            – opts_exclusive "`cnsreport' `fullcnsreport'"
            = opts_exclusive " "
            ─────────────────────────────────────────────────
>  ──────────────────────────────────── begin opts_exclusive ──────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
```

```
          — exit
          ─────────────────────────────────────────────────────────
>  ──────────────────────────────────────── end opts_exclusive ────────────
          — opts_exclusive "`coeflegend' `selegend'"
          = opts_exclusive " "
          ─────────────────────────────────────────────────────────
>  ──────────────────────────────────────── begin opts_exclusive ──────────
          — version 8.2
          — args opts optname errcode optslab
          — local opts `opts'
          = local opts
          — local n 0
          — while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          — if `n' < 2 {
          = if 0 < 2 {
          — exit
          ─────────────────────────────────────────────────────────
>  ──────────────────────────────────────── end opts_exclusive ────────────
          — opts_exclusive "`noci' `nopvalues'"
          = opts_exclusive " "
          ─────────────────────────────────────────────────────────
>  ──────────────────────────────────────── begin opts_exclusive ──────────
          — version 8.2
          — args opts optname errcode optslab
          — local opts `opts'
          = local opts
          — local n 0
          — while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          — if `n' < 2 {
          = if 0 < 2 {
          — exit
          ─────────────────────────────────────────────────────────
>  ──────────────────────────────────────── end opts_exclusive ────────────
          — local K : list sizeof namelist
          — gettoken c_diopts c_opts : namelist
          — opts_exclusive "`coding' `compare'"
          = opts_exclusive " "
          ─────────────────────────────────────────────────────────
```

```
> ──────────────────────────── begin opts_exclusive ──────────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
              ────────────────────────────────────────────────────
> ──────────────────────────── end opts_exclusive ────────────────
            – opts_exclusive "`versus' `compare'"
            = opts_exclusive " "
              ────────────────────────────────────────────────────
> ──────────────────────────── begin opts_exclusive ──────────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
              ────────────────────────────────────────────────────
> ──────────────────────────── end opts_exclusive ────────────────
            – opts_exclusive "`abbrev' `noabbrev'"
            = opts_exclusive " "
              ────────────────────────────────────────────────────
> ──────────────────────────── begin opts_exclusive ──────────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
```

```
            local ++n
            gettoken item`n' opts : opts, bind
            }
      – if `n' < 2 {
      = if 0 < 2 {
      – exit
            ───────────────────────────────────────────
> ─────────────────────────────────── end opts_exclusive ───────────────
      – local allbaselevels `allbaselevels' `noallbaselevels'
      = local allbaselevels
      – local baselevels `baselevels' `nobaselevels'
      = local baselevels
      – local emptycells `emptycells' `noemptycells'
      = local emptycells
      – local omitted `omitted' `noomitted'
      = local omitted
      – local lstretch `lstretch' `nolstretch'
      = local lstretch
      – local fvlabel `fvlabel' `nofvlabel'
      = local fvlabel
      – local abbrev `abbrev' `noabbrev'
      = local abbrev
      – if "`allbaselevels'`baselevels'" == "" {
      = if "" == "" {
      – if c(showbaselevels) == "all" {
            local allbaselevels allbaselevels
            }
      – else if c(showbaselevels) == "on" {
            local baselevels baselevels
            }
      – }
      – if "`emptycells'" == "" {
      = if "" == "" {
      – if c(showemptycells) == "off" {
            local emptycells noemptycells
            }
      – }
      – if "`omitted'" == "" {
      = if "" == "" {
      – if c(showomitted) == "off" {
            local omitted noomitted
            }
      – }
      – if "`lstretch'" == "" {
      = if "" == "" {
      – if c(lstretch) == "off" {
```

```
                    local lstretch nolstretch
                    }
  -                 }
  -             if `:length local cformat' {
  =             if 0 {
                    confirm numeric format `cformat'
                    if fmtwidth(`"`cformat'"') > 9 {
                    local cformat "%9.0g"
                    di "{txt}note: invalid cformat(), using default"
                    }
                    sreturn local cformat `"`cformat'"'
                    local cformat `"cformat(`cformat')"'
                    }
  -             if `:length local sformat' {
  =             if 0 {
                    confirm numeric format `sformat'
                    if fmtwidth(`"`sformat'"') > 8 {
                    local sformat "%8.2f"
                    di "{txt}note: invalid sformat(), using default"
                    }
                    sreturn local sformat `"`sformat'"'
                    local sformat `"sformat(`sformat')"'
                    }
  -             if `:length local pformat' {
  =             if 0 {
                    confirm numeric format `pformat'
                    if fmtwidth(`"`pformat'"') > 5 {
                    local pformat "%5.3f"
                    di "{txt}note: invalid pformat(), using default"
                    }
                    sreturn local pformat `"`pformat'"'
                    local pformat `"pformat(`pformat')"'
                    }
  -             if `K' == 1 & `:length local options' {
  =             if 1 == 1 & 0 {
                    syntax namelist(max=2) [, `DIOPTS']
                    }
  -             if reldif(`level', c(level)) > 1e-3 {
  =             if reldif(95, c(level)) > 1e-3 {
                    local levelopt level(`level')
                    }
  -             Wrapon , `fvwrapon'
  =             Wrapon ,
                ─────────────────────────────────────────────────────────────────
  > ─────────────────────────────────── begin _get_diopts.Wrapon ───────────────
              -   capture syntax [, WOrd WIdth]
```

```
                    – if c(rc) {
                      di as err "invalid fvwrapon() option;"
                      syntax [, WOrd WIdth]
                      exit 198
                      }
                    – opts_exclusive "`word' `width'" fvwrapon
                    = opts_exclusive " " fvwrapon
                    ────────────────────────────────────────────────
>  ─────────────────────────────────── begin opts_exclusive ───────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ────────────────────────────────────────────────
>  ─────────────────────────────────── end opts_exclusive ─────────────────
                    – local fvwrapon `word' `width'
                    = local fvwrapon
                    – if `:length local fvwrapon' {
                    = if 0 {
                      c_local fvwrapon fvwrapon(`fvwrapon')
                      }
                    ────────────────────────────────────────────────
>  ─────────────────────────────────── end _get_diopts.Wrapon ─────────────
                  – if "`fvwrap'" != "" {
                  = if "" != "" {
                    FVWrap, `fvwrap'
                    }
                  – c_local `c_diopts' `levelopt' `vsquish' `allbaselevels' `baselev
> els' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `coeflege
> nd' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `compare' `fv
> wrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `abbrev'
                  = c_local DEFAULT
                  – if `K' == 2 {
                  = if 1 == 2 {
                    c_local `c_opts' `"`options'"'
                    }
                  – sreturn local coding `coding'
```

```
            = sreturn local coding
            – sreturn local versus `versus'
            = sreturn local versus
            – sreturn local compare `compare'
            = sreturn local compare
            – sreturn local level `level'
            = sreturn local level 95
            ───────────────────────────────────────────────
> ──────────────────────────── end _get_diopts.GetDiopts ────────────────
            – if `"`name2'"' == "" {
            = if `""' == "" {
            – GetDiopts DUPS, `options'
            = GetDiopts DUPS,

            ───────────────────────────────────────────────
> ──────────────────────────── begin _get_diopts.GetDiopts ──────────────
            – local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLBASElevel
> s NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMPTYcells
> NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(string) sf
> ormat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru) FVWRAPO
> N(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru) NOABBRE
> V ABBREV
            – syntax namelist(max=2) [, `DIOPTS' *]
            = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBASElevels
>  ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcell
> s EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cform
> at(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(pass
> thru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(pass
> thru) NOABBREV ABBREV *]
            – opts_exclusive "`allbaselevels' `noallbaselevels'"
            = opts_exclusive " "

            ───────────────────────────────────────────────
> ──────────────────────────── begin opts_exclusive ─────────────────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
            ───────────────────────────────────────────────
```

```
>  ──────────────────────────── end opts_exclusive ───────────
         – opts_exclusive "`allbaselevels' `nobaselevels'"
         = opts_exclusive " "
         ────────────────────────────────────────────────────
>  ──────────────────────────── begin opts_exclusive ─────────
         – version 8.2
         – args opts optname errcode optslab
         – local opts `opts'
         = local opts
         – local n 0
         – while `"`opts'"' != "" {
         = while `""' != "" {
           local ++n
           gettoken item`n' opts : opts, bind
           }
         – if `n' < 2 {
         = if 0 < 2 {
         – exit
         ────────────────────────────────────────────────────
>  ──────────────────────────── end opts_exclusive ───────────
         – opts_exclusive "`baselevels' `nobaselevels'"
         = opts_exclusive " "
         ────────────────────────────────────────────────────
>  ──────────────────────────── begin opts_exclusive ─────────
         – version 8.2
         – args opts optname errcode optslab
         – local opts `opts'
         = local opts
         – local n 0
         – while `"`opts'"' != "" {
         = while `""' != "" {
           local ++n
           gettoken item`n' opts : opts, bind
           }
         – if `n' < 2 {
         = if 0 < 2 {
         – exit
         ────────────────────────────────────────────────────
>  ──────────────────────────── end opts_exclusive ───────────
         – opts_exclusive "`emptycells' `noemptycells'"
         = opts_exclusive " "

>  ──────────────────────────── begin opts_exclusive ─────────
         – version 8.2
         – args opts optname errcode optslab
         – local opts `opts'
```

```
= local opts
- local n 0
- while `"`opts'"' != "" {
= while `""' != "" {
  local ++n
  gettoken item`n' opts : opts, bind
  }
- if `n' < 2 {
= if 0 < 2 {
- exit
```

> ─────────────────────────────────── end opts_exclusive ────────────

```
- opts_exclusive "`fvlabel' `nofvlabel'"
= opts_exclusive " "
```

> ─────────────────────────────────── begin opts_exclusive ──────────

```
- version 8.2
- args opts optname errcode optslab
- local opts `opts'
= local opts
- local n 0
- while `"`opts'"' != "" {
= while `""' != "" {
  local ++n
  gettoken item`n' opts : opts, bind
  }
- if `n' < 2 {
= if 0 < 2 {
- exit
```

> ─────────────────────────────────── end opts_exclusive ────────────

```
- opts_exclusive "`omitted' `noomitted'"
= opts_exclusive " "
```

> ─────────────────────────────────── begin opts_exclusive ──────────

```
- version 8.2
- args opts optname errcode optslab
- local opts `opts'
= local opts
- local n 0
- while `"`opts'"' != "" {
= while `""' != "" {
  local ++n
  gettoken item`n' opts : opts, bind
  }
- if `n' < 2 {
```

```
                = if 0 < 2 {
                - exit
                ─────────────────────────────────────────────
>   ──────────────────────────────────── end opts_exclusive ──────────
                - opts_exclusive "`lstretch' `nolstretch'"
                = opts_exclusive " "
                ─────────────────────────────────────────────
>   ──────────────────────────────────── begin opts_exclusive ──────────
                - version 8.2
                - args opts optname errcode optslab
                - local opts `opts'
                = local opts
                - local n 0
                - while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                - if `n' < 2 {
                = if 0 < 2 {
                - exit
                ─────────────────────────────────────────────
>   ──────────────────────────────────── end opts_exclusive ──────────
                - opts_exclusive "`cnsreport' `fullcnsreport'"
                = opts_exclusive " "
                ─────────────────────────────────────────────
>   ──────────────────────────────────── begin opts_exclusive ──────────
                - version 8.2
                - args opts optname errcode optslab
                - local opts `opts'
                = local opts
                - local n 0
                - while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                - if `n' < 2 {
                = if 0 < 2 {
                - exit
                ─────────────────────────────────────────────
>   ──────────────────────────────────── end opts_exclusive ──────────
                - opts_exclusive "`coeflegend' `selegend'"
                = opts_exclusive " "
                ─────────────────────────────────────────────
>   ──────────────────────────────────── begin opts_exclusive ──────────
```

```
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────────────
> ───────────────────────────────────── end opts_exclusive ─────────────
                    – opts_exclusive "`noci' `nopvalues'"
                    = opts_exclusive " "
                    ─────────────────────────────────────────────────
> ───────────────────────────────────── begin opts_exclusive ───────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────────────
> ───────────────────────────────────── end opts_exclusive ─────────────
                    – local K : list sizeof namelist
                    – gettoken c_diopts c_opts : namelist
                    – opts_exclusive "`coding' `compare'"
                    = opts_exclusive " "
                    ─────────────────────────────────────────────────
> ───────────────────────────────────── begin opts_exclusive ───────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
```

```
= while `""' != "" {
  local ++n
  gettoken item`n' opts : opts, bind
  }
− if `n' < 2 {
= if 0 < 2 {
− exit
```
───

```
− opts_exclusive "`versus' `compare'"
= opts_exclusive " "
```
───

```
− version 8.2
− args opts optname errcode optslab
− local opts `opts'
= local opts
− local n 0
− while `"`opts'"' != "" {
= while `""' != "" {
  local ++n
  gettoken item`n' opts : opts, bind
  }
− if `n' < 2 {
= if 0 < 2 {
− exit
```
───

```
− opts_exclusive "`abbrev' `noabbrev'"
= opts_exclusive " "
```
───

```
− version 8.2
− args opts optname errcode optslab
− local opts `opts'
= local opts
− local n 0
− while `"`opts'"' != "" {
= while `""' != "" {
  local ++n
  gettoken item`n' opts : opts, bind
  }
− if `n' < 2 {
= if 0 < 2 {
− exit
```
───

```
>  ──────────────────────────────────────── end opts_exclusive ──────────────
            – local allbaselevels `allbaselevels' `noallbaselevels'
            = local allbaselevels
            – local baselevels `baselevels' `nobaselevels'
            = local baselevels
            – local emptycells `emptycells' `noemptycells'
            = local emptycells
            – local omitted `omitted' `noomitted'
            = local omitted
            – local lstretch `lstretch' `nolstretch'
            = local lstretch
            – local fvlabel `fvlabel' `nofvlabel'
            = local fvlabel
            – local abbrev `abbrev' `noabbrev'
            = local abbrev
            – if "`allbaselevels'`baselevels'" == "" {
            = if "" == "" {
            – if c(showbaselevels) == "all" {
              local allbaselevels allbaselevels
              }
            – else if c(showbaselevels) == "on" {
              local baselevels baselevels
              }
            – }
            – if "`emptycells'" == "" {
            = if "" == "" {
            – if c(showemptycells) == "off" {
              local emptycells noemptycells
              }
            – }
            – if "`omitted'" == "" {
            = if "" == "" {
            – if c(showomitted) == "off" {
              local omitted noomitted
              }
            – }
            – if "`lstretch'" == "" {
            = if "" == "" {
            – if c(lstretch) == "off" {
              local lstretch nolstretch
              }
            – }
            – if `:length local cformat' {
            = if 0 {
              confirm numeric format `cformat'
              if fmtwidth(`"`cformat'"') > 9 {
```

```
                   local cformat "%9.0g"
                   di "{txt}note: invalid cformat(), using default"
                   }
                   sreturn local cformat `"'`cformat'"'
                   local cformat `"cformat(`cformat')"'
                   }
          -  if `:length local sformat' {
          =  if 0 {
                   confirm numeric format `sformat'
                   if fmtwidth(`"'`sformat'"') > 8 {
                   local sformat "%8.2f"
                   di "{txt}note: invalid sformat(), using default"
                   }
                   sreturn local sformat `"'`sformat'"'
                   local sformat `"sformat(`sformat')"'
                   }
          -  if `:length local pformat' {
          =  if 0 {
                   confirm numeric format `pformat'
                   if fmtwidth(`"'`pformat'"') > 5 {
                   local pformat "%5.3f"
                   di "{txt}note: invalid pformat(), using default"
                   }
                   sreturn local pformat `"'`pformat'"'
                   local pformat `"pformat(`pformat')"'
                   }
          -  if `K' == 1 & `:length local options' {
          =  if 1 == 1 & 0 {
                   syntax namelist(max=2) [, `DIOPTS']
                   }
          -  if reldif(`level', c(level)) > 1e-3 {
          =  if reldif(95, c(level)) > 1e-3 {
                   local levelopt level(`level')
                   }
          -  Wrapon , `fvwrapon'
          =  Wrapon ,
          _____

>  _____ begin _get_diopts.Wrapon _____
          -  capture syntax [, WOrd WIdth]
          -  if c(rc) {
                   di as err "invalid fvwrapon() option;"
                   syntax [, WOrd WIdth]
                   exit 198
                   }
          -  opts_exclusive "`word' `width'" fvwrapon
          =  opts_exclusive " " fvwrapon
```

```
> ──────────────────────────────────────────── begin opts_exclusive ─────────────────
              - version 8.2
              - args opts optname errcode optslab
              - local opts `opts'
              = local opts
              - local n 0
              - while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              - if `n' < 2 {
              = if 0 < 2 {
              - exit
                                                     ─────────────────────────────────
> ──────────────────────────────────────────── end opts_exclusive ──────────────────
              - local fvwrapon `word' `width'
              = local fvwrapon
              - if `:length local fvwrapon' {
              = if 0 {
                c_local fvwrapon fvwrapon(`fvwrapon')
                }
                                                     ─────────────────────────────────
> ──────────────────────────────────────────── end _get_diopts.Wrapon ──────────────
              - if "`fvwrap'" != "" {
              = if "" != "" {
                FVWrap, `fvwrap'
                }
              - c_local `c_diopts' `levelopt' `vsquish' `allbaselevels' `baselev
> els' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `coeflege
> nd' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `compare' `fv
> wrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `abbrev'
              = c_local DUPS
              - if `K' == 2 {
              = if 1 == 2 {
                c_local `c_opts' `"`options'"'
                }
              - sreturn local coding `coding'
              = sreturn local coding
              - sreturn local versus `versus'
              = sreturn local versus
              - sreturn local compare `compare'
              = sreturn local compare
              - sreturn local level `level'
              = sreturn local level 95
```

```
      - }
      - else {
        GetDiopts DUPS options, `options'
        c_local `name2' `"`options'"'
        }
      - local DUPS : list DUPS - DEFAULT
      - gettoken DUPS : DUPS
      - if `"`DUPS'"' != "" {
      = if `""' != "" {
        if (strpos(`"`DUPS'"', "(")) {
        gettoken DUPS : DUPS, parse("(")
        local DUPS `"`DUPS'()"'
        }
        di as err "duplicate {bf:`DUPS'} option not allowed"
        exit 198
        }
      - sreturn clear
      - foreach sname of local snames {
      - sreturn local `sname' = `"`S_`sname''"'
      = sreturn local level = `"95"'
      - }
      - sreturn local `sname' = `"`S_`sname''"'
      = sreturn local after = `"aux"'
      - }
      - sreturn local `sname' = `"`S_`sname''"'
      = sreturn local before = `"PCAUX "'
      - }
      - sreturn local `sname' = `"`S_`sname''"'
      = sreturn local log = `"log"'
      - }
      - sreturn local `sname' = `"`S_`sname''"'
      = sreturn local deriv = `"0"'
      - }
      - sreturn local `sname' = `"`S_`sname''"'
      = sreturn local namelist = `"cluster"'
      - }
      - sreturn local `sname' = `"`S_`sname''"'
      = sreturn local optlist = `"CLuster"'
      - }
      - sreturn local `sname' = `"`S_`sname''"'
      = sreturn local k_fill = `"10"'
      - }
      - sreturn local `sname' = `"`S_`sname''"'
      = sreturn local k = `"10"'
```

```
            – }
          _____
  > ──────────────────────────────────────────── end _get_diopts ──────────────
            – if "`irr'"!="" {
            = if ""!="" {
              local eopt "eform(IRR)"
              }
            – if "`e(dispers)'"=="mean" {
            = if "mean"=="mean" {
            – local parm alpha
            – }
            – else local parm delta
            – version 9: ml di, level(`level') `eopt' nofootnote `diopts'
            = version 9: ml di, level(95)  nofootnote
          _____
  > ──────────────────────────────────────────── begin ml ──────────────────────
            – if _caller()>=11 {
              mopt `0'
              exit
              }
            – version 8.2, missing
            – version 6, missing
            – if _caller()<6 {
              ml_5 `0'
              exit
              }
            – local caller : display string(_caller())
            – gettoken cmd 0: 0, parse(" ,")
            – local l = length(`"`cmd'"')
            = local l = length(`"di"')
            – if `"`cmd'"' == "technique" {
            = if `"di"' == "technique" {
              ml_technique `0'
              exit
              }
            – if `"`cmd'"' == "clear" {
            = if `"di"' == "clear" {
              ml_clear `0'
              exit
              }
            – if `"`cmd'"' == "hold" {
            = if `"di"' == "hold" {
              ml_hold `0'
              exit
              }
            – if `"`cmd'"' == "unhold" {
```

```
          = if `"di"' == "unhold" {
            ml_unhold `0'
            exit
            }
          - if `"`cmd'"' == "score" {
          = if `"di"' == "score" {
            if "`e(opt)'" == "moptimize" {
            mopt score `0'
            exit
            }
            ml_score `0'
            exit
            }
          - if `"`cmd'"'=="count" {
          = if `"di"'=="count" {
            ml_c_d count `0'
            exit
            }
          - if `"`cmd'"' == "trace" {
          = if `"di"' == "trace" {
            ml_c_d trace `0'
            exit
            }
          - if `"`cmd'"'==bsubstr("graph",1,max(2,`l')) {
          = if `"di"'==bsubstr("graph",1,max(2,2)) {
            ml_graph `0'
            exit
            }
          - if `"`cmd'"' == "init" {
          = if `"di"' == "init" {
            ml_init `0'
            exit
            }
          - if `"`cmd'"' == bsubstr("maximize",1,max(3,`l')) {
          = if `"di"' == bsubstr("maximize",1,max(3,2)) {
            version `caller', missing: AllowEv ml_max `0'
            exit
            }
          - if `"`cmd'"' == bsubstr("display",1,max(2,`l')) | `"`cmd'"' == bsu
> bstr("mlout", 1,max(3,`l')) {
          = if `"di"' == bsubstr("display",1,max(2,2)) | `"di"' == bsubstr("ml
> out", 1,max(3,2)) {
            - if "`e(opt)'" == "moptimize" {
            = if "moptimize" == "moptimize" {
            - mopt display `0'
            = mopt display , level(95)  nofootnote
```

```
- local vv : di "version " string(_caller()) ":"
- version 12
- gettoken subcmd 0 : 0, parse(" ,")
- local lcmd : length local subcmd
- if "`subcmd'" == "clear" {
= if "display" == "clear" {
  Clear
  exit
  }
- if `"`subcmd'"' == "hold" {
= if `"display"' == "hold" {
  ml_hold `0'
  exit
  }
- if `"`subcmd'"' == "unhold" {
= if `"display"' == "unhold" {
  ml_unhold `0'
  exit
  }
- if "`subcmd'" == "score" {
= if "display" == "score" {
  if _caller() > 12 {
  `vv' Score `0'
  }
  else {
  Score `0'
  }
  exit
  }
- if "`subcmd'" == "count" {
= if "display" == "count" {
  Count `0'
  exit
  }
- if "`subcmd'" == "trace" {
= if "display" == "trace" {
  Trace `0'
  exit
  }
- if "`subcmd'" == bsubstr("graph",1,max(2,`lcmd')) {
= if "display" == bsubstr("graph",1,max(2,7)) {
  Graph `0'
  exit
  }
```

```
            – if "`subcmd'" == "init" {
            = if "display" == "init" {
              Interactive 0
              `vv' Init `0'
              exit
              }
            – if "`subcmd'" == bsubstr("maximize",1,max(3,`lcmd')) {
            = if "display" == bsubstr("maximize",1,max(3,7)) {
              Interactive 1
              `vv' MaxMin maximize `0'
              exit
              }
            – if "`subcmd'" == bsubstr("minimize",1,max(3,`lcmd')) {
            = if "display" == bsubstr("minimize",1,max(3,7)) {
              Interactive 1
              `vv' MaxMin minimize `0'
              exit
              }
            – if "`subcmd'" == bsubstr("display",1,max(2,`lcmd')) {
            = if "display" == bsubstr("display",1,max(2,7)) {
            – Display `0'
            = Display  , level(95)  nofootnote
              ─────────────────────────────────────────────────────────────
```

> ── begin mopt.Display ───────────────

```
            – if !inlist("`e(opt)'", "ml", "moptimize") {
            = if !inlist("moptimize", "ml", "moptimize") {
              error 301
              }
            – if "`e(svyml)'" != "" | "`e(prefix)'" == "svy" {
            = if "" != "" | "" == "svy" {
              _prefix_display `0'
              exit
              }
            – syntax [, Level(cilevel) PLus noHeader First SHOWEQns NEQ(inte
```
> ger –1) noFOOTnote NOSKIP TItle(passthru) NOTEST *]
```
            – if "`plus'" != "" {
            = if "" != "" {
              local footnote nofootnote
              }
            – if `neq' >= 0 {
            = if –1 >= 0 {
              local neqopt neq(`neq')
              }
            – _get_diopts diopts options, `options'
            = _get_diopts diopts options,
              ─────────────────────────────────────────────────────────────
```

```
> ───────────────────────────────────── begin _get_diopts ─────────────────
                  ─ version 11
                  ─ syntax namelist(max=2) [, *]
                  ─ gettoken name1 namelist : namelist
                  ─ gettoken name2 namelist : namelist
                  ─ GetDiopts diopts options, `options'
                  = GetDiopts diopts options,
                  ─────────────────────────────────────────────────────────

> ───────────────────────────── begin _get_diopts.GetDiopts ───────────────
                  ─ local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLBAS
> Elevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMPTY
> cells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(stri
> ng) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru) F
> VWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru) N
> OABBREV ABBREV
                  ─ syntax namelist(max=2) [, `DIOPTS' *]
                  = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBASE
> levels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMP
> TYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND
>  cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRA
> P(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYP
> E(passthru) NOABBREV ABBREV *]
                  ─ opts_exclusive "`allbaselevels' `noallbaselevels'"
                  = opts_exclusive " "
                  ─────────────────────────────────────────────────────────

> ───────────────────────────────── begin opts_exclusive ──────────────────
                  ─ version 8.2
                  ─ args opts optname errcode optslab
                  ─ local opts `opts'
                  = local opts
                  ─ local n 0
                  ─ while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  ─ if `n' < 2 {
                  = if 0 < 2 {
                  ─ exit
                  ─────────────────────────────────────────────────────────

> ───────────────────────────────── end opts_exclusive ────────────────────
                  ─ opts_exclusive "`allbaselevels' `nobaselevels'"
                  = opts_exclusive " "
                  ─────────────────────────────────────────────────────────
> ───────────────────────────────── begin opts_exclusive ──────────────────
                  ─ version 8.2
```

```
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────────
  > ───────────────────────────────── end opts_exclusive ──────────
                 – opts_exclusive "`baselevels' `nobaselevels'"
                 = opts_exclusive " "
                    ─────────────────────────────────────────────
  > ───────────────────────────────── begin opts_exclusive ────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────────
  > ───────────────────────────────── end opts_exclusive ──────────
                 – opts_exclusive "`emptycells' `noemptycells'"
                 = opts_exclusive " "
                    ─────────────────────────────────────────────
  > ───────────────────────────────── begin opts_exclusive ────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
```

```
        }
      – if `n' < 2 {
      = if 0 < 2 {
      – exit
     _____
> ─────────────────────────────── end opts_exclusive ──────────────
      – opts_exclusive "`fvlabel' `nofvlabel'"
      = opts_exclusive " "
     _____
> ─────────────────────────────── begin opts_exclusive ──────────────
      – version 8.2
      – args opts optname errcode optslab
      – local opts `opts'
      = local opts
      – local n 0
      – while `"`opts'"' != "" {
      = while `""' != "" {
        local ++n
        gettoken item`n' opts : opts, bind
        }
      – if `n' < 2 {
      = if 0 < 2 {
      – exit
     _____
> ─────────────────────────────── end opts_exclusive ──────────────
      – opts_exclusive "`omitted' `noomitted'"
      = opts_exclusive " "
     _____
> ─────────────────────────────── begin opts_exclusive ──────────────
      – version 8.2
      – args opts optname errcode optslab
      – local opts `opts'
      = local opts
      – local n 0
      – while `"`opts'"' != "" {
      = while `""' != "" {
        local ++n
        gettoken item`n' opts : opts, bind
        }
      – if `n' < 2 {
      = if 0 < 2 {
      – exit
     _____
> ─────────────────────────────── end opts_exclusive ──────────────
      – opts_exclusive "`lstretch' `nolstretch'"
      = opts_exclusive " "
```

```
> ────────────────────────────────────────── begin opts_exclusive ──────────────
                     – version 8.2
                     – args opts optname errcode optslab
                     – local opts `opts'
                     = local opts
                     – local n 0
                     – while `"`opts'"' != "" {
                     = while `""' != "" {
                       local ++n
                       gettoken item`n' opts : opts, bind
                       }
                     – if `n' < 2 {
                     = if 0 < 2 {
                     – exit
                     ────────────────────────────────────────────────────────
> ────────────────────────────────────────── end opts_exclusive ────────────────
                 – opts_exclusive "`cnsreport' `fullcnsreport'"
                 = opts_exclusive " "
                     ────────────────────────────────────────────────────────
> ────────────────────────────────────────── begin opts_exclusive ──────────────
                     – version 8.2
                     – args opts optname errcode optslab
                     – local opts `opts'
                     = local opts
                     – local n 0
                     – while `"`opts'"' != "" {
                     = while `""' != "" {
                       local ++n
                       gettoken item`n' opts : opts, bind
                       }
                     – if `n' < 2 {
                     = if 0 < 2 {
                     – exit
                     ────────────────────────────────────────────────────────
> ────────────────────────────────────────── end opts_exclusive ────────────────
                 – opts_exclusive "`coeflegend' `selegend'"
                 = opts_exclusive " "
                     ────────────────────────────────────────────────────────
> ────────────────────────────────────────── begin opts_exclusive ──────────────
                     – version 8.2
                     – args opts optname errcode optslab
                     – local opts `opts'
                     = local opts
                     – local n 0
                     – while `"`opts'"' != "" {
```

```
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
                  _____
>  _____ end opts_exclusive _____
                – opts_exclusive "`noci' `nopvalues'"
                = opts_exclusive " "
                  _____
>  _____ begin opts_exclusive _____
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
                  _____
>  _____ end opts_exclusive _____
                – local K : list sizeof namelist
                – gettoken c_diopts c_opts : namelist
                – opts_exclusive "`coding' `compare'"
                = opts_exclusive " "
                  _____
>  _____ begin opts_exclusive _____
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
```

```
                        – exit
         ─────────────────────────────────────────────────
>  ──────────────────────── end opts_exclusive ──────────
                        – opts_exclusive "`versus' `compare'"
                        = opts_exclusive " "
                        ─────────────────────────────────────────
>  ──────────────────────── begin opts_exclusive ────────
                        – version 8.2
                        – args opts optname errcode optslab
                        – local opts `opts'
                        = local opts
                        – local n 0
                        – while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        – if `n' < 2 {
                        = if 0 < 2 {
                        – exit
                        ─────────────────────────────────────────
>  ──────────────────────── end opts_exclusive ──────────
                        – opts_exclusive "`abbrev' `noabbrev'"
                        = opts_exclusive " "
                        ─────────────────────────────────────────
>  ──────────────────────── begin opts_exclusive ────────
                        – version 8.2
                        – args opts optname errcode optslab
                        – local opts `opts'
                        = local opts
                        – local n 0
                        – while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        – if `n' < 2 {
                        = if 0 < 2 {
                        – exit
                        ─────────────────────────────────────────
>  ──────────────────────── end opts_exclusive ──────────
                        – local allbaselevels `allbaselevels' `noallbaselevels'
                        = local allbaselevels
                        – local baselevels `baselevels' `nobaselevels'
                        = local baselevels
                        – local emptycells `emptycells' `noemptycells'
```

```
= local emptycells
– local omitted `omitted' `noomitted'
= local omitted
– local lstretch `lstretch' `nolstretch'
= local lstretch
– local fvlabel `fvlabel' `nofvlabel'
= local fvlabel
– local abbrev `abbrev' `noabbrev'
= local abbrev
– if "`allbaselevels'`baselevels'" == "" {
= if "" == "" {
– if c(showbaselevels) == "all" {
  local allbaselevels allbaselevels
  }
– else if c(showbaselevels) == "on" {
  local baselevels baselevels
  }
– }
– if "`emptycells'" == "" {
= if "" == "" {
– if c(showemptycells) == "off" {
  local emptycells noemptycells
  }
– }
– if "`omitted'" == "" {
= if "" == "" {
– if c(showomitted) == "off" {
  local omitted noomitted
  }
– }
– if "`lstretch'" == "" {
= if "" == "" {
– if c(lstretch) == "off" {
  local lstretch nolstretch
  }
– }
– if `:length local cformat' {
= if 0 {
  confirm numeric format `cformat'
  if fmtwidth(`"`cformat'"') > 9 {
  local cformat "%9.0g"
  di "{txt}note: invalid cformat(), using default"
  }
  sreturn local cformat `"`cformat'"'
  local cformat `"cformat(`cformat')"'
  }
```

```
  - if `:length local sformat' {
  = if 0 {
    confirm numeric format `sformat'
    if fmtwidth(`"`sformat'"') > 8 {
    local sformat "%8.2f"
    di "{txt}note: invalid sformat(), using default"
    }
    sreturn local sformat `"`sformat'"'
    local sformat `"sformat(`sformat')"'
    }
  - if `:length local pformat' {
  = if 0 {
    confirm numeric format `pformat'
    if fmtwidth(`"`pformat'"') > 5 {
    local pformat "%5.3f"
    di "{txt}note: invalid pformat(), using default"
    }
    sreturn local pformat `"`pformat'"'
    local pformat `"pformat(`pformat')"'
    }
  - if `K' == 1 & `:length local options' {
  = if 2 == 1 & 0 {
    syntax namelist(max=2) [, `DIOPTS']
    }
  - if reldif(`level', c(level)) > 1e-3 {
  = if reldif(95, c(level)) > 1e-3 {
    local levelopt level(`level')
    }
  - Wrapon , `fvwrapon'
  = Wrapon ,
    ─────────────────────────────────────────────────

> ───────────────────────────── begin _get_diopts.Wrapon ─────────────
  - capture syntax [, WOrd WIdth]
  - if c(rc) {
    di as err "invalid fvwrapon() option;"
    syntax [, WOrd WIdth]
    exit 198
    }
  - opts_exclusive "`word' `width'" fvwrapon
  = opts_exclusive " " fvwrapon
    ─────────────────────────────────────────────────

> ──────────────────────────────── begin opts_exclusive ─────────────
  - version 8.2
  - args opts optname errcode optslab
  - local opts `opts'
  = local opts
```

```
                          – local n 0
                          – while `"`opts'"' != "" {
                          = while `""' != "" {
                            local ++n
                            gettoken item`n' opts : opts, bind
                            }
                          – if `n' < 2 {
                          = if 0 < 2 {
                          – exit
                          ────────────────────────────────────────
  > ──────────────────────────────── end opts_exclusive ───────────────
                      – local fvwrapon `word' `width'
                      = local fvwrapon
                      – if `:length local fvwrapon' {
                      = if 0 {
                        c_local fvwrapon fvwrapon(`fvwrapon')
                        }
                          ────────────────────────────────────────
  > ──────────────────────────── end _get_diopts.Wrapon ───────────────
                      – if "`fvwrap'" != "" {
                      = if "" != "" {
                        FVWrap, `fvwrap'
                        }
                      – c_local `c_diopts' `levelopt' `vsquish' `allbaselevels' `b
  > aselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `co
  > eflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `compar
  > e' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `abb
  > rev'
                      = c_local diopts
                      – if `K' == 2 {
                      = if 2 == 2 {
                      – c_local `c_opts' `"`options'"'
                      = c_local  options `""'
                      – }
                      – sreturn local coding `coding'
                      = sreturn local coding
                      – sreturn local versus `versus'
                      = sreturn local versus
                      – sreturn local compare `compare'
                      = sreturn local compare
                      – sreturn local level `level'
                      = sreturn local level 95
                          ────────────────────────────────────────
  > ──────────────────────────── end _get_diopts.GetDiopts ────────────
                      – c_local `name1' `"`diopts'"'
                      = c_local diopts `""'
```

```
              - local snames : s(macros)
              - foreach sname of local snames {
              - local S_`sname' = s(`sname')
              = local S_level = s(level)
              - }
              - local S_`sname' = s(`sname')
              = local S_k = s(k)
              - }
              - local S_`sname' = s(`sname')
              = local S_k_fill = s(k_fill)
              - }
              - local S_`sname' = s(`sname')
              = local S_optlist = s(optlist)
              - }
              - local S_`sname' = s(`sname')
              = local S_namelist = s(namelist)
              - }
              - local S_`sname' = s(`sname')
              = local S_deriv = s(deriv)
              - }
              - local S_`sname' = s(`sname')
              = local S_log = s(log)
              - }
              - local S_`sname' = s(`sname')
              = local S_before = s(before)
              - }
              - local S_`sname' = s(`sname')
              = local S_after = s(after)
              - }
              - sreturn clear
              - GetDiopts DEFAULT
              ─────────────────────────────────────────────
> ───────────────────────────── begin _get_diopts.GetDiopts ───────────────
              - local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLBAS
> ESlevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMPTY
> cells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(stri
> ng) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru) F
> VWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru) N
> OABBREV ABBREV
              - syntax namelist(max=2) [, `DIOPTS' *]
              = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBASE
> levels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMP
> TYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND
>  cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRA
> P(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYP
> E(passthru) NOABBREV ABBREV *]
```

```
                  – opts_exclusive "`allbaselevels' `noallbaselevels'"
                = opts_exclusive " "
                  _____
>  ─────────────────────────────────────── begin opts_exclusive ──────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                = if 0 < 2 {
                  – exit
                  _____
>  ───────────────────────────────────────── end opts_exclusive ──────────
                  – opts_exclusive "`allbaselevels' `nobaselevels'"
                = opts_exclusive " "
                  _____
>  ─────────────────────────────────────── begin opts_exclusive ──────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                = if 0 < 2 {
                  – exit
                  _____
>  ───────────────────────────────────────── end opts_exclusive ──────────
                  – opts_exclusive "`baselevels' `nobaselevels'"
                = opts_exclusive " "
                  _____
>  ─────────────────────────────────────── begin opts_exclusive ──────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                = local opts
```

```
                   – local n 0
                   – while `"`opts'"' != "" {
                   = while `""' != "" {
                     local ++n
                     gettoken item`n' opts : opts, bind
                     }
                   – if `n' < 2 {
                   = if 0 < 2 {
                   – exit
                   ───────────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ────────────
                 – opts_exclusive "`emptycells' `noemptycells'"
                 = opts_exclusive " "
                   ───────────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ──────────
                   – version 8.2
                   – args opts optname errcode optslab
                   – local opts `opts'
                   = local opts
                   – local n 0
                   – while `"`opts'"' != "" {
                   = while `""' != "" {
                     local ++n
                     gettoken item`n' opts : opts, bind
                     }
                   – if `n' < 2 {
                   = if 0 < 2 {
                   – exit
                   ───────────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ────────────
                 – opts_exclusive "`fvlabel' `nofvlabel'"
                 = opts_exclusive " "
                   ───────────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ──────────
                   – version 8.2
                   – args opts optname errcode optslab
                   – local opts `opts'
                   = local opts
                   – local n 0
                   – while `"`opts'"' != "" {
                   = while `""' != "" {
                     local ++n
                     gettoken item`n' opts : opts, bind
                     }
                   – if `n' < 2 {
                   = if 0 < 2 {
```

```
                            – exit
                ─────────────────────────────────────────────
>  ───────────────────────────────── end opts_exclusive ─────────────
                – opts_exclusive "`omitted' `noomitted'"
                = opts_exclusive " "
                ─────────────────────────────────────────────
>  ───────────────────────────────── begin opts_exclusive ─────────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
                ─────────────────────────────────────────────
>  ───────────────────────────────── end opts_exclusive ─────────────
                – opts_exclusive "`lstretch' `nolstretch'"
                = opts_exclusive " "
                ─────────────────────────────────────────────
>  ───────────────────────────────── begin opts_exclusive ─────────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
                ─────────────────────────────────────────────
>  ───────────────────────────────── end opts_exclusive ─────────────
                – opts_exclusive "`cnsreport' `fullcnsreport'"
                = opts_exclusive " "
                ─────────────────────────────────────────────
>  ───────────────────────────────── begin opts_exclusive ─────────────
                – version 8.2
```

```
                   − args opts optname errcode optslab
                   − local opts `opts'
                   = local opts
                   − local n 0
                   − while `"`opts'"' != "" {
                   = while `""' != "" {
                     local ++n
                     gettoken item`n' opts : opts, bind
                     }
                   − if `n' < 2 {
                   = if 0 < 2 {
                   − exit
                   ──────────────────────────────────────────────────
  > ──────────────────────────────── end opts_exclusive ───────────
                 − opts_exclusive "`coeflegend' `selegend'"
                 = opts_exclusive " "
                   ──────────────────────────────────────────────────
  > ──────────────────────────────── begin opts_exclusive ─────────
                   − version 8.2
                   − args opts optname errcode optslab
                   − local opts `opts'
                   = local opts
                   − local n 0
                   − while `"`opts'"' != "" {
                   = while `""' != "" {
                     local ++n
                     gettoken item`n' opts : opts, bind
                     }
                   − if `n' < 2 {
                   = if 0 < 2 {
                   − exit
                   ──────────────────────────────────────────────────
  > ──────────────────────────────── end opts_exclusive ───────────
                 − opts_exclusive "`noci' `nopvalues'"
                 = opts_exclusive " "
                   ──────────────────────────────────────────────────
  > ──────────────────────────────── begin opts_exclusive ─────────
                   − version 8.2
                   − args opts optname errcode optslab
                   − local opts `opts'
                   = local opts
                   − local n 0
                   − while `"`opts'"' != "" {
                   = while `""' != "" {
                     local ++n
                     gettoken item`n' opts : opts, bind
```

```
            }
      − if `n' < 2 {
      = if 0 < 2 {
      − exit
      ─────────────────────────────────────────
```

> ───────────────────────────── end opts_exclusive ─────────────

```
      − local K : list sizeof namelist
      − gettoken c_diopts c_opts : namelist
      − opts_exclusive "`coding' `compare'"
      = opts_exclusive " "
      ─────────────────────────────────────────
```

> ───────────────────────────── begin opts_exclusive ─────────────

```
      − version 8.2
      − args opts optname errcode optslab
      − local opts `opts'
      = local opts
      − local n 0
      − while `"`opts'"' != "" {
      = while `""' != "" {
        local ++n
        gettoken item`n' opts : opts, bind
        }
      − if `n' < 2 {
      = if 0 < 2 {
      − exit
      ─────────────────────────────────────────
```

> ───────────────────────────── end opts_exclusive ─────────────

```
      − opts_exclusive "`versus' `compare'"
      = opts_exclusive " "
      ─────────────────────────────────────────
```

> ───────────────────────────── begin opts_exclusive ─────────────

```
      − version 8.2
      − args opts optname errcode optslab
      − local opts `opts'
      = local opts
      − local n 0
      − while `"`opts'"' != "" {
      = while `""' != "" {
        local ++n
        gettoken item`n' opts : opts, bind
        }
      − if `n' < 2 {
      = if 0 < 2 {
      − exit
      ─────────────────────────────────────────
```

> ───────────────────────────── end opts_exclusive ─────────────

```
              – opts_exclusive "`abbrev' `noabbrev'"
              = opts_exclusive " "
              ─────────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ──────────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
              ─────────────────────────────────────────────
> ───────────────────────────────── end opts_exclusive ──────────────
              – local allbaselevels `allbaselevels' `noallbaselevels'
              = local allbaselevels
              – local baselevels `baselevels' `nobaselevels'
              = local baselevels
              – local emptycells `emptycells' `noemptycells'
              = local emptycells
              – local omitted `omitted' `noomitted'
              = local omitted
              – local lstretch `lstretch' `nolstretch'
              = local lstretch
              – local fvlabel `fvlabel' `nofvlabel'
              = local fvlabel
              – local abbrev `abbrev' `noabbrev'
              = local abbrev
              – if "`allbaselevels'`baselevels'" == "" {
              = if "" == "" {
              – if c(showbaselevels) == "all" {
                local allbaselevels allbaselevels
                }
              – else if c(showbaselevels) == "on" {
                local baselevels baselevels
                }
              – }
              – if "`emptycells'" == "" {
              = if "" == "" {
              – if c(showemptycells) == "off" {
                local emptycells noemptycells
```

```
      }
  -   }
  -   if "`omitted'" == "" {
  =   if "" == "" {
  -   if c(showomitted) == "off" {
      local omitted noomitted
      }
  -   }
  -   if "`lstretch'" == "" {
  =   if "" == "" {
  -   if c(lstretch) == "off" {
      local lstretch nolstretch
      }
  -   }
  -   if `:length local cformat' {
  =   if 0 {
      confirm numeric format `cformat'
      if fmtwidth(`"`cformat'"') > 9 {
      local cformat "%9.0g"
      di "{txt}note: invalid cformat(), using default"
      }
      sreturn local cformat `"`cformat'"'
      local cformat `"cformat(`cformat')"'
      }
  -   if `:length local sformat' {
  =   if 0 {
      confirm numeric format `sformat'
      if fmtwidth(`"`sformat'"') > 8 {
      local sformat "%8.2f"
      di "{txt}note: invalid sformat(), using default"
      }
      sreturn local sformat `"`sformat'"'
      local sformat `"sformat(`sformat')"'
      }
  -   if `:length local pformat' {
  =   if 0 {
      confirm numeric format `pformat'
      if fmtwidth(`"`pformat'"') > 5 {
      local pformat "%5.3f"
      di "{txt}note: invalid pformat(), using default"
      }
      sreturn local pformat `"`pformat'"'
      local pformat `"pformat(`pformat')"'
      }
  -   if `K' == 1 & `:length local options' {
  =   if 1 == 1 & 0 {
```

```
                      syntax namelist(max=2) [, `DIOPTS']
                      }
            -  if reldif(`level', c(level)) > 1e-3 {
            =  if reldif(95, c(level)) > 1e-3 {
               local levelopt level(`level')
               }
            -  Wrapon , `fvwrapon'
            =  Wrapon ,
               ─────────────────────────────────────────────────
 >  ──────────────────────────────  begin _get_diopts.Wrapon  ──────────
            -  capture syntax [, WOrd WIdth]
            -  if c(rc) {
               di as err "invalid fvwrapon() option;"
               syntax [, WOrd WIdth]
               exit 198
               }
            -  opts_exclusive "`word' `width'" fvwrapon
            =  opts_exclusive " " fvwrapon
               ─────────────────────────────────────────────────
 >  ──────────────────────────────────  begin opts_exclusive  ──────────
            -  version 8.2
            -  args opts optname errcode optslab
            -  local opts `opts'
            =  local opts
            -  local n 0
            -  while `"`opts'"' != "" {
            =  while `""' != "" {
                 local ++n
                 gettoken item`n' opts : opts, bind
                 }
            -  if `n' < 2 {
            =  if 0 < 2 {
            -  exit
               ─────────────────────────────────────────────────
 >  ────────────────────────────────────  end opts_exclusive  ──────────
            -  local fvwrapon `word' `width'
            =  local fvwrapon
            -  if `:length local fvwrapon' {
            =  if 0 {
               c_local fvwrapon fvwrapon(`fvwrapon')
               }
               ─────────────────────────────────────────────────
 >  ────────────────────────────────  end _get_diopts.Wrapon  ──────────
            -  if "`fvwrap'" != "" {
            =  if "" != "" {
               FVWrap, `fvwrap'
```

```
                    }
                  – c_local `c_diopts' `levelopt' `vsquish' `allbaselevels' `b
> aselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `co
> eflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `compar
> e' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `abb
> rev'
                  = c_local DEFAULT
                  – if `K' == 2 {
                  = if 1 == 2 {
                    c_local `c_opts' `"`options'"'
                    }
                  – sreturn local coding `coding'
                  = sreturn local coding
                  – sreturn local versus `versus'
                  = sreturn local versus
                  – sreturn local compare `compare'
                  = sreturn local compare
                  – sreturn local level `level'
                  = sreturn local level 95
                  ─────────────────────────────────────────────────────
> ───────────────────────────────── end _get_diopts.GetDiopts ────────────
                – if `"`name2'"' == "" {
                = if `"options"' == "" {
                  GetDiopts DUPS, `options'
                  }
                – else {
                – GetDiopts DUPS options, `options'
                = GetDiopts DUPS options,
                ─────────────────────────────────────────────────────
> ──────────────────────────────── begin _get_diopts.GetDiopts ───────────
                  – local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLBAS
> Elevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMPTY
> cells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(stri
> ng) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru) F
> VWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru) N
> OABBREV ABBREV
                  – syntax namelist(max=2) [, `DIOPTS' *]
                  = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBASE
> levels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMP
> TYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND
>  cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRA
> P(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYP
> E(passthru) NOABBREV ABBREV *]
                  – opts_exclusive "`allbaselevels' `noallbaselevels'"
                  = opts_exclusive " "
                  ─────────────────────────────────────────────────────
```

```
> ───────────────────────────── begin opts_exclusive ─────────────
               – version 8.2
               – args opts optname errcode optslab
               – local opts `opts'
               = local opts
               – local n 0
               – while `"`opts'"' != "" {
               = while `""' != "" {
                 local ++n
                 gettoken item`n' opts : opts, bind
                 }
               – if `n' < 2 {
               = if 0 < 2 {
               – exit
               ──────────────────────────────────────────────────
> ───────────────────────────── end opts_exclusive ──────────────
             – opts_exclusive "`allbaselevels' `nobaselevels'"
             = opts_exclusive " "
               ──────────────────────────────────────────────────
> ───────────────────────────── begin opts_exclusive ─────────────
               – version 8.2
               – args opts optname errcode optslab
               – local opts `opts'
               = local opts
               – local n 0
               – while `"`opts'"' != "" {
               = while `""' != "" {
                 local ++n
                 gettoken item`n' opts : opts, bind
                 }
               – if `n' < 2 {
               = if 0 < 2 {
               – exit
               ──────────────────────────────────────────────────
> ───────────────────────────── end opts_exclusive ──────────────
             – opts_exclusive "`baselevels' `nobaselevels'"
             = opts_exclusive " "
               ──────────────────────────────────────────────────
> ───────────────────────────── begin opts_exclusive ─────────────
               – version 8.2
               – args opts optname errcode optslab
               – local opts `opts'
               = local opts
               – local n 0
               – while `"`opts'"' != "" {
               = while `""' != "" {
```

```
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  ──────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ─────────────
                  – opts_exclusive "`emptycells' `noemptycells'"
                  = opts_exclusive " "
                  ──────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ───────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  ──────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ─────────────
                  – opts_exclusive "`fvlabel' `nofvlabel'"
                  = opts_exclusive " "
                  ──────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ───────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  ──────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ─────────────
```

```
                  – opts_exclusive "`omitted' `noomitted'"
                  = opts_exclusive " "
                  ───────────────────────────────────────────────
>  ─────────────────────────────────────── begin opts_exclusive ──────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  ───────────────────────────────────────────────
>  ─────────────────────────────────────── end opts_exclusive ──────────
                  – opts_exclusive "`lstretch' `nolstretch'"
                  = opts_exclusive " "
                  ───────────────────────────────────────────────
>  ─────────────────────────────────────── begin opts_exclusive ──────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  ───────────────────────────────────────────────
>  ─────────────────────────────────────── end opts_exclusive ──────────
                  – opts_exclusive "`cnsreport' `fullcnsreport'"
                  = opts_exclusive " "
                  ───────────────────────────────────────────────
>  ─────────────────────────────────────── begin opts_exclusive ──────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
```

```
                       – local n 0
                       – while `"`opts'"' != "" {
                       = while `""' != "" {
                         local ++n
                         gettoken item`n' opts : opts, bind
                         }
                       – if `n' < 2 {
                       = if 0 < 2 {
                       – exit
                       ───────────────────────────────────────────────
>  ──────────────────────────────────── end opts_exclusive ─────────────
                   – opts_exclusive "`coeflegend' `selegend'"
                   = opts_exclusive " "
                       ───────────────────────────────────────────────
>  ──────────────────────────────────── begin opts_exclusive ───────────
                       – version 8.2
                       – args opts optname errcode optslab
                       – local opts `opts'
                       = local opts
                       – local n 0
                       – while `"`opts'"' != "" {
                       = while `""' != "" {
                         local ++n
                         gettoken item`n' opts : opts, bind
                         }
                       – if `n' < 2 {
                       = if 0 < 2 {
                       – exit
                       ───────────────────────────────────────────────
>  ──────────────────────────────────── end opts_exclusive ─────────────
                   – opts_exclusive "`noci' `nopvalues'"
                   = opts_exclusive " "
                       ───────────────────────────────────────────────
>  ──────────────────────────────────── begin opts_exclusive ───────────
                       – version 8.2
                       – args opts optname errcode optslab
                       – local opts `opts'
                       = local opts
                       – local n 0
                       – while `"`opts'"' != "" {
                       = while `""' != "" {
                         local ++n
                         gettoken item`n' opts : opts, bind
                         }
                       – if `n' < 2 {
                       = if 0 < 2 {
```

```
                    – exit
                  ───────────────────────────────────────────────────
> ─────────────────────────────────── end opts_exclusive ───────────
                  – local K : list sizeof namelist
                  – gettoken c_diopts c_opts : namelist
                  – opts_exclusive "`coding' `compare'"
                  = opts_exclusive " "
                  ───────────────────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ─────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  ───────────────────────────────────────────────────
> ─────────────────────────────────── end opts_exclusive ───────────
                  – opts_exclusive "`versus' `compare'"
                  = opts_exclusive " "
                  ───────────────────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ─────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  ───────────────────────────────────────────────────
> ─────────────────────────────────── end opts_exclusive ───────────
                  – opts_exclusive "`abbrev' `noabbrev'"
                  = opts_exclusive " "
                  ───────────────────────────────────────────────────
```

```
> ─────────────────────────── begin opts_exclusive ───────────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"'`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
                ─────────────────────────────────────────────────

> ─────────────────────────── end opts_exclusive ─────────────────
                – local allbaselevels `allbaselevels' `noallbaselevels'
                = local allbaselevels
                – local baselevels `baselevels' `nobaselevels'
                = local baselevels
                – local emptycells `emptycells' `noemptycells'
                = local emptycells
                – local omitted `omitted' `noomitted'
                = local omitted
                – local lstretch `lstretch' `nolstretch'
                = local lstretch
                – local fvlabel `fvlabel' `nofvlabel'
                = local fvlabel
                – local abbrev `abbrev' `noabbrev'
                = local abbrev
                – if "`allbaselevels'`baselevels'" == "" {
                = if "" == "" {
                – if c(showbaselevels) == "all" {
                  local allbaselevels allbaselevels
                  }
                – else if c(showbaselevels) == "on" {
                  local baselevels baselevels
                  }
                – }
                – if "`emptycells'" == "" {
                = if "" == "" {
                – if c(showemptycells) == "off" {
                  local emptycells noemptycells
                  }
                – }
                – if "`omitted'" == "" {
```

```
= if "" == "" {
- if c(showomitted) == "off" {
  local omitted noomitted
  }
- }
- if "`lstretch'" == "" {
= if "" == "" {
- if c(lstretch) == "off" {
  local lstretch nolstretch
  }
- }
- if `:length local cformat' {
= if 0 {
  confirm numeric format `cformat'
  if fmtwidth(`"`cformat'"') > 9 {
  local cformat "%9.0g"
  di "{txt}note: invalid cformat(), using default"
  }
  sreturn local cformat `"`cformat'"'
  local cformat `"cformat(`cformat')"'
  }
- if `:length local sformat' {
= if 0 {
  confirm numeric format `sformat'
  if fmtwidth(`"`sformat'"') > 8 {
  local sformat "%8.2f"
  di "{txt}note: invalid sformat(), using default"
  }
  sreturn local sformat `"`sformat'"'
  local sformat `"sformat(`sformat')"'
  }
- if `:length local pformat' {
= if 0 {
  confirm numeric format `pformat'
  if fmtwidth(`"`pformat'"') > 5 {
  local pformat "%5.3f"
  di "{txt}note: invalid pformat(), using default"
  }
  sreturn local pformat `"`pformat'"'
  local pformat `"pformat(`pformat')"'
  }
- if `K' == 1 & `:length local options' {
= if 2 == 1 & 0 {
  syntax namelist(max=2) [, `DIOPTS']
  }
- if reldif(`level', c(level)) > 1e-3 {
```

```
                    = if reldif(95, c(level)) > 1e-3 {
                      local levelopt level(`level')
                      }
                    - Wrapon , `fvwrapon'
                    = Wrapon ,
                    ─────────────────────────────────────────────
>  ───────────────────────────────  begin _get_diopts.Wrapon ───────────────
                    - capture syntax [, WOrd WIdth]
                    - if c(rc) {
                      di as err "invalid fvwrapon() option;"
                      syntax [, WOrd WIdth]
                      exit 198
                      }
                    - opts_exclusive "`word' `width'" fvwrapon
                    = opts_exclusive " " fvwrapon
                    ─────────────────────────────────────────────
>  ───────────────────────────────  begin opts_exclusive ───────────────────
                    - version 8.2
                    - args opts optname errcode optslab
                    - local opts `opts'
                    = local opts
                    - local n 0
                    - while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    - if `n' < 2 {
                    = if 0 < 2 {
                    - exit
                    ─────────────────────────────────────────────
>  ───────────────────────────────  end opts_exclusive ─────────────────────
                    - local fvwrapon `word' `width'
                    = local fvwrapon
                    - if `:length local fvwrapon' {
                    = if 0 {
                      c_local fvwrapon fvwrapon(`fvwrapon')
                      }
                    ─────────────────────────────────────────────
>  ───────────────────────────────  end _get_diopts.Wrapon ─────────────────
                    - if "`fvwrap'" != "" {
                    = if "" != "" {
                      FVWrap, `fvwrap'
                      }
                    - c_local `c_diopts' `levelopt' `vsquish' `allbaselevels' `b
>  aselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `co
```

```
> eflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `compar
> e' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `abb
> rev'
                    = c_local DUPS
                    - if `K' == 2 {
                    = if 2 == 2 {
                    - c_local `c_opts' `"`options'"'
                    = c_local  options `""'
                    - }
                    - sreturn local coding `coding'
                    = sreturn local coding
                    - sreturn local versus `versus'
                    = sreturn local versus
                    - sreturn local compare `compare'
                    = sreturn local compare
                    - sreturn local level `level'
                    = sreturn local level 95
                  ─────────────────────────────────────────────────────────
> ──────────────────────────────── end _get_diopts.GetDiopts ────────────────
                    - c_local `name2' `"`options'"'
                    = c_local options `""'
                    - }
                    - local DUPS : list DUPS - DEFAULT
                    - gettoken DUPS : DUPS
                    - if `"`DUPS'"' != "" {
                    = if `""' != "" {
                      if (strpos(`"`DUPS'"', "(")) {
                      gettoken DUPS : DUPS, parse("(")
                      local DUPS `"`DUPS'()"'
                      }
                      di as err "duplicate {bf:`DUPS'} option not allowed"
                      exit 198
                      }
                    - sreturn clear
                    - foreach sname of local snames {
                    - sreturn local `sname' = `"`S_`sname''"'
                    = sreturn local level = `"95"'
                    - }
                    - sreturn local `sname' = `"`S_`sname''"'
                    = sreturn local k = `"10"'
                    - }
                    - sreturn local `sname' = `"`S_`sname''"'
                    = sreturn local k_fill = `"10"'
                    - }
                    - sreturn local `sname' = `"`S_`sname''"'
                    = sreturn local optlist = `"CLuster"'
```

```
              - }
              - sreturn local `sname' = `"'`S_`sname''"'
              = sreturn local namelist = `"cluster"'
              - }
              - sreturn local `sname' = `"'`S_`sname''"'
              = sreturn local deriv = `"0"'
              - }
              - sreturn local `sname' = `"'`S_`sname''"'
              = sreturn local log = `"log"'
              - }
              - sreturn local `sname' = `"'`S_`sname''"'
              = sreturn local before = `"PCAUX "'
              - }
              - sreturn local `sname' = `"'`S_`sname''"'
              = sreturn local after = `"aux"'
              - }
              ────────────────────────────────────────────────
> ──────────────────────────────────────── end _get_diopts ───────────────
        - _get_eformopts , eformopts(`options') soptions allowed(__all__
> )
        = _get_eformopts , eformopts() soptions allowed(__all__)
              ────────────────────────────────────────────────
> ──────────────────────────────── begin _get_eformopts ───────────────
              - version 8.0
              - syntax [, eformopts(string asis) soptions ALLOWed(string) ]
              - local 0 , `eformopts'
              = local 0 ,
              - local EFALL NOHR hr NOSHR shr or IRr RRr tr TRatio
              - if "`soptions'" != "" {
              = if "soptions" != "" {
              - syntax [, EForm1(passthru) EForm `EFALL' * ]
              = syntax [, EForm1(passthru) EForm NOHR hr NOSHR shr or IRr RR
> r tr TRatio * ]
              - local opts `"'`options'"'
              = local opts `""'
              - local 0 , `eform1' `eform' `nohr' `hr' `noshr' `shr' `or' `i
> rr' `rrr' `tr' `tratio'
              = local 0 ,
              - }
              - if "`allowed'" == "__all__" {
              = if "__all__" == "__all__" {
              - local allowed `EFALL'
              = local allowed NOHR hr NOSHR shr or IRr RRr tr TRatio
              - }
              - foreach ef of local allowed {
              - capture confirm name `ef'
```

```
= capture confirm name NOHR
- if _rc {
  di as err "`ef' is not a valid name"
  exit 198
  }
- local efopts `efopts' `=lower("`ef'")'
= local efopts  nohr
- }
- capture confirm name `ef'
= capture confirm name hr
- if _rc {
  di as err "`ef' is not a valid name"
  exit 198
  }
- local efopts `efopts' `=lower("`ef'")'
= local efopts nohr hr
- }
- capture confirm name `ef'
= capture confirm name NOSHR
- if _rc {
  di as err "`ef' is not a valid name"
  exit 198
  }
- local efopts `efopts' `=lower("`ef'")'
= local efopts nohr hr noshr
- }
- capture confirm name `ef'
= capture confirm name shr
- if _rc {
  di as err "`ef' is not a valid name"
  exit 198
  }
- local efopts `efopts' `=lower("`ef'")'
= local efopts nohr hr noshr shr
- }
- capture confirm name `ef'
= capture confirm name or
- if _rc {
  di as err "`ef' is not a valid name"
  exit 198
  }
- local efopts `efopts' `=lower("`ef'")'
= local efopts nohr hr noshr shr or
- }
- capture confirm name `ef'
= capture confirm name IRr
```

```
                    - if _rc {
                      di as err "`ef' is not a valid name"
                      exit 198
                      }
                    - local efopts `efopts' `=lower("`ef'")'
                    = local efopts nohr hr noshr shr or irr
                    - }
                    - capture confirm name `ef'
                    = capture confirm name RRr
                    - if _rc {
                      di as err "`ef' is not a valid name"
                      exit 198
                      }
                    - local efopts `efopts' `=lower("`ef'")'
                    = local efopts nohr hr noshr shr or irr rrr
                    - }
                    - capture confirm name `ef'
                    = capture confirm name tr
                    - if _rc {
                      di as err "`ef' is not a valid name"
                      exit 198
                      }
                    - local efopts `efopts' `=lower("`ef'")'
                    = local efopts nohr hr noshr shr or irr rrr tr
                    - }
                    - capture confirm name `ef'
                    = capture confirm name TRatio
                    - if _rc {
                      di as err "`ef' is not a valid name"
                      exit 198
                      }
                    - local efopts `efopts' `=lower("`ef'")'
                    = local efopts nohr hr noshr shr or irr rrr tr tratio
                    - }
                    - local efopts : list uniq efopts
                    - syntax [, EForm1(string) EForm `allowed' ]
                    = syntax [, EForm1(string) EForm NOHR hr NOSHR shr or IRr RRr
  > tr TRatio ]
                    - foreach ef of local efopts {
                    - local eform `eform' ``ef''
                    = local eform
                    - }
                    - local eform `eform' ``ef''
                    = local eform
                    - }
                    - local eform `eform' ``ef''
```

```
= local eform
- }
- local eform `eform' ``ef''
= local eform
- }
- local eform `eform' ``ef''
= local eform
- }
- local eform `eform' ``ef''
= local eform
- }
- local eform `eform' ``ef''
= local eform
- }
- local eform `eform' ``ef''
= local eform
- }
- local eform `eform' ``ef''
= local eform
- }
- if `"`eform1'"'=="Odds ratio" {
= if `""'=="Odds ratio" {
  local eform_cons_ti = "Odds"
  local eform_cons_note = "odds ratios"
  }
- else if `"`eform1'"'=="Haz. ratio" {
= else if `""'=="Haz. ratio" {
  local eform_cons_ti = "Hazard"
  local eform_cons_note = "hazard ratios"
  }
- else if `"`eform1'"'=="Time ratio" {
= else if `""'=="Time ratio" {
  local eform_cons_ti = "Time"
  local eform_cons_note = "time ratios"
  }
- else if `"`eform1'"'=="IRR" {
= else if `""'=="IRR" {
  local eform_cons_ti = "Inc. rate"
  local eform_cons_note = "incidence-rate ratios"
  local eform_cons_ti2 = "incidence rate"
  }
- else if `"`eform1'"'=="Risk ratio" {
= else if `""'=="Risk ratio" {
  local eform_cons_ti = "Risk"
  local eform_cons_note = "risk ratios"
  }
```

```
-           else if `"`eform1'"'=="Hlth ratio" {
=           else if `""'=="Hlth ratio" {
            local eform_cons_ti = "Health"
            local eform_cons_note = "health ratios"
            }
-           local k : list sizeof eform
-           if `k' {
=           if 0 {
            opts_exclusive "`eform'"
            if `:length local eform1' {
            opts_exclusive "eform() `eform'"
            }
            }
-           if `k' {
=           if 0 {
            if ("`eform'"=="eform") local eform1 = "exp(b)"
            else if ("`eform'"=="hr") {
            local eform1 = "Haz. ratio"
            local eform_cons_ti = "Hazard"
            local eform_cons_note = "hazard ratios"
            }
            else if ("`eform'"=="shr") {
            local eform1 = "SHR"
            local eform_cons_ti = "Subhazard"
            local eform_cons_note = "subhazard ratios"
            }
            else if ("`eform'"=="tr") {
            local eform1 = "Time ratio"
            local eform_cons_ti = "Time"
            local eform_cons_note = "time ratios"
            }
            else if ("`eform'"=="tratio") {
            local eform1 = "Time ratio"
            local eform_cons_ti = "Time"
            local eform_cons_note = "time ratios"
            }
            else if ("`eform'"=="or") {
            local eform1 = "Odds ratio"
            if ("`e(cmd)'"=="asclogit" | "`e(cmd)'"=="cmclogit" | "`e(cm
>  d)'"=="cmmixlogit" | "`e(cmd)'"=="cmxtmixlogit" ) {
            local eform_cons_ti = "Rel. risk"
            local eform_cons_note = "relative-risk ratios"
            local eform_cons_ti2 = "relative risk"
            }
            else {
            local eform_cons_ti = "Odds"
```

```
                    local eform_cons_note = "odds ratios"
                    }
                    }
              else if ("`eform'"=="irr") {
              local eform1 = "IRR"
              local eform_cons_ti = "Inc. rate"
              local eform_cons_note = "incidence-rate ratios"
              local eform_cons_ti2 = "incidence rate"
              }
              else if ("`eform'"=="rrr") {
              local eform1 = "RRR"
              local eform_cons_ti = "Rel. risk"
              local eform_cons_note = "relative-risk ratios"
              local eform_cons_ti2 = "relative risk"
              }
              else if ("`eform'"!="nohr") & ("`eform'"!="noshr") {
              local eform1 = upper("`eform'")
              }
              }
      - sreturn clear
      - sreturn local options `"`opts'"'
      = sreturn local options `""'
      - sreturn local opt `eform'
      = sreturn local opt
      - sreturn local str `eform1'
      = sreturn local str
      - if `"`eform1'"' != "" {
      = if `""' != "" {
        sreturn local eform eform(`"`eform1'"')
        }
      - else sreturn local eform ""
      - sreturn local eform_cons_ti `eform_cons_ti'
      = sreturn local eform_cons_ti
      - sreturn local eform_cons_note `eform_cons_note'
      = sreturn local eform_cons_note
      - sreturn local eform_cons_ti2 `eform_cons_ti2'
      = sreturn local eform_cons_ti2
      ────────────────────────────────────────────────────
> ──────────────────────────────── end _get_eformopts ─────────────
      - local eform `s(eform)'
      = local eform
      - local diparm `s(options)'
      = local diparm
      - _get_diparmopts , diparmopts(`diparm') level(`level')
      = _get_diparmopts , diparmopts() level(95)
      ────────────────────────────────────────────────────
```

```
> ──────────────────────── begin _get_diparmopts ─────────────
            – if _caller() < 8.2 {
              _get_diparmopts_8 `0'
              exit
              }
            – version 9
            – local version : di "version " string(_caller()) ":"
            – syntax [, diparmopts(string asis) EXECute soptions bottom pl
> us SYNTAXonly * ]
            – local goptions `options'
            = local goptions level(95)
            – SpliceGlobals junk , `goptions'
            = SpliceGlobals junk , level(95)
              ─────────────────────────────────────────────────────
> ──────────────────── begin _get_diparmopts.SpliceGlobals ────────────
            – syntax name(id="macro name" name=c_diparm) [, diparm(strin
> g asis) Level(cilevel) dof(passthru) syntaxonly ]
            – if `"`dof'"' == "" & `"`e(df_r)'"' != "" {
            = if `""' == "" & `""' != "" {
              capture confirm integer number `e(df_r)'
              if !c(rc) {
              local gdof dof(`e(df_r)')
              }
              capture
              }
            – else local gdof `"`dof'"'
            = else local gdof `""'
            – local glevel `level'
            = local glevel 95
            – local lopt level(`glevel')
            = local lopt level(95)
            – if (`"`diparm'"' == "") exit
            = if (`""' == "") exit
              ─────────────────────────────────────────────────────
> ──────────────────── end _get_diparmopts.SpliceGlobals ────────────
            – local 0 `", `diparmopts'"'
            = local 0 `", "'
            – local diparmopts
            – local k 0
            – syntax [, diparm(string asis) * ]
            – while `"`diparm'"' != "" {
            = while `""' != "" {
              local ++k
              local single 1
              local after
              capture _on_colon_parse `diparm'
```

```
                      if !c(rc) {
                      local single 0
                      local diparm `"`s(before)'"'
                      local after `"`s(after)'"'
                      }
                      capture
                      SpliceGlobals diparm , diparm(`diparm') `syntaxonly' `goptio
> ns'
                      local diparm`k' `"`diparm'"'
                      local diparmopts `"`diparmopts' : `diparm'"'
                      if `single' | `"`:list retok after'"' == "" {
                      local 0 `", `options'"'
                      syntax [, diparm(string asis) * ]
                      }
                      else {
                      local diparm `"`after'"'
                      }
                      }
          - if `"`soptions'"' == "" {
          = if `""' == "" {
          - syntax [, diparm(string asis) ]
          - }
          - if ("`execute'" == "") {
          = if ("" == "") {
          - sreturn clear
          - sreturn local options `"`options'"'
          = sreturn local options `""'
          - sreturn local diparm `"`diparmopts'"'
          = sreturn local diparm `""'
          - forval i = 1/`k' {
          = forval i = 1/0 {
            sreturn local diparm`i' `"`diparm`i''"'
            }
          - sreturn local k `k'
          = sreturn local k 0
          - exit
          ────────────────────────────────────────────────
>  ──────────────────────────────────── end _get_diparmopts ────────────────
          - if "`header'"=="" {
          = if ""=="" {
          - _coef_table_header, `title'
          = _coef_table_header,
          ────────────────────────────────────────────────
>  ──────────────────────────────────── begin _coef_table_header ────────────
          - version 9
          - if !c(noisily) {
```

```
                        exit
                        }
                    - syntax [, rclass noHeader obj(string) head1left(numlist max=
 > 1 integer >=0) head1right(numlist max=1 integer >=0) head2left(numlist max=1
 >  integer >=0) head2right(numlist max=1 integer >=0) head2start(numlist max=1
 >  integer >=1) width(numlist max=1 integer >=1) * ]
                        - if ("`header'" != "") exit
                        = if ("" != "") exit
                        - if ("`head2start'" != "" & "`width'" != "") {
                        = if ("" != "" & "" != "") {
                          opts_exclusive "head2start() width()"
                          exit 198
                          }
                        - local has_obj = (`"`obj'"' != "")
                        = local has_obj = (`""' != "")
                        - if (`has_obj' == 0) {
                        = if (0 == 0) {
                        - tempname obj
                        - }
                        - if ("`rclass'" != "") {
                        = if ("" != "") {
                          tempname rhold
                          _return hold `rhold'
                          }
                        - .`obj' = ._coef_table__header.new, `rclass' `options'
                        = .__000007 = ._coef_table__header.new,
                          -class _coef_table__header {
                          -          string   result          = "e"
                          -          string   newline         = "display"
                          -          double   opt_dvheader    = 0
                          -          double   opt_modeltest   = 0
                          -          double   opt_cluster     = 0
                          -          double   opt_rules       = 0
                          -          double   opt_tvar        = 0
                          -          double   opt_septitle    = 0
                          -          double   linesize        = 0
                          -          string   title           = ""
                          -          string   title2          = ""
                          -          string   groupvar        = ""
                          -          string   intmethod       = ""
                          -          double   intpoints       = -1
                          -          string   cmd             = ""
                          -          string   cmd2            = ""
                          -          string   prefix          = ""
                          -          double   is_prefix       = 0
                          -          double   is_svy          = 0
```

```
            –          double   is_margins     = 0
            –          double   is_gsem        = 0
            –          double   is_gsem_group  = 0
            –          double   is_sem         = 0
            –          double   is_areg        = 0
            –          double   is_demand      = 0
            –          double   is_demandn     = 0
            –          double   is_bacon       = 0
            –          double   is_htedid      = 0
            –          double   is_sum         = 0
            –          double   is_tab         = 0
            –          double   is_r2_p        = 1
            –          double   is_multclust   = 0
            –          double   is_stintcox    = 0
            –          double   is_bmareg      = 0
            –          double   prop_pushtitle = 0
            –          double   prop_groupvar  = 0
            –          double   prop_censlimits = 0
            –          double   prop_censored  = 0
            –          double   prop_nouncensored    = 0
            –          double   prop_iselected = 0
            –          double   prop_selected  = 0
            –          double   prop_groups    = 0
            –          double   prop_balance   = 0
            –          double   ablen          = 16
            –          double   width          = 78
            –          double   c1             = 1
            –          double   c2             = 16
            –          double   c2a            = 16
            –          double   c3             = 49
            –          double   c4             = 67
            –          double   c2wfmt         = 10
            –          double   c4wfmt         = 10
            –          string   scheme         = "ml"
            –          double  lalignr         = 0
            –          double  ralignr         = 0
            –          double  lalignl         = 0
            –          double  ralignl         = 0
            –          double  lalignla        = 0
            –          double  ralignla        = 0
            –          array   left
            –          array   right
            –}
            ──────────────────────────────────────────────────────
 > ─────────────────────────── begin _coef_table__header.new ───────────────
            – version 16
```

```
                          - syntax [, rclass noDVHeader noMODELtest TItle(string asis)
>   nocluster noRULES noTVAR SEPTITLE linesize(int 0) ]
                          - if "`rclass'" != "" {
                          = if "" != "" {
                            .result = "r"
                            }
                          - if "`dvheader'" == "" {
                          = if "" == "" {
                          - .opt_dvheader = 1
                          - }
                          - if "`modeltest'" == "" {
                          = if "" == "" {
                          - .opt_modeltest = 1
                          - }
                          - if "`cluster'" == "" {
                          = if "" == "" {
                          - .opt_cluster = 1
                          - }
                          - if "`rules'" == "" {
                          = if "" == "" {
                          - .opt_rules = 1
                          - }
                          - if "`tvar'" == "" {
                          = if "" == "" {
                          - .opt_tvar = 1
                          - }
                          - if "`septitle'" != "" {
                          = if "" != "" {
                            .opt_septitle = 1
                            }
                          - .linesize = `linesize'
                          = .linesize = 0
                          - .title = `"`title'"'
                          = .title = `""'
                          - if `"`.result'"' == "e" {
                          = if `"e"' == "e" {
                          - .New4e
                            ─────────────────────────────────────────────────
> ───────────────────────── begin _coef_table__header.New4e ─────────────
                          - version 16
                          - .cmd = "`e(cmd)'"
                          = .cmd = "nbreg"
                          - .cmd2 = "`e(cmd2)'"
                          = .cmd2 = ""
                          - .prefix = "`e(prefix)'"
                          = .prefix = ""
```

```
- if `"`.prefix'"' != "" {
= if `""' != "" {
  .is_prefix = 1
  }
- if "`.prefix'" == "svy" {
= if "" == "svy" {
  .is_svy = 1
  }
- if "`.cmd'" == "margins" {
= if "nbreg" == "margins" {
  .is_margins = 1
  }
- if inlist("`.cmd'", "contrast", "pwcompare") {
= if inlist("nbreg", "contrast", "pwcompare") {
  if "`.cmd2'" == "margins" {
  .is_margins = 1
  }
  }
- if "`.cmd'" == "gsem" | "`.cmd2'" == "gsem" {
= if "nbreg" == "gsem" | "" == "gsem" {
  .is_gsem = 1
  }
- if "`.cmd'" == "sem" {
= if "nbreg" == "sem" {
  .is_sem = 1
  }
- if "`.cmd'" == "areg" {
= if "nbreg" == "areg" {
  .is_areg = 1
  }
- if ("`.cmd'" == "demandsys" & `"`e(doheader)'"'=="yes")
> {
= if ("nbreg" == "demandsys" & `""'=="yes") {
  .is_demand = 1
  }
- if ("`.cmd'" == "demandsys") {
= if ("nbreg" == "demandsys") {
  .is_demandn = 1
  }
- if ("`.cmd'" == "xthdidregress" & "`e(inestat)'"=="") {
= if ("nbreg" == "xthdidregress" & ""=="") {
  .is_htedid = 1
  }
- if "`.cmd'" == "stintcox" {
= if "nbreg" == "stintcox" {
  .is_stintcox = 1
```

```
                                    }
                            -  if "`.cmd'" == "bdecomp" {
                            =  if "nbreg" == "bdecomp" {
                               .is_bacon = 1
                               }
                            -  if "`.cmd'" == "bmaregress" {
                            =  if "nbreg" == "bmaregress" {
                               .is_bmareg = 1
                               }
                            -  is_svysum `.cmd'
                            =  is_svysum nbreg
                            ─────────────────────────────────
>  ──────────────────────────────── begin is_svysum ──────────────────
                            -  version 9
                            -  local SvySum mean prop proportion ratio total
                            -  if `"`0'"' != "" & `:list 0 in SvySum' {
                            =  if `"nbreg"' != "" & 0 {
                               return scalar is_svysum = 1
                               }
                            -  else return scalar is_svysum = 0
                            ─────────────────────────────────
>  ──────────────────────────────── end is_svysum ────────────────────
                            -  .is_sum = r(is_svysum)
                            -  if `.is_svy' {
                            =  if 0 {
                               if "`.cmd'" == "tabulate" {
                               .is_tab = 1
                               }
                               }
                            -  if `.is_gsem' {
                            =  if 0 {
                               if `"`e(groupvar)'"' != "" & "`.cmd2'" == "" {
                               .is_gsem_group = 1
                               }
                               }
                            -  local clustvars `e(clustvar)'
                            =  local clustvars
                            -  local kclvar : list sizeof clustvars
                            -  .is_multclust = ((`kclvar'>1) & ("`e(kcluster)'"=="matri
>  x"))
                            =  .is_multclust = ((0>1) & (""=="matrix"))
                            -  if `.is_multclust' {
                            =  if 0 {
                               .prop_pushtitle = 1
                               }
                            -  local c2pfix 20
```

```
  - if `.is_sem' | `.is_gsem_group' {
  = if 0 | 0 {
    local crlen `"`e(crittype)'"'
    local crlen : smcllength local crlen
    if `crlen' >= `c2pfix' {
    local c2pfix = `crlen' + 2
    }
    }
  - if `.is_sum' {
  = if 0 {
    if `.linesize' > 62 {
    local offset = `.linesize' – 62
    }
    else local offset 0
    .width = 62 + `offset'
    .c2 = 18
    .c3 = 35 + `offset'
    .c4 = 51 + `offset'
    .c2wfmt = 7
    .c4wfmt = 10
    .scheme = "compact"
    }
  - else if `.is_prefix' | `.is_sem' | `.is_gsem_group' {
  = else if 0 | 0 | 0 {
    .width = 78
    .c2 = `c2pfix'
    .c3 = 49
    .c4 = 67
    .c2wfmt = 9
    .c4wfmt = 10
    .scheme = "svy"
    }
  - if `.is_svy' {
  = if 0 {
    local maxlen = `.width'–`.c2'–(`.c2wfmt'+2)–2–(`.c4'–`.c
> 3')–2

    if `maxlen' > 19 {
    local maxlen 19
    }
    local len : display %`maxlen'.0fc e(N_pop)
    local len : list retok len
    local len : length local len
    local ++maxlen
    local ++len
    if `.c4wfmt' <= `len' & `len' <= `maxlen' {
    .c3 = `.c3' + `.c4wfmt' – `len'
```

```
                           .c4 = `.c4' + `.c4wfmt' - `len'
                           .c4wfmt = `len'
                           }
                           }
                   ─────────────────────────────────────────
>   ─────────────────────── end _coef_table__header.New4e ───────────────
                 - }
                 - else {
                   .New4r
                   }
                 - local props `"`.Macro _coef_table_props'"'
                   ─────────────────────────────────────────
>   ─────────────────────── begin _coef_table__header.Macro ──────────────
                 - version 16
                 - class exit `"``.result'(`0')'"'
                 = class exit `""'
                   ─────────────────────────────────────────
>   ─────────────────────── end _coef_table__header.Macro ────────────────
                 = local props `""'
                 - if `.is_sem' | `.is_gsem_group' | `:list posof "pushtitle"
>   in props' {
                 = if 0 | 0 | 0 {
                   .prop_pushtitle = 1
                   }
                 - if (`.is_demand'| `.is_htedid') {
                 = if (0| 0) {
                   .prop_pushtitle = 1
                   }
                 - if (`.is_bmareg') {
                 = if (0) {
                   .prop_pushtitle = 1
                   }
                 - if `.is_sem' | `.is_gsem_group' | `:list posof "groupvar"
> in props' {
                 = if 0 | 0 | 0 {
                   .prop_groupvar = 1
                   }
                 - local list tobit cpoisson ivtobit metobit xttobit
                 - local list2 metobit
                 - if `:list posof "`.cmd'" in list' | `:list posof "`.cmd2'"
>   in list2' | `:list posof "censlimits" in props' {
                 = if 0 | 0 | 0 {
                   .prop_censlimits = !missing(e(N_unc))
                   }
                 - local list intreg tobit cpoisson ivtobit eintreg xtintreg
> xttobit
```

```
                          - local list2 meintreg metobit stintreg
                          - if `:list posof "`.cmd'" in list' | `:list posof "`.cmd2'"
  >  in list2' | `:list posof "censored" in props' {
                          = if 0 | 0 | 0 {
                            .prop_censored = !missing(e(N_unc))
                            }
                          - if `:list posof "nouncensored" in props' {
                          = if 0 {
                            .prop_nouncensored = 1
                            }
                          - local list eintreg
                          - if `:list posof "`.cmd'" in list' | `:list posof "iselecte
  > d" in props' {
                          = if 0 | 0 {
                            .prop_iselected = 1
                            }
                          - local list eregress eprobit eoprobit
                          - if `:list posof "`.cmd'" in list' | `:list posof "selected
  > " in props' {
                          = if 0 | 0 {
                            .prop_selected = 1
                            }
                          - if `:list posof "groups" in props' {
                          = if 0 {
                            .prop_groups = 1
                            .groupvar = "`e(repanvar)'"
                            .intmethod = "`e(reintmethod)'"
                            .intpoints = e(reintpoints)
                            }
                          - local list xtreg xtprobit xtlogit xtcloglog xtfrontier xti
  > ntreg xtnbreg
                          - local list `list' xtpoisson xttobit xtmlogit xtrc
                          = local list xtreg xtprobit xtlogit xtcloglog xtfrontier xti
  > ntreg xtnbreg xtpoisson xttobit xtmlogit xtrc
                          - local list2 xtlogit xtoprobit xtologit xtmlogit
                          - if `:list posof "`.cmd'" in list' | `:list posof "`.cmd2'"
  >  in list2' {
                          = if 0 | 0 {
                            .prop_groups = 1
                            .groupvar = "`e(ivar)'"
                            .intmethod = "`e(intmethod)'"
                            .intpoints = e(n_quad)
                            }
                          - if "`.cmd'" == "xtreg" | "`.cmd2'" == "xtlogit" {
                          = if "nbreg" == "xtreg" | "" == "xtlogit" {
                            .is_r2_p = 0
```

```
                         }
               – if `:list posof "balance" in props' {
               = if 0 {
                 .prop_balance = 1
                 }
               – .left = {}
               – .right = {}
               ────────────────────────────────────────────
> ──────────────────────── end _coef_table__header.new ─────────────
             – if ("`rclass'" != "") {
             = if ("" != "") {
               _return restore `rhold'
               .`obj'.New4r
               }
             – if ("`head1left'" != "") {
             = if ("" != "") {
               .`obj'.lalignla = `head1left'
               }
             – if ("`head1right'" != "") {
             = if ("" != "") {
               .`obj'.ralignla = `head1right'
               }
             – if ("`head2left'" != "") {
             = if ("" != "") {
               .`obj'.lalignr = `head2left'
               }
             – if ("`head2right'" != "") {
             = if ("" != "") {
               .`obj'.ralignr = `head2right'
               }
             – if ("`width'" != "") {
             = if ("" != "") {
               .`obj'.width = `width'
               }
             – .`obj'.build
             = .__000007.build
               ────────────────────────────────────────────
> ──────────────────────── begin _coef_table__header.build ───────────
             – version 16
             – if `"`.title'"' == "" {
             = if `""' == "" {
             – .title = `"`.Macro title'"'
               ────────────────────────────────────────────
> ──────────────────────── begin _coef_table__header.Macro ───────────
              – version 16
              – class exit `"`.result'(`0')'"'
```

```
                        = class exit `"Negative binomial regression"'
                        ────────────────────────────────────────────────
> ───────────────────────── end _coef_table__header.Macro ─────────────
                    = .title = `"Negative binomial regression"'
                    – .title2 = `"'`.Macro title2'"'
                        ────────────────────────────────────────────────
> ───────────────────────── begin _coef_table__header.Macro ───────────
                      – version 16
                      – class exit `"'`.result'(`0')'"'
                      = class exit `""'
                        ────────────────────────────────────────────────
> ───────────────────────── end _coef_table__header.Macro ─────────────
                    = .title2 = `""'
                    – }
                    – if `.is_areg' {
                    = if 0 {
                      local absvar = abbrev("`e(absvar)'", 22)
                      .title2 = "Absorbed variable: {res:`absvar'}"
                      }
                    – if `.prop_pushtitle' {
                    = if 0 {
                      if `.is_svy' & ("`.cmd'" == "clogit" | "`.cmd'" == "xtmlog
> it" | "`.cmd2'" == "xtmlogit") {
                      }
                      else if `.is_stintcox' | `.is_bmareg' {
                      .PushLeft `"'`.title'"'
                      .PushLeft `"'`.title2'"'
                      .title = ""
                      .title2 = ""
                      }
                      else {
                      .PushLeft `"'`.title'"'
                      if `.is_areg' {
                      .PushLeft `"'`.title2'"'
                      }
                      .title = ""
                      .title2 = ""
                      }
                      }
                    – if `.prop_groupvar' | `.is_gsem_group' {
                    = if 0 | 0 {
                      local groupvar `"'`.Macro groupvar'"'
                      if (`"'`groupvar'"' != "" & `.is_stintcox') {
                      local s = cond(`:word count `groupvar''>1, "s","")
                      local grpvar = abbrev("`groupvar'",`.ablen')
                      .PushLeft "Strata variable`s': {res}`grpvar'"
```

```
                    }
                    else if `"`groupvar'"' != "" {
                    local grpvar = abbrev("`groupvar'",`.ablen')
                    .PushLeft "Grouping variable: {res}`grpvar'"
                    }
                    }
        -   if (`.is_stintcox') {
        =   if (0) {
                    .PushLeft ""
                    local ndep = e(k_dv)
                    if (`ndep'==2) {
                    tokenize `e(depvar)'
                    local ltime `1'
                    local rtime `2'
                    .PushLeft "Event-time interval:"
                    .PushLeft "  Lower endpoint: {res}`ltime'"
                    .PushLeft "  Upper endpoint: {res}`rtime'"
                    if "`e(strata)'" != "" {
                    .PushLeft ""
                    }
                    }
                    else {
                    .PushLeft "ID variable: {res}`e(id)'"
                    .PushLeft "Examination time: {res}`e(depvar)'"
                    .PushLeft "Status indicator: {res}`e(status)'"
                    }
                    }
        -   if `.is_svy' {
        =   if 0 {
                    .BuildLeft4svy
                    }
        -   else if `.is_prefix' {
        =   else if 0 {
                    if !`.is_margins' {
                    .Build4strata
                    }
                    }
        -   if (`.is_tab' | `.is_sum') & !missing(`.result'(N_stdize))
>   {
        =   if (0 | 0) & !missing(e(N_stdize)) {
                    .PushLeft "N. of std strata" " = " "as res" %`.c2wfmt'.0fc
>   `.result'(N_stdize)
                    }
        -   .Build4tvar
                    _____
>   ─────────────────────── begin _coef_table__header.Build4tvar ───────────────
```

```
                        – version 16
                        – if `.opt_tvar' == 0 {
                        = if 1 == 0 {
                          exit
                          }
                        – if "`.Macro tvar'" == "" {
                        ─────────────────────────────────────────────
>  ───────────────────────── begin _coef_table__header.Macro ─────────────
                        – version 16
                        – class exit `"``.result'(`0')'"'
                        = class exit `""'
                        ─────────────────────────────────────────────
>  ───────────────────────── end _coef_table__header.Macro ─────────────
                        = if "" == "" {
                        – exit
                        ─────────────────────────────────────────────
>  ───────────────────────── end _coef_table__header.Build4tvar ─────────────
                  – if (!missing(`.Scalar N') & `.is_demandn'==0 & !`.is_bmare
>  g') {
                        ─────────────────────────────────────────────
>  ───────────────────────── begin _coef_table__header.Scalar ─────────────
                        – version 16
                        – class exit `"`= `.result'(`0')'"'
                        = class exit `"145"'
                        ─────────────────────────────────────────────
>  ───────────────────────── end _coef_table__header.Scalar ─────────────
                  = if (!missing(145) & 0==0 & !0) {
                  – .PushRight "Number of obs" " = " "as res" %`.c4wfmt'.0fc `
>  .Scalar N'
                        ─────────────────────────────────────────────
>  ───────────────────────── begin _coef_table__header.Scalar ─────────────
                        – version 16
                        – class exit `"`= `.result'(`0')'"'
                        = class exit `"145"'
                        ─────────────────────────────────────────────
>  ───────────────────────── end _coef_table__header.Scalar ─────────────
                  = .PushRight "Number of obs" " = " "as res" %10.0fc 145
                        ─────────────────────────────────────────────
>  ───────────────────────── begin _coef_table__header.PushRight ─────────────
                        – version 16
                        – gettoken tok rest : 0
                        – gettoken eq rest : rest
                        – gettoken dias rest : rest
                        – if `:length local rest' {
                        = if 12 {
                        – local direst = ustrltrim("`: di `rest''")
```

```
                        = local direst = ustrltrim("        145")
                        - .ralignr = max(`.ralignr', udstrlen("`direst'"))
                        = .ralignr = max(0, udstrlen("145"))
                        - local len : di `"`tok'"'
                        = local len : di `"Number of obs"'
                        - local len : smcllength local len
                        - .lalignr = max(`.lalignr', `len')
                        = .lalignr = max(0, 13)
                        - .right.Arrpush \`.C3' `"{lalign \`.lalignr':`tok'}"' \`.
> C4' "`eq'" `dias' "{ralign \`.ralignr':`direst'}"
                        = .right.Arrpush `.C3' `"{lalign `.lalignr':Number of obs}
> "' `.C4' " = " as res "{ralign `.ralignr':145}"
                        - }
                        - else if `:length local tok' {
                        = else if 13 {
                          .right.Arrpush \`.C3' `"`tok'"'
                          }
                        - else {
                          .right.Arrpush
                          }
                        _____

> ──────────────────────── end _coef_table__header.PushRight ───────────────
                    - }
                    - if `.is_demandn' {
                    = if 0 {
                      if (e(N_estat_dsys)==.|"`e(N_estat_dsys)'"=="") {
                      .PushRight "Number of obs" " = " "as res" %`.c4wfmt'.0fc `
> .Scalar N'
                      }
                      else {
                      .PushRight "Number of obs" " = " "as res" %`.c4wfmt'.0fc e
> (N_estat_dsys)
                      }
                      }
                    - if `.is_demand' {
                    = if 0 {
                      .PushRight "Number of goods" " = " "as res" %`.c4wfmt'.0fc
>  e(n_goods)
                      .PushLeft "Expenditure variable: {result:`e(expenditures)'
> }"
                      }
                    - if `.is_demand' {
                    = if 0 {
                      if (`"`e(piconstant)'"'!="") {
                      .PushRight "Price index constant" " = " "as res" %`.c2wfmt
> '.4gc e(piconstant)
```

```
                        .PushLeft ""
                        }
                        if (e(n_demos)>0) {
                        local scaling = strproper("`e(demo_type)'")
                        .PushLeft `"Demographic method: {text:`scaling'}"'
                        .PushRight "Number of demographics" " = " "as res" %`.c2wf
> mt'.0fc e(n_demos)
                        }
                        .PushLeft ""
                        local rsquare = strproper("`e(r2_type)'")
                        .PushLeft `"`rsquare' R2 of model for"'
                        local kdem = e(k_eq_old) + 1
                        local labels `"`e(labels)'"'
                        forvalues i=1/`kdem' {
                        if (`"`labels'"'=="") {
                        .PushLeft "  Good `i'" " = " "as res" %`.c2wfmt'.4f e(r2_`
> i')
                        }
                        else {
                        local xdm: word `i' of `labels'
                        .PushLeft "  `xdm'" " = " "as res" %`.c2wfmt'.4f e(r2_`i')
                        }
                        }
                        .PushLeft ""
                        }
                   -  if `.is_bacon' {
                   =  if 0 {
                        .PushLeft "ATET" " = " "as res" %`.c2wfmt'.0g `e(atet)'
                        .PushRight "Number of groups" " = " "as res" %`.c4wfmt'.0f
> c `e(N_groups)'
                        .PushRight "Number of cohorts" " = " "as res" %`.c4wfmt'.0
> fc `e(N_timing)'
                        }
                   -  if `.is_bmareg' {
                   =  if 0 {
                        local heredlab = proper("`e(heredity)'")
                        .PushLeft "`e(sampling_lab)'"
                        if "`heredlab'" != "" {
                        .PushLeft "Heredity: {txt}`heredlab'"
                        if !missing(e(burnin)) {
                        .PushLeft ""
                        }
                        }
                        else if !missing(e(burnin)) {
                        .PushLeft ""
                        .PushLeft ""
```

```
                             }
                             .PushLeft ""
                             .PushLeft "Priors:"
                             .PushLeft "  Models: {txt}`e(mprior_lab)'"
                             .PushLeft "   Cons.: Noninformative"
                             .PushLeft "   Coef.: Zellner's g"
                             .PushLeft "       g: {txt}`e(gprior_lab)'"
                             .PushLeft "  sigma2: Noninformative"
                             if !missing(e(burnin)) {
                             .PushLeft
                             .PushLeftRalign "{help j_bmaregress_sampcorr:Sampling corr
> elation}" " = " "as res" %`.c4wfmt'.4f e(sampcorr)
                             }
                             .PushRight "No. of obs" " = " "as res" %`.c4wfmt'.0fc `.Sc
> alar N'
                             .PushRight "No. of predictors" " = " "as res" %`.c4wfmt'.0
> fc e(p)
                             .PushRightRalign "Groups" " = " "as res" %`.c4wfmt'.0fc e(
> p_groups)
                             .PushRightRalign "Always" " = " "as res" %`.c4wfmt'.0fc e(
> p_always)
                             .PushRight "No. of models" " = " "as res" %`.c4wfmt'.0fc e
> (k_models)
                             .PushRightRalign "For CPMP >= .9" " = " "as res" %`.c4wfmt
> '.0fc e(k_models_cpmp)
                             .PushRight "Mean model size" " = " "as res" %`.c4wfmt'.3f
> e(msize_mean)
                             if !missing(e(burnin)) {
                             .PushRight "Burn-in" " = " "as res" %`.c4wfmt'.0fc e(burni
> n)
                             .PushRight "MCMC sample size" " = " "as res" %`.c4wfmt'.0f
> c e(mcmcsize)
                             .PushRight "Acceptance rate" " = " "as res" %`.c4wfmt'.4f
> e(arate)
                             }
                             else {
                             if "`heredlab'" != "" {
                             .PushRight
                             }
                             .PushRight
                             }
                             if !missing(e(shrinkage)) {
                             .PushRight "Shrinkage, g/(1+g)" " = " "as res" %`.c4wfmt'.
> 4f e(shrinkage)
                             }
                             else {
```

```
                        .PushRight ""
                        }
                        if (e(sigma2) < 1e-3) {
                        local sigfmt 8.4g
                        }
                        else {
                        local sigfmt `.c4wfmt'.3f
                        }
                        .PushRight "Mean sigma2" " = " "as res" %`sigfmt' e(sigma2
> )
                        }
                    - if `.is_htedid' {
                    = if 0 {
                        .PushRight "Number of panels" " = " "as res" %`.c4wfmt'.0f
> c e(N_panels)
                        }
                    - if !missing(`.Scalar N_sub') & `.is_stintcox' {
                      ──────────────────────────────────────────────────────
> ───────────────────────────── begin _coef_table__header.Scalar ──────────────
                    - version 16
                    - class exit `"`= `.result'(`0')'"'
                    = class exit `"."'
                      ──────────────────────────────────────────────────────
> ────────────────────────────── end _coef_table__header.Scalar ───────────────
                    = if !missing(.) & 0 {
                        .PushRight "Number of subjects" " = " "as res" %`.c4wfmt'.
> 0fc `.Scalar N_sub'
                        }
                    - if `.is_areg' {
                    = if 0 {
                        .PushRight "No. of categories" " = " "as res" %`.c4wfmt'.0
> fc e(k_absorb)
                        }
                    - if `.is_sem' | `.is_gsem_group' {
                    = if 0 | 0 {
                        if `"`.Macro groupvar'"' != "" {
                        .PushRight "Number of groups" " = " "as res" %`.c4wfmt'.0f
> c `.Scalar N_groups'
                        }
                        }
                    - if `.is_sem' & !`.is_svy' {
                    = if 0 & !0 {
                        .PushLeft `"Estimation method: {res:`.Macro method'}"'
                        }
                    - if `.prop_selected' {
                    = if 0 {
```

```
                        .Build4selected
                        }
                      ─ if `.is_svy' {
                      = if 0 {
                        .BuildRight4svy
                        if `.prop_censored' {
                        .PushRight
                        .Build4censobs "header"
                        .PushRight
                        }
                        }
                      ─ else {
                      ─ if `.is_margins' {
                      = if 0 {
                        .Build4subpop
                        }
                      ─ if `.prop_iselected' {
                      = if 0 {
                        .Build4title
                        .Build4iselected
                        }
                      ─ if `.prop_censored' {
                      = if 0 {
                        .Build4title
                        .Build4censobs
                        if !`.is_prefix' {
                        .PushRight
                        }
                        }
                      ─ .Build4cluster
```

> ────────────────────── begin _coef_table__header.Build4cluster ──────────────

```
                      ─ version 16
                      ─ if `.is_multclust' {
                      = if 0 {
                        .Build4mclust
                        exit
                        }
                      ─ if missing(`.Scalar N_clust') {
```

> ─────────────────────────── begin _coef_table__header.Scalar ────────────────

```
                      ─ version 16
                      ─ class exit `"`= `.result'(`0')'"'
                      = class exit `"."'
```

> ───────────────────────────── end _coef_table__header.Scalar ────────────────

```
                      = if missing(.) {
                      – exit
                      ─────────────────────────────────────────
>  ──────────────────── end _coef_table__header.Build4cluster ──────────────
              – .Build4reps
                      ─────────────────────────────────────────
>  ──────────────────── begin _coef_table__header.Build4reps ──────────────
              – version 16
              – if !missing(`.Scalar N_reps') {
                      ─────────────────────────────────────────
>  ──────────────────────── begin _coef_table__header.Scalar ──────────────
              – version 16
              – class exit `"`= `.result'(`0')'"'
              = class exit `".".'
                      ─────────────────────────────────────────
>  ──────────────────────── end _coef_table__header.Scalar ──────────────
              = if !missing(.) {
                .PushRight "Replications" " = " "as res" %`.c4wfmt'.0fc
>  `.Scalar N_reps'
                if `.prop_censored' & !`.is_svy' {
                .PushRight
                }
                }
                      ─────────────────────────────────────────
>  ──────────────────────── end _coef_table__header.Build4reps ──────────────
              – }
              – if `.prop_groups' {
              = if 0 {
                .Build4groups
                }
              – if `.is_stintcox' & "`e(strata)'" != "" {
              = if 0 & "" != "" {
                if `ndep' == 2 {
                .PushRight
                }
                }
              – .Build4modeltest
                      ─────────────────────────────────────────
>  ──────────────────── begin _coef_table__header.Build4modeltest ──────────────
              – version 16
              – if "`.result'" != "e" {
              = if "e" != "e" {
                exit
                }
              – if `.opt_modeltest' == 0 {
              = if 1 == 0 {
```

```
                           exit
                           }
            — if `"'`.Macro k_eq_model'"' == "0" {
                ─────────────────────────────────────────────────
>  ──────────────────────────── begin _coef_table__header.Macro ───────────────
            — version 16
            — class exit `"'``.result'(`0')'"'
            = class exit `"1"'
                ─────────────────────────────────────────────────
>  ──────────────────────────── end _coef_table__header.Macro ─────────────────
            = if `"1"' == "0" {
            exit
            }
            — if missing(`.Scalar df_m') {
                ─────────────────────────────────────────────────
>  ──────────────────────────── begin _coef_table__header.Scalar ──────────────
            — version 16
            — class exit `"'`= `.result'(`0')'"'
            = class exit `"7"'
                ─────────────────────────────────────────────────
>  ──────────────────────────── end _coef_table__header.Scalar ────────────────
            = if missing(7) {
            exit
            }
            — if `"'`.Macro chi2'"' != "" | `"'`.Macro df_r'"' == "" {
                ─────────────────────────────────────────────────
>  ──────────────────────────── begin _coef_table__header.Macro ───────────────
            — version 16
            — class exit `"'``.result'(`0')'"'
            = class exit `"275.3507162514581"'
                ─────────────────────────────────────────────────
>  ──────────────────────────── end _coef_table__header.Macro ─────────────────
                ─────────────────────────────────────────────────
>  ──────────────────────────── begin _coef_table__header.Macro ───────────────
            — version 16
            — class exit `"'``.result'(`0')'"'
            = class exit `""'
                ─────────────────────────────────────────────────
>  ──────────────────────────── end _coef_table__header.Macro ─────────────────
            = if `"275.3507162514581"' != "" | `""' == "" {
            — .Build4chi2test
                ─────────────────────────────────────────────────
>  ──────────────── begin _coef_table__header.Build4chi2test ──────────────────
            — version 16
            — local type `e(chi2type)'
            = local type Wald
```

```
                         - if `"`type'"' == "" {
                         = if `"Wald"' == "" {
                           local type Wald
                           }
                         - local didf = strtrim("`: di e(df_m)'")
                         = local didf = strtrim("7")
                         - if !missing(e(chi2)) {
                         - .PushRight "`type' chi2({res:`didf'})" " = " "as res"
> %`.c4wfmt'.2f e(chi2)
                         = .PushRight "Wald chi2({res:7})" " = " "as res" %10.2f
> e(chi2)
                                  _____
> ──────────────────────── begin _coef_table__header.PushRight ────────────────
                         - version 16
                         - gettoken tok rest : 0
                         - gettoken eq rest : rest
                         - gettoken dias rest : rest
                         - if `:length local rest' {
                         = if 15 {
                         - local direst = ustrltrim("`: di `rest''")
                         = local direst = ustrltrim("    275.35")
                         - .ralignr = max(`.ralignr', udstrlen("`direst'"))
                         = .ralignr = max(3, udstrlen("275.35"))
                         - local len : di `"`tok'"'
                         = local len : di `"Wald chi2({res:7})"'
                         - local len : smcllength local len
                         - .lalignr = max(`.lalignr', `len')
                         = .lalignr = max(13, 12)
                         - .right.Arrpush \`.C3' `"{lalign \`.lalignr':`tok'}"'
>  \`.C4' "`eq'" `dias' "{ralign \`.ralignr':`direst'}"
                         = .right.Arrpush `.C3' `"{lalign `.lalignr':Wald chi2(
> {res:7})}"' `.C4' " = " as res "{ralign `.ralignr':275.35}"
                         - }
                         - else if `:length local tok' {
                         = else if 18 {
                           .right.Arrpush \`.C3' `"`tok'"'
                           }
                         - else {
                           .right.Arrpush
                           }
                                  _____
> ──────────────────────── end _coef_table__header.PushRight ────────────────
                         - .PushRight "Prob > chi2" " = " "as res" %`.c4wfmt'.4f
> chi2tail(e(df_m),e(chi2))
                         = .PushRight "Prob > chi2" " = " "as res" %10.4f chi2tai
> l(e(df_m),e(chi2))
```

```
> ─────────────────────────────────────────────
> ───────────────────── begin _coef_table__header.PushRight ─────────────
                        ─ version 16
                        ─ gettoken tok rest : 0
                        ─ gettoken eq rest : rest
                        ─ gettoken dias rest : rest
                        ─ if `:length local rest' {
                        = if 33 {
                        ─ local direst = ustrltrim("`: di `rest''")
                        = local direst = ustrltrim("    0.0000")
                        ─ .ralignr = max(`.ralignr', udstrlen("`direst'"))
                        = .ralignr = max(6, udstrlen("0.0000"))
                        ─ local len : di `"`tok'"'
                        = local len : di `"Prob > chi2"'
                        ─ local len : smcllength local len
                        ─ .lalignr = max(`.lalignr', `len')
                        = .lalignr = max(13, 11)
                        ─ .right.Arrpush \`.C3' `"{lalign \`.lalignr':`tok'}"'
>  \`.C4' "`eq'" `dias' "{ralign \`.ralignr':`direst'}"
                        = .right.Arrpush `.C3' `"{lalign `.lalignr':Prob > chi
> 2}"' `.C4' " = " as res "{ralign `.ralignr':0.0000}"
                        ─ }
                        ─ else if `:length local tok' {
                        = else if 11 {
                          .right.Arrpush \`.C3' `"`tok'"'
                          }
                        ─ else {
                          .right.Arrpush
                          }
                        ─────────────────────────────────────────────
> ───────────────────── end _coef_table__header.PushRight ──────────────
                     ─ }
                     ─ else {
                       local j_robust "{help j_robustsingular##|_new:`type' c
> hi2(`didf')}"
                       .PushRight "`j_robust'" " = " "as res" %`.c4wfmt's "."
                       .PushRight "Prob > chi2" " = " "as res" %`.c4wfmt's ".
> "
                       }
                     ─────────────────────────────────────────────
> ───────────────────── end _coef_table__header.Build4chi2test ─────────────
                  ─ }
                  ─ else {
                    .Build4Ftest
                    }
                  ─────────────────────────────────────────────
```

```
> ──────────────────── end _coef_table__header.Build4modeltest ──────────────
                  − .Build4r2
                                ───────────────────────────────────────────
> ──────────────────── begin _coef_table__header.Build4r2 ───────────────
                  − version 16
                  − if "`.result'" != "e" {
                  = if "e" != "e" {
                    exit
                    }
                  − if !missing(e(r2)) {
                    .PushRight "R-squared" " = " "as res" %`.c4wfmt'.4f e(r2
> )

                    }
                  − if !missing(e(r2_p)) & `.is_r2_p' {
                  = if !missing(e(r2_p)) & 1 {
                  − .PushRight "Pseudo R2" " = " "as res" %`.c4wfmt'.4f e(r2
> _p)

                  = .PushRight "Pseudo R2" " = " "as res" %10.4f e(r2_p)
                                ───────────────────────────────────────────
> ──────────────────── begin _coef_table__header.PushRight ───────────────
                  − version 16
                  − gettoken tok rest : 0
                  − gettoken eq rest : rest
                  − gettoken dias rest : rest
                  − if `:length local rest' {
                  = if 15 {
                  − local direst = ustrltrim("`: di `rest''")
                  = local direst = ustrltrim("    0.1741")
                  − .ralignr = max(`.ralignr', udstrlen("`direst'"))
                  = .ralignr = max(6, udstrlen("0.1741"))
                  − local len : di `"`tok'"'
                  = local len : di `"Pseudo R2"'
                  − local len : smcllength local len
                  − .lalignr = max(`.lalignr', `len')
                  = .lalignr = max(13, 9)
                  − .right.Arrpush \`.C3' `"{lalign \`.lalignr':`tok'}"' \
> `.C4' "`eq'" `dias' "{ralign \`.ralignr':`direst'}"
                  = .right.Arrpush `.C3' `"{lalign `.lalignr':Pseudo R2}"'
>  `.C4' " = " as res "{ralign `.ralignr':0.1741}"
                  − }
                  − else if `:length local tok' {
                  = else if 9 {
                    .right.Arrpush \`.C3' `"`tok'"'
                    }
                  − else {
                    .right.Arrpush
```

```
                         }
        ─────────────────────────────────────────────────────
> ─────────────────────────── end _coef_table__header.PushRight ──────────────
                    ─ }
                    ─ if !missing(e(r2_a)) {
                      .PushRight "Adj R-squared" " = " "as res" %`.c4wfmt'.4f
> e(r2_a)

                      }
                    ─ if !missing(e(rmse)) {
                      .PushRight "Root MSE" " = " "as res" %`.c4wfmt'.4f e(rms
> e)

                      }
        ─────────────────────────────────────────────────────
> ─────────────────────────── end _coef_table__header.Build4r2 ──────────────
                ─ .Build4title
        ─────────────────────────────────────────────────────
> ─────────────────────────── begin _coef_table__header.Build4title ──────────────
                    ─ version 16
                    ─ if `.opt_septitle' {
                    = if 0 {
                      exit
                      }
                    ─ if `"`.title'"' == "" {
                    = if `"Negative binomial regression"' == "" {
                      exit
                      }
                    ─ if `.left.arrnels' {
                    = if 0 {
                      exit
                      }
                    ─ local title `.title'
                    = local title Negative binomial regression
                    ─ local title2 `.title2'
                    = local title2
                    ─ local len : smcllength local title
                    ─ local len2 : smcllength local title2
                    ─ if `len2' > `len' {
                    = if 0 > 28 {
                      local len = `len2'
                      }
                    ─ if `len' < (`.c3' - 2) - (`.c1' - 1) {
                    = if 28 < (49 - 2) - (1 - 1) {
                    ─ PushLeft `"`.title'"'
                    = PushLeft `"Negative binomial regression"'
        ─────────────────────────────────────────────────────
> ─────────────────────────── begin _coef_table__header.PushLeft ──────────────
```

```
                          – version 16
                          – gettoken tok rest : 0
                          – gettoken eq rest : rest
                          – gettoken dias rest : rest
                          – if `:length local rest' {
                          = if 0 {
                            local direst : di `rest'
                            local direst = strtrim("`direst'")
                            local len : smcllength local direst
                            .ralignl = max(`.ralignl', `len')
                            local len : di `"`tok'"'
                            local len : smcllength local len
                            .lalignl = max(`.lalignl', `len')
                            .left.Arrpush \`.C1' `"{lalign \`.lalignl':`tok'}"' \`
> .C2' "`eq'" `dias' "{ralign \`.ralignl':`direst'}"
                            }
                          – else if `:length local tok' {
                          = else if 28 {
                          – .left.Arrpush \`.C1' `"`tok'"'
                          = .left.Arrpush `.C1' `"Negative binomial regression"'
                          – }
                          – else {
                            .left.Arrpush
                            }
                        ────────────────────────────────────────────────
> ───────────────────────────── end _coef_table__header.PushLeft ───────────────
                    – .title = ""
                    – if `len2' {
                    = if 0 {
                      PushLeft `"`.title2'"'
                      .title2 = ""
                      }
                    – }
                    – .opt_septitle = 1
                    ────────────────────────────────────────────────
> ───────────────────────────── end _coef_table__header.Build4title ───────────
                 – if `.prop_censlimits' {
                 = if 0 {
                   .Build4censlimits 1
                   }
                 – .c2 = `.lalignl' + 1
                 = .c2 = 0 + 1
                 – .c3 = `.width'–`.lalignr'–`.ralignr'–3+1
                 = .c3 = 78–13–6–3+1
                 – .c4 = `.c3' + `.lalignr'
                 = .c4 = 57 + 13
```

```
                      - if `.is_gsem' {
                    = if 0 {
                      if `.opt_dvheader' {
                      gsem_depvar_header, left(`.left.objkey') right(`.right.obj
> key') c3(`.c3') c4(`.c4') c4wfmt(`.c4wfmt')
                      }
                      }
                    - .Build4crit
                    ─────────────────────────────────────────────────────
> ──────────────────────────── begin _coef_table__header.Build4crit ─────────────
                    - version 16
                    - if "`.result'" != "e" {
                    = if "e" != "e" {
                      exit
                      }
                    - local offset 1
                    - local hascrit = !missing(`"`e(ll)'"') & !missing(`"`e(cr
> ittype)'"')
                    = local hascrit = !missing(`"-266.1309258931282"') & !miss
> ing(`"log pseudolikelihood"')
                      - if inlist("`e(dispers)'", "mean", "constant") {
                      = if inlist("mean", "mean", "constant") {
                      - if `hascrit' {
                      = if 1 {
                      - local ++offset
                      - local crtype `"`e(crittype)'"'
                      = local crtype `"log pseudolikelihood"'
                      - local clen : length local crtype
                      - .c2 = `clen' + 2
                      = .c2 = 20 + 2
                      - }
                      - local didisp = strtrim("`: di e(dispers)'")
                      = local didisp = strtrim("mean")
                      - local DISPERS `""Dispersion: {res:`didisp'}""'
                      = local DISPERS `""Dispersion: {res:mean}""'
                      - }
                      - .FillLeft `offset'
                      = .FillLeft 2
                      ─────────────────────────────────────────────────────
> ──────────────────────────── begin _coef_table__header.FillLeft ───────────────
                      - version 16
                      - args offset
                      - local kr = `.right.arrnels'
                      = local kr = 4
                      - local kl = `.left.arrnels'
                      = local kl = 1
```

```
                          − local diff = `kr' − `kl' − 0`offset'
                          = local diff = 4 − 1 − 02
                          − forval i = 1/`diff' {
                          = forval i = 1/1 {
                          − .left.Arrpush ""
                          − }
                        ─────────────────────────────────────────────
> ───────────────────────── end _coef_table__header.FillLeft ─────────────
                    − if `"`DISPERS'"' != "" {
                    = if `""Dispersion: {res:mean}""' != "" {
                    − .PushLeft `DISPERS'
                    = .PushLeft "Dispersion: {res:mean}"

                        ─────────────────────────────────────────────
> ───────────────────────── begin _coef_table__header.PushLeft ─────────────
                    − version 16
                    − gettoken tok rest : 0
                    − gettoken eq rest : rest
                    − gettoken dias rest : rest
                    − if `:length local rest' {
                    = if 0 {
                      local direst : di `rest'
                      local direst = strtrim("`direst'")
                      local len : smcllength local direst
                      .ralignl = max(`.ralignl', `len')
                      local len : di `"`tok'"'
                      local len : smcllength local len
                      .lalignl = max(`.lalignl', `len')
                      .left.Arrpush \`.C1' `"{lalign \`.lalignl':`tok'}"' \`
> .C2' "`eq'" `dias' "{ralign \`.ralignl':`direst'}"
                      }
                    − else if `:length local tok' {
                    = else if 22 {
                    − .left.Arrpush \`.C1' `"`tok'"'
                    = .left.Arrpush `.C1' `"Dispersion: {res:mean}"'
                    − }
                    − else {
                      .left.Arrpush
                      }
                        ─────────────────────────────────────────────
> ───────────────────────── end _coef_table__header.PushLeft ─────────────
                    − }
                    − local crtype = upper(bsubstr(`"`e(crittype)'"',1,1)) + b
> substr(`"`e(crittype)'"',2,.)
                    = local crtype = upper(bsubstr(`"log pseudolikelihood"',1,
> 1)) + bsubstr(`"log pseudolikelihood"',2,.)
                    − if `.is_sem' & `"`e(critvalue)'"' != "" & !`.is_svy' {
```

```
                        = if 0 & `""' != "" & !0 {
                          .PushLeft
                          .PushLeftRalign "`crtype'" " = " "as res" %10.0g e(critv
> alue)

                          }
                        – else if `hascrit' {
                        = else if 1 {
                        – if `.is_gsem_group' {
                        = if 0 {
                          local dill = strtrim("`: di %10.0g e(ll)'")
                          .PushLeft "`crtype' = {res:`dill'}"
                          }
                        – else {
                        – .PushLeftRalign "`crtype'" " = " "as res" %10.0g e(ll)
                        = .PushLeftRalign "Log pseudolikelihood" " = " "as res" %1
> 0.0g e(ll)
                                    ─────────────────────────────────────────────
> ──────────────────       begin _coef_table__header.PushLeftRalign ─────────────
                        – version 16
                        – gettoken tok rest : 0
                        – gettoken eq rest : rest
                        – gettoken dias rest : rest
                        – if `:length local rest' {
                        = if 13 {
                        – local direst : di `rest'
                        = local direst : di  %10.0g e(ll)
                        – local direst = strtrim("`direst'")
                        = local direst = strtrim("−266.13093")
                        – local len : smcllength local direst
                        – .ralignla = max(`.ralignla', `len')
                        = .ralignla = max(0, 10)
                        – local len : di `"`tok'"'
                        = local len : di `"Log pseudolikelihood"'
                        – local len : smcllength local len
                        – .lalignla = max(`.lalignla', `len')
                        = .lalignla = max(0, 20)
                        – .left.Arrpush \`.C1' `"{lalign \`.lalignla':`tok'}"' \
> `.C2a' "`eq'" `dias' "{ralign \`.ralignla':`direst'}"
                        = .left.Arrpush `.C1' `"{lalign `.lalignla':Log pseudoli
> kelihood}"' `.C2a' " = " as res "{ralign `.ralignla':−266.13093}"
                        – }
                        – else if `:length local tok' {
                        = else if 20 {
                          .left.Arrpush \`.C1' `"`tok'"'
                          }
                        – else {
```

```
                    .left.Arrpush
                    }
    ──────────────────────────────────────────────────────
> ──────────────────── end _coef_table__header.PushLeftRalign ──────────
         ─ }
         ─ }
    ──────────────────────────────────────────────────────
> ──────────────────── end _coef_table__header.Build4crit ──────────
         ─ .c2 = `.lalignl' + 1
         = .c2 = 0 + 1
         ─ .c2a = `.lalignla' + 1
         = .c2a = 20 + 1
         ─ .c3 = `.width'─`.lalignr'─`.ralignr'─3+1
         = .c3 = 78─13─6─3+1
         ─ .c4 = `.c3' + `.lalignr'
         = .c4 = 57 + 13
    ──────────────────────────────────────────────────────
> ──────────────────── end _coef_table__header.build ──────────
         ─ if ("`head2start'" != "") {
         = if ("" != "") {
           .`obj'.c3 = `head2start'
           .`obj'.c4 = `head2start' + `.`obj'.lalignr'
           .`obj'.width = `head2start' + `.`obj'.lalignr' + `.`obj'.ral
> ignr' + 2

           }
         ─ if (`has_obj' == 0) {
         = if (0 == 0) {
         ─ .`obj'.display
         = .__000007.display
    ──────────────────────────────────────────────────────
> ──────────────────── begin _coef_table__header.display ──────────
         ─ version 16
         ─ .ShowRules
    ──────────────────────────────────────────────────────
> ──────────────────── begin _coef_table__header.ShowRules ──────────
         ─ version 16
         ─ if "`.result'" != "e" {
         = if "e" != "e" {
           exit
           }
         ─ if `.opt_rules' == 0 {
         = if 1 == 0 {
           exit
           }
         ─ if !inlist("`.cmd'", "logistic", "logit", "probit") {
         = if !inlist("nbreg", "logistic", "logit", "probit") {
```

```
                        – exit
                _____
> ————————————————————— end _coef_table__header.ShowRules ——————————
                – local nl = `.left.arrnels'
                = local nl = 4
                – local nr = `.right.arrnels'
                = local nr = 4
                – local K = max(`nl',`nr')
                = local K = max(4,4)
                – `.newline'
                = display

                – if `"`.title'"' != "" {
                = if `""' != "" {
                  display as txt `"`.title'"'
                  if `"`.title2'"' != "" {
                  display as txt `"`.title2'"'
                  }
                  if `K' {
                  display
                  }
                  }
                – forval i = 1/`K' {
                = forval i = 1/4 {
                – display as smcl as txt `.left[`i']' as txt `.right[`i']'
                _____
> —————————————————————— begin _coef_table__header.C1 ——————————————
                – version 16
                – class exit `"_col(`.c1')"'
                = class exit `"_col(1)"'
                _____
> ———————————————————————— end _coef_table__header.C1 ——————————————
                _____
> —————————————————————— begin _coef_table__header.C3 ——————————————
                – version 16
                – class exit `"_col(`.c3')"'
                = class exit `"_col(57)"'
                _____
> ———————————————————————— end _coef_table__header.C3 ——————————————
                _____
> —————————————————————— begin _coef_table__header.C4 ——————————————
                – version 16
                – class exit `"_col(`.c4')"'
                = class exit `"_col(70)"'
                _____
> ———————————————————————— end _coef_table__header.C4 ——————————————
```

```
                  = display as smcl as txt _col(1) `"Negative binomial regress
> ion"' as txt _col(57) `"{lalign 13:Number of obs}"' _col(70) " = " as res "{
> ralign 6:145}"
Negative binomial regression                            Number of obs =     145
                  - }
                  - display as smcl as txt `.left[`i']' as txt `.right[`i']'
                    ─────────────────────────────────────────────────
> ─────────────────────────── begin _coef_table__header.C3 ────────────────
                  - version 16
                  - class exit `"_col(`.c3')"'
                  = class exit `"_col(57)"'
                    ─────────────────────────────────────────────────
> ─────────────────────────── end _coef_table__header.C3 ────────────────
                    ─────────────────────────────────────────────────
> ─────────────────────────── begin _coef_table__header.C4 ────────────────
                  - version 16
                  - class exit `"_col(`.c4')"'
                  = class exit `"_col(70)"'
                    ─────────────────────────────────────────────────
> ─────────────────────────── end _coef_table__header.C4 ────────────────
                  = display as smcl as txt  as txt _col(57) `"{lalign 13:Wald
> chi2({res:7})}"' _col(70) " = " as res "{ralign 6:275.35}"
                                                        Wald chi2(7)  = 275.35
                  - }
                  - display as smcl as txt `.left[`i']' as txt `.right[`i']'
                    ─────────────────────────────────────────────────
> ─────────────────────────── begin _coef_table__header.C1 ────────────────
                  - version 16
                  - class exit `"_col(`.c1')"'
                  = class exit `"_col(1)"'
                    ─────────────────────────────────────────────────
> ─────────────────────────── end _coef_table__header.C1 ────────────────
                    ─────────────────────────────────────────────────
> ─────────────────────────── begin _coef_table__header.C3 ────────────────
                  - version 16
                  - class exit `"_col(`.c3')"'
                  = class exit `"_col(57)"'
                    ─────────────────────────────────────────────────
> ─────────────────────────── end _coef_table__header.C3 ────────────────
                    ─────────────────────────────────────────────────
> ─────────────────────────── begin _coef_table__header.C4 ────────────────
                  - version 16
                  - class exit `"_col(`.c4')"'
                  = class exit `"_col(70)"'
                    ─────────────────────────────────────────────────
> ─────────────────────────── end _coef_table__header.C4 ────────────────
```

```
                       = display as smcl as txt _col(1) `"Dispersion: {res:mean}"'
> as txt _col(57) `"{lalign 13:Prob > chi2}"' _col(70) " = " as res "{ralign 6
> :0.0000}"
Dispersion: mean                                        Prob > chi2   = 0.0000
                       - }
                       - display as smcl as txt `.left[`i']' as txt `.right[`i']'
                       ──────────────────────────────────────────────────────────
> ───────────────────────────── begin _coef_table__header.C1 ──────────────────
                       - version 16
                       - class exit `"_col(`.c1')"'
                       = class exit `"_col(1)"'
                       ──────────────────────────────────────────────────────────
> ────────────────────────────── end _coef_table__header.C1 ──────────────────
                       ──────────────────────────────────────────────────────────
> ──────────────────────────── begin _coef_table__header.C2a ──────────────────
                       - version 16
                       - class exit `"_col(`.c2a')"'
                       = class exit `"_col(21)"'
                       ──────────────────────────────────────────────────────────
> ───────────────────────────── end _coef_table__header.C2a ──────────────────
                       ──────────────────────────────────────────────────────────
> ───────────────────────────── begin _coef_table__header.C3 ──────────────────
                       - version 16
                       - class exit `"_col(`.c3')"'
                       = class exit `"_col(57)"'
                       ──────────────────────────────────────────────────────────
> ────────────────────────────── end _coef_table__header.C3 ──────────────────
                       ──────────────────────────────────────────────────────────
> ───────────────────────────── begin _coef_table__header.C4 ──────────────────
                       - version 16
                       - class exit `"_col(`.c4')"'
                       = class exit `"_col(70)"'
                       ──────────────────────────────────────────────────────────
> ────────────────────────────── end _coef_table__header.C4 ──────────────────
                       = display as smcl as txt _col(1) `"{lalign 20:Log pseudolike
> lihood}"' _col(21) " = " as res "{ralign 10:-266.13093}" as txt _col(57) `"{
> lalign 13:Pseudo R2}"' _col(70) " = " as res "{ralign 6:0.1741}"
Log pseudolikelihood = -266.13093                       Pseudo R2     = 0.1741
                       - }
                       ──────────────────────────────────────────────────────────
> ───────────────────────────── end _coef_table__header.display ───────────────
                       - }
                       - sreturn local width_header `.`obj'.width'
                       = sreturn local width_header 78
                       - sreturn local head2_right `.`obj'.ralignr'
                       = sreturn local head2_right 6
```

```
              -  sreturn local head2_left `.`obj'.lalignr'
              =  sreturn local head2_left 13
              -  sreturn local head2_start `.`obj'.c3'
              =  sreturn local head2_start 57
              -  sreturn local head1_right `.`obj'.ralignla'
              =  sreturn local head1_right 10
              -  sreturn local head1_left `.`obj'.lalignla'
              =  sreturn local head1_left 20
              -  sreturn local head1_start `.`obj'.c1'
              =  sreturn local head1_start 1
                 ─────────────────────────────────────────────
>  ───────────────────────────────────── end _coef_table_header ─────────────
              -  di

              -  }
              -  _coef_table, `first' level(`level') `neqopt' `plus' `noskip' `
>  showeqns' `diopts' `options' `notest'
              =  _coef_table,  level(95)
                 ─────────────────────────────────────────────
>  ───────────────────────────────────── begin _coef_table ─────────────────
              -  version 11
              -  local vv : di "version " string(max(11,_caller())) ", missin
>  g:"

              -  if (!c(noisily) & c(coeftabresults) == "off") {
                 exit
                 }
              -  _check_eclass
              -  syntax [, BMATrix(passthru) VMATrix(passthru) * ]
              -  if "`e(b)'" == "" & "`e(V)'" == "" & "`bmatrix'`vmatrix'"=="
>  " {

              =  if "matrix" == "" & "matrix" == "" & ""=="" {
                 exit
                 }
              -  local mc_cmds contrast margins pwcompare pwmean
              -  local cmd "`e(cmd)'"
              =  local cmd "nbreg"
              -  local keepmc : list cmd in mc_cmds
              -  if inlist("`cmd'", "pwcompare", "pwmean") {
              =  if inlist("nbreg", "pwcompare", "pwmean") {
                 local groups GROUPS
                 }
              -  if "`cmd'" == "regress" {
              =  if "nbreg" == "regress" {
                 local beta Beta
                 }
              -  if "`cmd'" == "gsem" {
```

```
                     = if "nbreg" == "gsem" {
                       local fvignore fvignore(int 0)
                       local flignore flignore
                       }
                     - if "`cmd'" == "sem" {
                     = if "nbreg" == "sem" {
                       local standardized STANDARDIZED
                       local showginvariant SHOWGINVariant
                       local nolabel NOLABel LABel NOFVLABel FVLABel
                       local nofootnote NOFOOTnote
                       local wrap wrap(numlist max=1) fvwrap(passthru)
                       }
                     - if "`e(mi)'"=="mi" {
                     = if ""=="mi" {
                       local dftable DFTable
                       local dfonly DFONLY
                       local noclustreport NOCLUSTReport
                       local pisematrix PISEMATrix(string)
                       }
                     - syntax [, cmdextras BMATrix(string) VMATrix(string) EMATrix(
>  string) DFMATrix(string) EQMATrix(string) ROWMATrix(string) CIMATrix(string)
>   ROWCFormat(string) ROWPFormat(string) ROWSFormat(string) NOROWCI MMATrix(st
>  ring) MVMATrix(string) MEMATrix(string) BSTDMATrix(string) CNSMATrix(string)
>   PCLASSMATrix(string) Level(cilevel) prefix(name) suffix(name) OFFSETlist(st
>  ring asis) `beta' `standardized' NOCI NOPValues `dftable' `dfonly' dfci DFPV
>  alues dfmissing `groups' COEFLegend selegend `fvignore' `flignore' `showginv
>  ariant' `nolabel' `nofootnote' `wrap' sort `pisematrix' depname(string) COEF
>  Title(string) coeftitle2(string) ptitle(string) cititle(string) NOMCLEGend n
>  oCNSReport FULLCNSReport `noclustreport' cformat(passthru) sformat(passthru)
>   pformat(passthru) NOFirst First SHOWEQns neq(integer -1) NODIPARM NOTEST SE
>  Parator(integer 0) NOSKIP OFFSETONLY1 PLus NOEQCHECK EFORMALL CITYPE(string)
>   eqselect(string) noEFORMNOTE * ]
                       = syntax [, cmdextras BMATrix(string) VMATrix(string) EMATrix(
>  string) DFMATrix(string) EQMATrix(string) ROWMATrix(string) CIMATrix(string)
>   ROWCFormat(string) ROWPFormat(string) ROWSFormat(string) NOROWCI MMATrix(st
>  ring) MVMATrix(string) MEMATrix(string) BSTDMATrix(string) CNSMATrix(string)
>   PCLASSMATrix(string) Level(cilevel) prefix(name) suffix(name) OFFSETlist(st
>  ring asis)   NOCI NOPValues   dfci DFPValues dfmissing   COEFLegend selegend
>       sort  depname(string) COEFTitle(string) coeftitle2(string) ptitle(stri
>  ng) cititle(string) NOMCLEGend noCNSReport FULLCNSReport  cformat(passthru)
>  sformat(passthru) pformat(passthru) NOFirst First SHOWEQns neq(integer -1) N
>  ODIPARM NOTEST SEParator(integer 0) NOSKIP OFFSETONLY1 PLus NOEQCHECK EFORMA
>  LL CITYPE(string) eqselect(string) noEFORMNOTE * ]
                     - if "`wrap'" != "" {
                     = if "" != "" {
                       opts_exclusive `"wrap(`wrap') `fvwrap'"'
```

```
                  local fvwrap fvwrap(`wrap')
                  }
        — if "`nolabel'`label'" != "" {
        = if "" != "" {
          opts_exclusive "`nolabel' `label'"
          opts_exclusive "`nofvlabel' `fvlabel'"
          opts_exclusive "`nolabel' `fvlabel'"
          opts_exclusive "`nofvlabel' `label'"
          if "`nolabel'" != "" {
          local fvlabel nofvlabel
          }
          else {
          local fvlabel fvlabel
          }
          }
        — else local fvlabel `nofvlabel' `fvlabel'
        = else local fvlabel
        — local type `coeflegend' `selegend'
        = local type
        — opts_exclusive "`type' `standardized'"
        = opts_exclusive " "
          ─────────────────────────────────────
> ───────────────────────────────── begin opts_exclusive ─────────────
        — version 8.2
        — args opts optname errcode optslab
        — local opts `opts'
        = local opts
        — local n 0
        — while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
        — if `n' < 2 {
        = if 0 < 2 {
        — exit
          ─────────────────────────────────────
> ───────────────────────────────── end opts_exclusive ─────────────
        — if (`"`rowmatrix'"'=="" & "`norowci'"!="") {
        = if (`""'=="" & ""!="") {
          di as err "{bf:norowci} requires {bf:rowmatrix()}"
          exit 198
          }
        — if ("`dftable'"!="" & "`norowci'"!="") {
        = if (""!="" & ""!="") {
          di as err "{bf:norowci} is not allowed with {bf:`dftable'}"
```

```
                    exit 198
                    }
        − if ("`dfonly'"!="" & "`norowci'"!="") {
        = if (""!="" & ""!="") {
          di as err "{bf:norowci} is not allowed with {bf:`dfonly'}"
          exit 198
          }
        − if ("`noci'"!="" & "`norowci'"!="") {
        = if (""!="" & ""!="") {
          di as err "{bf:norowci} is not allowed with {bf:`noci'}"
          exit 198
          }
        − if "`standardized'" != "" & "`bstdmatrix'" != "" {
        = if "" != "" & "" != "" {
          local beta beta
          local standardized
          }
        − if `:length local type' == 0 {
        = if 0 == 0 {
        − local type `beta' `noci' `nopvalues' `dftable' `dfonly' `gro
> ups' `dfci' `dfpvalues'
        = local type
        − }
        − opts_exclusive "`type'"
        = opts_exclusive ""
          ────────────────────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ─────────────
        − version 8.2
        − args opts optname errcode optslab
        − local opts `opts'
        = local opts
        − local n 0
        − while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
        − if `n' < 2 {
        = if 0 < 2 {
        − exit
          ────────────────────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ─────────────
        − opts_exclusive "`first' `nofirst'"
        = opts_exclusive " "
          ────────────────────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ─────────────
```

```
                    - version 8.2
                    - args opts optname errcode optslab
                    - local opts `opts'
                    = local opts
                    - local n 0
                    - while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    - if `n' < 2 {
                    = if 0 < 2 {
                    - exit
                    ───────────────────────────────────────────────────
> ─────────────────────────────────── end opts_exclusive ──────────────
                  - opts_exclusive "`first' `showeqns'"
                  = opts_exclusive " "
                    ───────────────────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ────────────
                  - version 8.2
                  - args opts optname errcode optslab
                  - local opts `opts'
                  = local opts
                  - local n 0
                  - while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  - if `n' < 2 {
                  = if 0 < 2 {
                  - exit
                    ───────────────────────────────────────────────────
> ─────────────────────────────────── end opts_exclusive ──────────────
                  - local cnsreport `cnsreport' `fullcnsreport'
                  = local cnsreport
                  - opts_exclusive "`cnsreport'"
                  = opts_exclusive ""
                    ───────────────────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ────────────
                  - version 8.2
                  - args opts optname errcode optslab
                  - local opts `opts'
                  = local opts
                  - local n 0
                  - while `"`opts'"' != "" {
```

```
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    - if `n' < 2 {
                    = if 0 < 2 {
                    - exit
                    _____
```
```
                - if `"`showeqns'"' != "" {
                = if `""' != "" {
                  local nofirst nofirst
                  }
                - if `"`ematrix'`noeqcheck'"' == "" {
                = if `""' == "" {
                - if `"`e(error)'"' == "matrix" {
                = if `""' == "matrix" {
                  local ematrix e(error)
                  }
                - }
                - _get_mcompare, `options'
                = _get_mcompare,
                    _____
```
```
                - version 11
                - local cmd `"`e(cmd)'"'
                = local cmd `"nbreg"'
                - syntax [name(name=caller)] [, *]
                - local is_pwc = inlist("pwcompare", "`cmd'", "`caller'") |
>  inlist("pwmean", "`cmd'", "`caller'")
                = local is_pwc = inlist("pwcompare", "nbreg", "") | inlist("
>  pwmean", "nbreg", "")
                - local is_marg = inlist("margins", "`cmd'", "`e(cmd2)'", "`
>  caller'")
                = local is_marg = inlist("margins", "nbreg", "", "")
                - local OPTIONS NOADJust BONferroni DUNCan DUNNett SCHeffe S
>  IDak SNK TUKey ADJustall
                - if `is_pwc' {
                = if 0 {
                  syntax [name] [, `OPTIONS' MCOMPare(string) *]
                  }
                - else {
                - syntax [name] [, MCOMPare(string) *]
                - local suboption mcompare()
                - }
                - sreturn clear
```

```
                  – sreturn local options `"'`options'"'
                  = sreturn local options `""'
                  – if `is_pwc' {
                  = if 0 {
                    local METHOD `noadjust' `bonferroni' `duncan' `dunnett' `s
> cheffe' `sidak' `snk' `tukey'
                    local METHOD : list uniq METHOD
                    opts_exclusive "`METHOD'"
                    local ALL `adjustall'
                    opts_exclusive "`noadjust' `ALL'"
                    }
                  – local 0 `", `mcompare'"'
                  = local 0 `", "'
                  – capture syntax [, `OPTIONS']
                  = capture syntax [, NOADJust BONferroni DUNCan DUNNett SCHef
> fe SIDak SNK TUKey ADJustall]
                  – if c(rc) {
                    di as err "invalid mcompare() option;"
                    di as err "method '`mcompare'' not allowed"
                    error 198
                    }
                  – local METHOD `METHOD' `noadjust' `bonferroni' `duncan' `du
> nnett' `scheffe' `sidak' `snk' `tukey'
                  = local METHOD
                  – local METHOD : list uniq METHOD
                  – local ALL `ALL' `adjustall'
                  = local ALL
                  – local ALL : list uniq ALL
                  – opts_exclusive "`METHOD'" `suboption'
                  = opts_exclusive "" mcompare()
                    ─────────────────────────────────────────────────────────

> ──────────────────────────────────── begin opts_exclusive ────────────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"'`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                    ─────────────────────────────────────────────────────────
```

```
> ──────────────────────────────── end opts_exclusive ──────────────
                    – if "`METHOD'" == "" {
                    = if "" == "" {
                    – if "`ALL'" != "" {
                    = if "" != "" {
                      di as err "multiple comparison method required with the ad
> justall option"
                      exit 198
                      }
                    – local METHOD noadjust
                    – local noadjust noadjust
                    – }
                    – opts_exclusive "`ALL' `noadjust'" `suboption'
                    = opts_exclusive " noadjust" mcompare()
                    ───────────────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ──────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts  noadjust
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `"noadjust"' != "" {
                    – local ++n
                    – gettoken item`n' opts : opts, bind
                    = gettoken item1 opts : opts, bind
                    – }
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 1 < 2 {
                    – exit
                    ───────────────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ──────────────
                    – local EXCLUDE duncan dunnett snk tukey
                    – if `:list METHOD in EXCLUDE' {
                    = if 0 {
                      if `is_pwc' {
                      local opt : copy local METHOD
                      }
                      else {
                      local opt "mcompare(`METHOD')"
                      }
```

```
                        local cmdlist anova manova regress mvreg pwmean
                        if "`cmd'" == "pwcompare" {
                        local cmd `"`e(cmd_est)'"'
                        }
                        if `is_marg' {
                        local cmd margins
                        }
                        if !`:list cmd in cmdlist' | !`is_pwc' {
                        di as err `"method `opt' is not allowed with results from
> `cmd'"'
                        exit 322
                        }
                        if `"`e(prefix)'"' == "svy" {
                        di as err `"method `opt' is not allowed with results using
>  the svy prefix"'
                        exit 322
                        }
                        local vce `"`e(vce)'"'
                        if !inlist("`vce'", "", "ols") {
                        di as err `"method `opt' is not allowed with results using
> vce(`vce')"'
                        exit 322
                        }
                        }
                    -   local EXCLUDE duncan dunnett snk tukey scheffe
                    -   if `:list METHOD in EXCLUDE' {
                    =   if 0 {
                        if "`ALL'" != "" {
                        di as err `"option adjustall is not allowed with method `M
> ETHOD'"'
                        exit 198
                        }
                        }
                    -   sreturn local method `"`METHOD'"'
                    =   sreturn local method `"noadjust"'
                    -   sreturn local adjustall `"`ALL'"'
                    =   sreturn local adjustall `""'
                        ──────────────────────────────────────────────────────────
>  ────────────────────────────── end _get_mcompare ────────────────
                    -   local method `"`s(method)'"'
                    =   local method `"noadjust"'
                    -   local all `"`s(adjustall)'"'
                    =   local all `""'
                    -   local options `"`s(options)'"'
                    =   local options `""'
                    -   if "`method'" != "noadjust" {
```

```
                       = if "noadjust" != "noadjust" {
                         local keepmc 1
                         }
                       – opts_exclusive "`all' `groups'"
                       = opts_exclusive " "
                       ─────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ──────────────
                       – version 8.2
                       – args opts optname errcode optslab
                       – local opts `opts'
                       = local opts
                       – local n 0
                       – while `"`opts'"' != "" {
                       = while `""' != "" {
                         local ++n
                         gettoken item`n' opts : opts, bind
                         }
                       – if `n' < 2 {
                       = if 0 < 2 {
                       – exit
                       ─────────────────────────────────────────
> ───────────────────────────────── end opts_exclusive ──────────────
                       – if "`method'" == "dunnett" {
                       = if "noadjust" == "dunnett" {
                         opts_exclusive "`method' `groups'"
                         }
                       – _get_diopts diopts options, `options' `fvwrap' `fvlabel'
                       = _get_diopts diopts options,
                       ─────────────────────────────────────────
> ──────────────────────────────── begin _get_diopts ──────────────
                       – version 11
                       – syntax namelist(max=2) [, *]
                       – gettoken name1 namelist : namelist
                       – gettoken name2 namelist : namelist
                       – GetDiopts diopts options, `options'
                       = GetDiopts diopts options,
                       ─────────────────────────────────────────
> ──────────────────────────── begin _get_diopts.GetDiopts ──────────
                       – local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLB
> ASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMP
> TYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(st
> ring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru)
>  FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru)
>  NOABBREV ABBREV
                       – syntax namelist(max=2) [, `DIOPTS' *]
                       = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBA
```

```
> SElevels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOE
> MPTYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGE
> ND cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVW
> RAP(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CIT
> YPE(passthru) NOABBREV ABBREV *]
                         - opts_exclusive "`allbaselevels' `noallbaselevels'"
                         = opts_exclusive " "
                         ─────────────────────────────────────────────────
> ─────────────────────────────── begin opts_exclusive ──────────────
                         - version 8.2
                         - args opts optname errcode optslab
                         - local opts `opts'
                         = local opts
                         - local n 0
                         - while `"`opts'"' != "" {
                         = while `""' != "" {
                           local ++n
                           gettoken item`n' opts : opts, bind
                           }
                         - if `n' < 2 {
                         = if 0 < 2 {
                         - exit
                         ─────────────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ──────────────
                    - opts_exclusive "`allbaselevels' `nobaselevels'"
                    = opts_exclusive " "
                         ─────────────────────────────────────────────────
> ─────────────────────────────── begin opts_exclusive ──────────────
                         - version 8.2
                         - args opts optname errcode optslab
                         - local opts `opts'
                         = local opts
                         - local n 0
                         - while `"`opts'"' != "" {
                         = while `""' != "" {
                           local ++n
                           gettoken item`n' opts : opts, bind
                           }
                         - if `n' < 2 {
                         = if 0 < 2 {
                         - exit
                         ─────────────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ──────────────
                    - opts_exclusive "`baselevels' `nobaselevels'"
                    = opts_exclusive " "
                         ─────────────────────────────────────────────────
```

```
> ─────────────────────────────────── begin opts_exclusive ──────────────
                     – version 8.2
                     – args opts optname errcode optslab
                     – local opts `opts'
                     = local opts
                     – local n 0
                     – while `"`opts'"' != "" {
                     = while `""' != "" {
                       local ++n
                       gettoken item`n' opts : opts, bind
                       }
                     – if `n' < 2 {
                     = if 0 < 2 {
                     – exit
                       ─────────────────────────────────────────────────
> ─────────────────────────────────── end opts_exclusive ────────────────
                   – opts_exclusive "`emptycells' `noemptycells'"
                   = opts_exclusive " "
                       ─────────────────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ──────────────
                     – version 8.2
                     – args opts optname errcode optslab
                     – local opts `opts'
                     = local opts
                     – local n 0
                     – while `"`opts'"' != "" {
                     = while `""' != "" {
                       local ++n
                       gettoken item`n' opts : opts, bind
                       }
                     – if `n' < 2 {
                     = if 0 < 2 {
                     – exit
                       ─────────────────────────────────────────────────
> ─────────────────────────────────── end opts_exclusive ────────────────
                   – opts_exclusive "`fvlabel' `nofvlabel'"
                   = opts_exclusive " "
                       ─────────────────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ──────────────
                     – version 8.2
                     – args opts optname errcode optslab
                     – local opts `opts'
                     = local opts
                     – local n 0
                     – while `"`opts'"' != "" {
                     = while `""' != "" {
```

```
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
```
───

> ──────────────────────────────── end opts_exclusive ─────────────

```
          – opts_exclusive "`omitted' `noomitted'"
          = opts_exclusive " "
```
───

> ──────────────────────────────── begin opts_exclusive ─────────────

```
          – version 8.2
          – args opts optname errcode optslab
          – local opts `opts'
          = local opts
          – local n 0
          – while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          – if `n' < 2 {
          = if 0 < 2 {
          – exit
```
───

> ──────────────────────────────── end opts_exclusive ─────────────

```
          – opts_exclusive "`lstretch' `nolstretch'"
          = opts_exclusive " "
```
───

> ──────────────────────────────── begin opts_exclusive ─────────────

```
          – version 8.2
          – args opts optname errcode optslab
          – local opts `opts'
          = local opts
          – local n 0
          – while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          – if `n' < 2 {
          = if 0 < 2 {
          – exit
```
───

> ──────────────────────────────── end opts_exclusive ─────────────
```

```
                – opts_exclusive "`cnsreport' `fullcnsreport'"
                = opts_exclusive " "
                   ─────────────────────────────────────────────
> ─────────────────────────────────────── begin opts_exclusive ───────────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
                   ─────────────────────────────────────────────
> ───────────────────────────────────────── end opts_exclusive ───────────────
                – opts_exclusive "`coeflegend' `selegend'"
                = opts_exclusive " "
                   ─────────────────────────────────────────────
> ─────────────────────────────────────── begin opts_exclusive ───────────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
                   ─────────────────────────────────────────────
> ───────────────────────────────────────── end opts_exclusive ───────────────
                – opts_exclusive "`noci' `nopvalues'"
                = opts_exclusive " "
                   ─────────────────────────────────────────────
> ─────────────────────────────────────── begin opts_exclusive ───────────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
```

```
                        – local n 0
                        – while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        – if `n' < 2 {
                        = if 0 < 2 {
                        – exit
                        ─────────────────────────────────────
>  ───────────────────────────────── end opts_exclusive ─────────────
                 – local K : list sizeof namelist
                 – gettoken c_diopts c_opts : namelist
                 – opts_exclusive "`coding' `compare'"
                 = opts_exclusive " "
                        ─────────────────────────────────────
>  ───────────────────────────────── begin opts_exclusive ───────────
                 – version 8.2
                 – args opts optname errcode optslab
                 – local opts `opts'
                 = local opts
                 – local n 0
                 – while `"`opts'"' != "" {
                 = while `""' != "" {
                   local ++n
                   gettoken item`n' opts : opts, bind
                   }
                 – if `n' < 2 {
                 = if 0 < 2 {
                 – exit
                        ─────────────────────────────────────
>  ───────────────────────────────── end opts_exclusive ─────────────
                 – opts_exclusive "`versus' `compare'"
                 = opts_exclusive " "
                        ─────────────────────────────────────
>  ───────────────────────────────── begin opts_exclusive ───────────
                 – version 8.2
                 – args opts optname errcode optslab
                 – local opts `opts'
                 = local opts
                 – local n 0
                 – while `"`opts'"' != "" {
                 = while `""' != "" {
                   local ++n
                   gettoken item`n' opts : opts, bind
                   }
```

```
                          – if `n' < 2 {
                          = if 0 < 2 {
                          – exit
                          ─────────────────────────────────────────────

>  ───────────────────────────────── end opts_exclusive ─────────────
                  – opts_exclusive "`abbrev' `noabbrev'"
                  = opts_exclusive " "
                          ─────────────────────────────────────────────

>  ───────────────────────────────── begin opts_exclusive ───────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                          ─────────────────────────────────────────────

>  ───────────────────────────────── end opts_exclusive ─────────────
                  – local allbaselevels `allbaselevels' `noallbaselevels'
                  = local allbaselevels
                  – local baselevels `baselevels' `nobaselevels'
                  = local baselevels
                  – local emptycells `emptycells' `noemptycells'
                  = local emptycells
                  – local omitted `omitted' `noomitted'
                  = local omitted
                  – local lstretch `lstretch' `nolstretch'
                  = local lstretch
                  – local fvlabel `fvlabel' `nofvlabel'
                  = local fvlabel
                  – local abbrev `abbrev' `noabbrev'
                  = local abbrev
                  – if "`allbaselevels'`baselevels'" == "" {
                  = if "" == "" {
                  – if c(showbaselevels) == "all" {
                    local allbaselevels allbaselevels
                    }
                  – else if c(showbaselevels) == "on" {
                    local baselevels baselevels
                    }
```

```
-   }
-   if "`emptycells'" == "" {
=   if "" == "" {
-   if c(showemptycells) == "off" {
    local emptycells noemptycells
    }
-   }
-   if "`omitted'" == "" {
=   if "" == "" {
-   if c(showomitted) == "off" {
    local omitted noomitted
    }
-   }
-   if "`lstretch'" == "" {
=   if "" == "" {
-   if c(lstretch) == "off" {
    local lstretch nolstretch
    }
-   }
-   if `:length local cformat' {
=   if 0 {
    confirm numeric format `cformat'
    if fmtwidth(`"`cformat'"') > 9 {
    local cformat "%9.0g"
    di "{txt}note: invalid cformat(), using default"
    }
    sreturn local cformat `"`cformat'"'
    local cformat `"cformat(`cformat')"'
    }
-   if `:length local sformat' {
=   if 0 {
    confirm numeric format `sformat'
    if fmtwidth(`"`sformat'"') > 8 {
    local sformat "%8.2f"
    di "{txt}note: invalid sformat(), using default"
    }
    sreturn local sformat `"`sformat'"'
    local sformat `"sformat(`sformat')"'
    }
-   if `:length local pformat' {
=   if 0 {
    confirm numeric format `pformat'
    if fmtwidth(`"`pformat'"') > 5 {
    local pformat "%5.3f"
    di "{txt}note: invalid pformat(), using default"
    }
```

```
                   sreturn local pformat `"'`pformat'"'
                   local pformat `"pformat(`pformat')"'
                   }
       - if `K' == 1 & `:length local options' {
       = if 2 == 1 & 0 {
                   syntax namelist(max=2) [, `DIOPTS']
                   }
       - if reldif(`level', c(level)) > 1e-3 {
       = if reldif(95, c(level)) > 1e-3 {
                   local levelopt level(`level')
                   }
       - Wrapon , `fvwrapon'
       = Wrapon ,
                   ─────────────────────────────────────────
  >   ───────────────────── begin _get_diopts.Wrapon ──────────────
                 - capture syntax [, WOrd WIdth]
                 - if c(rc) {
                   di as err "invalid fvwrapon() option;"
                   syntax [, WOrd WIdth]
                   exit 198
                   }
                 - opts_exclusive "`word' `width'" fvwrapon
                 = opts_exclusive " " fvwrapon
                   ─────────────────────────────────────────
  >   ───────────────────────── begin opts_exclusive ──────────────
                 - version 8.2
                 - args opts optname errcode optslab
                 - local opts `opts'
                 = local opts
                 - local n 0
                 - while `"'`opts'"' != "" {
                 = while `""' != "" {
                   local ++n
                   gettoken item`n' opts : opts, bind
                   }
                 - if `n' < 2 {
                 = if 0 < 2 {
                 - exit
                   ─────────────────────────────────────────
  >   ───────────────────────── end opts_exclusive ──────────────
                 - local fvwrapon `word' `width'
                 = local fvwrapon
                 - if `:length local fvwrapon' {
                 = if 0 {
                   c_local fvwrapon fvwrapon(`fvwrapon')
                   }
```

```
> ────────────────────────────────────────── end _get_diopts.Wrapon ──────────────────
                    – if "`fvwrap'" != "" {
                    = if "" != "" {
                      FVWrap, `fvwrap'
                      }
                    – c_local `c_diopts' `levelopt' `vsquish' `allbaselevels'
> `baselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `
> coeflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `comp
> are' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `a
> bbrev'
                    = c_local diopts
                    – if `K' == 2 {
                    = if 2 == 2 {
                    – c_local `c_opts' `"`options'"'
                    = c_local  options `""'
                    – }
                    – sreturn local coding `coding'
                    = sreturn local coding
                    – sreturn local versus `versus'
                    = sreturn local versus
                    – sreturn local compare `compare'
                    = sreturn local compare
                    – sreturn local level `level'
                    = sreturn local level 95
                    ─────────────────────────────────────────────────────────
> ──────────────────────────────────────── end _get_diopts.GetDiopts ─────────────────
                    – c_local `name1' `"`diopts'"'
                    = c_local diopts `""'
                    – local snames : s(macros)
                    – foreach sname of local snames {
                    – local S_`sname' = s(`sname')
                    = local S_level = s(level)
                    – }
                    – local S_`sname' = s(`sname')
                    = local S_method = s(method)
                    – }
                    – sreturn clear
                    – GetDiopts DEFAULT
                    ─────────────────────────────────────────────────────────
> ──────────────────────────────────────── begin _get_diopts.GetDiopts ───────────────
                    – local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLB
> ASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMP
> TYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(st
> ring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru)
>  FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru)
```

```
>   NOABBREV ABBREV
                    - syntax namelist(max=2) [, `DIOPTS' *]
                    = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBA
> SElevels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOE
> MPTYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGE
> ND cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVW
> RAP(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CIT
> YPE(passthru) NOABBREV ABBREV *]
                    - opts_exclusive "`allbaselevels' `noallbaselevels'"
                    = opts_exclusive " "
                    ─────────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ───────────────
                    - version 8.2
                    - args opts optname errcode optslab
                    - local opts `opts'
                    = local opts
                    - local n 0
                    - while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    - if `n' < 2 {
                    = if 0 < 2 {
                    - exit
                    ─────────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ───────────────
                    - opts_exclusive "`allbaselevels' `nobaselevels'"
                    = opts_exclusive " "
                    ─────────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ───────────────
                    - version 8.2
                    - args opts optname errcode optslab
                    - local opts `opts'
                    = local opts
                    - local n 0
                    - while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    - if `n' < 2 {
                    = if 0 < 2 {
                    - exit
                    ─────────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ───────────────
```

```
                – opts_exclusive "`baselevels' `nobaselevels'"
              = opts_exclusive " "

> ─────────────────────────────── begin opts_exclusive ──────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit

> ─────────────────────────────── end opts_exclusive ──────────
              – opts_exclusive "`emptycells' `noemptycells'"
              = opts_exclusive " "

> ─────────────────────────────── begin opts_exclusive ──────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit

> ─────────────────────────────── end opts_exclusive ──────────
              – opts_exclusive "`fvlabel' `nofvlabel'"
              = opts_exclusive " "

> ─────────────────────────────── begin opts_exclusive ──────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
```

```
                        – local n 0
                        – while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        – if `n' < 2 {
                        = if 0 < 2 {
                        – exit
                       ─────────────────────────────────────────
  > ─────────────────────────────── end opts_exclusive ─────────────
                   – opts_exclusive "`omitted' `noomitted'"
                   = opts_exclusive " "
                       ─────────────────────────────────────────
  > ─────────────────────────────── begin opts_exclusive ───────────
                        – version 8.2
                        – args opts optname errcode optslab
                        – local opts `opts'
                        = local opts
                        – local n 0
                        – while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        – if `n' < 2 {
                        = if 0 < 2 {
                        – exit
                       ─────────────────────────────────────────
  > ─────────────────────────────── end opts_exclusive ─────────────
                   – opts_exclusive "`lstretch' `nolstretch'"
                   = opts_exclusive " "
                       ─────────────────────────────────────────
  > ─────────────────────────────── begin opts_exclusive ───────────
                        – version 8.2
                        – args opts optname errcode optslab
                        – local opts `opts'
                        = local opts
                        – local n 0
                        – while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        – if `n' < 2 {
                        = if 0 < 2 {
```

```
                        – exit
              ——————————————————————————————————————————
>  ——————————————————————————————— end opts_exclusive ——————————
        – opts_exclusive "`cnsreport' `fullcnsreport'"
        = opts_exclusive " "
              ——————————————————————————————————————————
>  ——————————————————————————————— begin opts_exclusive ——————————
        – version 8.2
        – args opts optname errcode optslab
        – local opts `opts'
        = local opts
        – local n 0
        – while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
        – if `n' < 2 {
        = if 0 < 2 {
        – exit
              ——————————————————————————————————————————
>  ——————————————————————————————— end opts_exclusive ——————————
        – opts_exclusive "`coeflegend' `selegend'"
        = opts_exclusive " "
              ——————————————————————————————————————————
>  ——————————————————————————————— begin opts_exclusive ——————————
        – version 8.2
        – args opts optname errcode optslab
        – local opts `opts'
        = local opts
        – local n 0
        – while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
        – if `n' < 2 {
        = if 0 < 2 {
        – exit
              ——————————————————————————————————————————
>  ——————————————————————————————— end opts_exclusive ——————————
        – opts_exclusive "`noci' `nopvalues'"
        = opts_exclusive " "
              ——————————————————————————————————————————
>  ——————————————————————————————— begin opts_exclusive ——————————
        – version 8.2
```

```
                              — args opts optname errcode optslab
                              — local opts `opts'
                              = local opts
                              — local n 0
                              — while `"`opts'"' != "" {
                              = while `""' != "" {
                                local ++n
                                gettoken item`n' opts : opts, bind
                                }
                              — if `n' < 2 {
                              = if 0 < 2 {
                              — exit
                              ──────────────────────────────────────────
>  ──────────────────────────────── end opts_exclusive ─────────────
                  — local K : list sizeof namelist
                  — gettoken c_diopts c_opts : namelist
                  — opts_exclusive "`coding' `compare'"
                  = opts_exclusive " "
                              ──────────────────────────────────────────
>  ──────────────────────────────── begin opts_exclusive ───────────
                  — version 8.2
                  — args opts optname errcode optslab
                  — local opts `opts'
                  = local opts
                  — local n 0
                  — while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  — if `n' < 2 {
                  = if 0 < 2 {
                  — exit
                              ──────────────────────────────────────────
>  ──────────────────────────────── end opts_exclusive ─────────────
                  — opts_exclusive "`versus' `compare'"
                  = opts_exclusive " "
                              ──────────────────────────────────────────
>  ──────────────────────────────── begin opts_exclusive ───────────
                  — version 8.2
                  — args opts optname errcode optslab
                  — local opts `opts'
                  = local opts
                  — local n 0
                  — while `"`opts'"' != "" {
                  = while `""' != "" {
```

```
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────────
>  ───────────────────────────────────── end opts_exclusive ─────────────
                    – opts_exclusive "`abbrev' `noabbrev'"
                    = opts_exclusive " "
                    ─────────────────────────────────────────────
>  ───────────────────────────────────── begin opts_exclusive ───────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────────
>  ───────────────────────────────────── end opts_exclusive ─────────────
                    – local allbaselevels `allbaselevels' `noallbaselevels'
                    = local allbaselevels
                    – local baselevels `baselevels' `nobaselevels'
                    = local baselevels
                    – local emptycells `emptycells' `noemptycells'
                    = local emptycells
                    – local omitted `omitted' `noomitted'
                    = local omitted
                    – local lstretch `lstretch' `nolstretch'
                    = local lstretch
                    – local fvlabel `fvlabel' `nofvlabel'
                    = local fvlabel
                    – local abbrev `abbrev' `noabbrev'
                    = local abbrev
                    – if "`allbaselevels'`baselevels'" == "" {
                    = if "" == "" {
                    – if c(showbaselevels) == "all" {
                      local allbaselevels allbaselevels
                      }
```

```
-  else if c(showbaselevels) == "on" {
   local baselevels baselevels
   }
-  }
-  if "`emptycells'" == "" {
=  if "" == "" {
-  if c(showemptycells) == "off" {
   local emptycells noemptycells
   }
-  }
-  if "`omitted'" == "" {
=  if "" == "" {
-  if c(showomitted) == "off" {
   local omitted noomitted
   }
-  }
-  if "`lstretch'" == "" {
=  if "" == "" {
-  if c(lstretch) == "off" {
   local lstretch nolstretch
   }
-  }
-  if `:length local cformat' {
=  if 0 {
   confirm numeric format `cformat'
   if fmtwidth(`"`cformat'"') > 9 {
   local cformat "%9.0g"
   di "{txt}note: invalid cformat(), using default"
   }
   sreturn local cformat `"`cformat'"'
   local cformat `"cformat(`cformat')"'
   }
-  if `:length local sformat' {
=  if 0 {
   confirm numeric format `sformat'
   if fmtwidth(`"`sformat'"') > 8 {
   local sformat "%8.2f"
   di "{txt}note: invalid sformat(), using default"
   }
   sreturn local sformat `"`sformat'"'
   local sformat `"sformat(`sformat')"'
   }
-  if `:length local pformat' {
=  if 0 {
   confirm numeric format `pformat'
   if fmtwidth(`"`pformat'"') > 5 {
```

```
                    local pformat "%5.3f"
                    di "{txt}note: invalid pformat(), using default"
                    }
                    sreturn local pformat `"`pformat'"'
                    local pformat `"pformat(`pformat')"'
                    }
  - if `K' == 1 & `:length local options' {
  = if 1 == 1 & 0 {
                    syntax namelist(max=2) [, `DIOPTS']
                    }
  - if reldif(`level', c(level)) > 1e-3 {
  = if reldif(95, c(level)) > 1e-3 {
                    local levelopt level(`level')
                    }
  - Wrapon , `fvwrapon'
  = Wrapon ,
                 ─────────────────────────────────────────────
> ────────────────────────── begin _get_diopts.Wrapon ──────────────
                 - capture syntax [, WOrd WIdth]
                 - if c(rc) {
                   di as err "invalid fvwrapon() option;"
                   syntax [, WOrd WIdth]
                   exit 198
                   }
                 - opts_exclusive "`word' `width'" fvwrapon
                 = opts_exclusive " " fvwrapon
                 ─────────────────────────────────────────────
> ────────────────────────── begin opts_exclusive ──────────────
                 - version 8.2
                 - args opts optname errcode optslab
                 - local opts `opts'
                 = local opts
                 - local n 0
                 - while `"`opts'"' != "" {
                 = while `""' != "" {
                   local ++n
                   gettoken item`n' opts : opts, bind
                   }
                 - if `n' < 2 {
                 = if 0 < 2 {
                 - exit
                 ─────────────────────────────────────────────
> ────────────────────────── end opts_exclusive ──────────────
                 - local fvwrapon `word' `width'
                 = local fvwrapon
                 - if `:length local fvwrapon' {
```

```
                          = if 0 {
                            c_local fvwrapon fvwrapon(`fvwrapon')
                            }
                          ─────────────────────────────────────────
> ─────────────────────────────── end _get_diopts.Wrapon ───────────────
                        – if "`fvwrap'" != "" {
                        = if "" != "" {
                          FVWrap, `fvwrap'
                          }
                        – c_local `c_diopts' `levelopt' `vsquish' `allbaselevels'
> `baselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `
> coeflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `comp
> are' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `a
> bbrev'
                        = c_local DEFAULT
                        – if `K' == 2 {
                        = if 1 == 2 {
                          c_local `c_opts' `"`options'"'
                          }
                        – sreturn local coding `coding'
                        = sreturn local coding
                        – sreturn local versus `versus'
                        = sreturn local versus
                        – sreturn local compare `compare'
                        = sreturn local compare
                        – sreturn local level `level'
                        = sreturn local level 95
                          ─────────────────────────────────────────
> ─────────────────────────────── end _get_diopts.GetDiopts ───────────────
                      – if `"`name2'"' == "" {
                      = if `"options"' == "" {
                        GetDiopts DUPS, `options'
                        }
                      – else {
                      – GetDiopts DUPS options, `options'
                      = GetDiopts DUPS options,
                          ─────────────────────────────────────────
> ─────────────────────────────── begin _get_diopts.GetDiopts ───────────────
                        – local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLB
> ASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMP
> TYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(st
> ring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru)
>  FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru)
>  NOABBREV ABBREV
                        – syntax namelist(max=2) [, `DIOPTS' *]
                        = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBA
```

```
> SElevels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOE
> MPTYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGE
> ND cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVW
> RAP(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CIT
> YPE(passthru) NOABBREV ABBREV *]
                         - opts_exclusive "`allbaselevels' `noallbaselevels'"
                         = opts_exclusive " "
                         ───────────────────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ───────────────
                         - version 8.2
                         - args opts optname errcode optslab
                         - local opts `opts'
                         = local opts
                         - local n 0
                         - while `"`opts'"' != "" {
                         = while `""' != "" {
                           local ++n
                           gettoken item`n' opts : opts, bind
                           }
                         - if `n' < 2 {
                         = if 0 < 2 {
                         - exit
                         ───────────────────────────────────────────────────
> ─────────────────────────────────── end opts_exclusive ─────────────────
                     - opts_exclusive "`allbaselevels' `nobaselevels'"
                     = opts_exclusive " "
                     ───────────────────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ───────────────
                     - version 8.2
                     - args opts optname errcode optslab
                     - local opts `opts'
                     = local opts
                     - local n 0
                     - while `"`opts'"' != "" {
                     = while `""' != "" {
                       local ++n
                       gettoken item`n' opts : opts, bind
                       }
                     - if `n' < 2 {
                     = if 0 < 2 {
                     - exit
                     ───────────────────────────────────────────────────
> ─────────────────────────────────── end opts_exclusive ─────────────────
                 - opts_exclusive "`baselevels' `nobaselevels'"
                 = opts_exclusive " "
                 ───────────────────────────────────────────────────
```

```
> ──────────────────────────── begin opts_exclusive ───────────────
                   – version 8.2
                   – args opts optname errcode optslab
                   – local opts `opts'
                   = local opts
                   – local n 0
                   – while `"`opts'"' != "" {
                   = while `""' != "" {
                     local ++n
                     gettoken item`n' opts : opts, bind
                     }
                   – if `n' < 2 {
                   = if 0 < 2 {
                   – exit
                   ─────────────────────────────────────────────────
> ──────────────────────────── end opts_exclusive ─────────────────
                 – opts_exclusive "`emptycells' `noemptycells'"
                 = opts_exclusive " "
                   ─────────────────────────────────────────────────
> ──────────────────────────── begin opts_exclusive ───────────────
                   – version 8.2
                   – args opts optname errcode optslab
                   – local opts `opts'
                   = local opts
                   – local n 0
                   – while `"`opts'"' != "" {
                   = while `""' != "" {
                     local ++n
                     gettoken item`n' opts : opts, bind
                     }
                   – if `n' < 2 {
                   = if 0 < 2 {
                   – exit
                   ─────────────────────────────────────────────────
> ──────────────────────────── end opts_exclusive ─────────────────
                 – opts_exclusive "`fvlabel' `nofvlabel'"
                 = opts_exclusive " "
                   ─────────────────────────────────────────────────
> ──────────────────────────── begin opts_exclusive ───────────────
                   – version 8.2
                   – args opts optname errcode optslab
                   – local opts `opts'
                   = local opts
                   – local n 0
                   – while `"`opts'"' != "" {
                   = while `""' != "" {
```

```
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
               – if `n' < 2 {
               = if 0 < 2 {
               – exit
                 ─────────────────────────────────────────────
> ────────────────────────────────────── end opts_exclusive ──────────────
               – opts_exclusive "`omitted' `noomitted'"
               = opts_exclusive " "
                 ─────────────────────────────────────────────
> ────────────────────────────────────── begin opts_exclusive ────────────
               – version 8.2
               – args opts optname errcode optslab
               – local opts `opts'
               = local opts
               – local n 0
               – while `"`opts'"' != "" {
               = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
               – if `n' < 2 {
               = if 0 < 2 {
               – exit
                 ─────────────────────────────────────────────
> ────────────────────────────────────── end opts_exclusive ──────────────
               – opts_exclusive "`lstretch' `nolstretch'"
               = opts_exclusive " "
                 ─────────────────────────────────────────────
> ────────────────────────────────────── begin opts_exclusive ────────────
               – version 8.2
               – args opts optname errcode optslab
               – local opts `opts'
               = local opts
               – local n 0
               – while `"`opts'"' != "" {
               = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
               – if `n' < 2 {
               = if 0 < 2 {
               – exit
                 ─────────────────────────────────────────────
> ────────────────────────────────────── end opts_exclusive ──────────────
```

```
                  – opts_exclusive "`cnsreport' `fullcnsreport'"
              = opts_exclusive " "
              _____
 > ─────────────────────────── begin opts_exclusive ──────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
              _____
 > ─────────────────────────── end opts_exclusive ────────────
              – opts_exclusive "`coeflegend' `selegend'"
              = opts_exclusive " "
              _____
 > ─────────────────────────── begin opts_exclusive ──────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
              _____
 > ─────────────────────────── end opts_exclusive ────────────
              – opts_exclusive "`noci' `nopvalues'"
              = opts_exclusive " "
              _____
 > ─────────────────────────── begin opts_exclusive ──────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
```

```
                           – local n 0
                           – while `"`opts'"' != "" {
                           = while `""' != "" {
                             local ++n
                             gettoken item`n' opts : opts, bind
                             }
                           – if `n' < 2 {
                           = if 0 < 2 {
                           – exit
                           ─────────────────────────────────
> ───────────────────────────────────── end opts_exclusive ─────────────
                    – local K : list sizeof namelist
                    – gettoken c_diopts c_opts : namelist
                    – opts_exclusive "`coding' `compare'"
                    = opts_exclusive " "
                           ─────────────────────────────────
> ───────────────────────────────────── begin opts_exclusive ───────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                           ─────────────────────────────────
> ───────────────────────────────────── end opts_exclusive ─────────────
                    – opts_exclusive "`versus' `compare'"
                    = opts_exclusive " "
                           ─────────────────────────────────
> ───────────────────────────────────── begin opts_exclusive ───────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
```

```
                                 – if `n' < 2 {
                                 = if 0 < 2 {
                                 – exit
                       ───────────────────────────────────────────────

>  ──────────────────────────────── end opts_exclusive ────────────────
                       – opts_exclusive "`abbrev' `noabbrev'"
                       = opts_exclusive " "
                       ───────────────────────────────────────────────

>  ──────────────────────────────── begin opts_exclusive ──────────────
                       – version 8.2
                       – args opts optname errcode optslab
                       – local opts `opts'
                       = local opts
                       – local n 0
                       – while `"`opts'"' != "" {
                       = while `""' != "" {
                         local ++n
                         gettoken item`n' opts : opts, bind
                         }
                       – if `n' < 2 {
                       = if 0 < 2 {
                       – exit
                       ───────────────────────────────────────────────

>  ──────────────────────────────── end opts_exclusive ────────────────
                       – local allbaselevels `allbaselevels' `noallbaselevels'
                       = local allbaselevels
                       – local baselevels `baselevels' `nobaselevels'
                       = local baselevels
                       – local emptycells `emptycells' `noemptycells'
                       = local emptycells
                       – local omitted `omitted' `noomitted'
                       = local omitted
                       – local lstretch `lstretch' `nolstretch'
                       = local lstretch
                       – local fvlabel `fvlabel' `nofvlabel'
                       = local fvlabel
                       – local abbrev `abbrev' `noabbrev'
                       = local abbrev
                       – if "`allbaselevels'`baselevels'" == "" {
                       = if "" == "" {
                       – if c(showbaselevels) == "all" {
                         local allbaselevels allbaselevels
                         }
                       – else if c(showbaselevels) == "on" {
                         local baselevels baselevels
                         }
```

```
- }
- if "`emptycells'" == "" {
= if "" == "" {
- if c(showemptycells) == "off" {
  local emptycells noemptycells
  }
- }
- if "`omitted'" == "" {
= if "" == "" {
- if c(showomitted) == "off" {
  local omitted noomitted
  }
- }
- if "`lstretch'" == "" {
= if "" == "" {
- if c(lstretch) == "off" {
  local lstretch nolstretch
  }
- }
- if `:length local cformat' {
= if 0 {
  confirm numeric format `cformat'
  if fmtwidth(`"`cformat'"') > 9 {
  local cformat "%9.0g"
  di "{txt}note: invalid cformat(), using default"
  }
  sreturn local cformat `"`cformat'"'
  local cformat `"cformat(`cformat')"'
  }
- if `:length local sformat' {
= if 0 {
  confirm numeric format `sformat'
  if fmtwidth(`"`sformat'"') > 8 {
  local sformat "%8.2f"
  di "{txt}note: invalid sformat(), using default"
  }
  sreturn local sformat `"`sformat'"'
  local sformat `"sformat(`sformat')"'
  }
- if `:length local pformat' {
= if 0 {
  confirm numeric format `pformat'
  if fmtwidth(`"`pformat'"') > 5 {
  local pformat "%5.3f"
  di "{txt}note: invalid pformat(), using default"
  }
```

```
                    sreturn local pformat `"'`pformat'"'
                    local pformat `"pformat(`pformat')"'
                    }
  — if `K' == 1 & `:length local options' {
  = if 2 == 1 & 0 {
                    syntax namelist(max=2) [, `DIOPTS']
                    }
  — if reldif(`level', c(level)) > 1e-3 {
  = if reldif(95, c(level)) > 1e-3 {
                    local levelopt level(`level')
                    }
  — Wrapon , `fvwrapon'
  = Wrapon ,
                    ──────────────────────────────────────────────
  > ────────────────────────────── begin _get_diopts.Wrapon ──────────────
                    — capture syntax [, WOrd WIdth]
                    — if c(rc) {
                      di as err "invalid fvwrapon() option;"
                      syntax [, WOrd WIdth]
                      exit 198
                      }
                    — opts_exclusive "`word' `width'" fvwrapon
                    = opts_exclusive " " fvwrapon
                    ──────────────────────────────────────────────
  > ────────────────────────────── begin opts_exclusive ──────────────────
                    — version 8.2
                    — args opts optname errcode optslab
                    — local opts `opts'
                    = local opts
                    — local n 0
                    — while `"'`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    — if `n' < 2 {
                    = if 0 < 2 {
                    — exit
                    ──────────────────────────────────────────────
  > ────────────────────────────── end opts_exclusive ────────────────────
                    — local fvwrapon `word' `width'
                    = local fvwrapon
                    — if `:length local fvwrapon' {
                    = if 0 {
                      c_local fvwrapon fvwrapon(`fvwrapon')
                      }
```

```
                                ────────────────────────────────────────────
> ─────────────────────────────────── end _get_diopts.Wrapon ───────────────
                    − if "`fvwrap'" != "" {
                    = if "" != "" {
                      FVWrap, `fvwrap'
                      }
                    − c_local `c_diopts' `levelopt' `vsquish' `allbaselevels'
> `baselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `
> coeflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `comp
> are' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `a
> bbrev'
                    = c_local DUPS
                    − if `K' == 2 {
                    = if 2 == 2 {
                    − c_local `c_opts' `"`options'"'
                    = c_local  options `""'
                    − }
                    − sreturn local coding `coding'
                    = sreturn local coding
                    − sreturn local versus `versus'
                    = sreturn local versus
                    − sreturn local compare `compare'
                    = sreturn local compare
                    − sreturn local level `level'
                    = sreturn local level 95
                                ────────────────────────────────────────────
> ─────────────────────────────────── end _get_diopts.GetDiopts ────────────
                    − c_local `name2' `"`options'"'
                    = c_local options `""'
                    − }
                    − local DUPS : list DUPS − DEFAULT
                    − gettoken DUPS : DUPS
                    − if `"`DUPS'"' != "" {
                    = if `""' != "" {
                      if (strpos(`"`DUPS'"', "(")) {
                      gettoken DUPS : DUPS, parse("(")
                      local DUPS `"`DUPS'()"'
                      }
                      di as err "duplicate {bf:`DUPS'} option not allowed"
                      exit 198
                      }
                    − sreturn clear
                    − foreach sname of local snames {
                    − sreturn local `sname' = `"`S_`sname''"'
                    = sreturn local level = `"95"'
                    − }
```

```
                            - sreturn local `sname' = `"'`S_`sname''"'
                            = sreturn local method = `"noadjust"'
                            - }
                          ─────────────────────────────────────────────
  > ───────────────────────────────────────── end _get_diopts ─────────────
                - local legend coeflegend selegend
                - local legend : list legend & diopts
                - local diopts : list diopts - legend
                - local lstretch lstretch nolstretch
                - local lstretch : list lstretch & diopts
                - local diopts : list diopts - lstretch
                - local markdown markdown
                - local markdown : list markdown & diopts
                - local diopts : list diopts - markdown
                - _get_diopts ignore, `diopts' `cformat' `sformat' `pformat'
                = _get_diopts ignore,
                          ─────────────────────────────────────────────
  > ───────────────────────────────────────── begin _get_diopts ───────────
                - version 11
                - syntax namelist(max=2) [, *]
                - gettoken name1 namelist : namelist
                - gettoken name2 namelist : namelist
                - GetDiopts diopts options, `options'
                = GetDiopts diopts options,
                          ─────────────────────────────────────────────
  > ───────────────────────────────────────── begin _get_diopts.GetDiopts ──
                          - local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLB
  > ASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMP
  > TYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(st
  > ring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru)
  >  FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru)
  >  NOABBREV ABBREV
                          - syntax namelist(max=2) [, `DIOPTS' *]
                          = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBA
  > SElevels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOE
  > MPTYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGE
  > ND cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVW
  > RAP(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CIT
  > YPE(passthru) NOABBREV ABBREV *]
                          - opts_exclusive "`allbaselevels' `noallbaselevels'"
                          = opts_exclusive " "
                            ───────────────────────────────────────────
  > ───────────────────────────────────────── begin opts_exclusive ─────────
                      - version 8.2
                      - args opts optname errcode optslab
                      - local opts `opts'
```

```
= local opts
– local n 0
– while `"`opts'"' != "" {
= while `""' != "" {
  local ++n
  gettoken item`n' opts : opts, bind
  }
– if `n' < 2 {
= if 0 < 2 {
– exit
  ─────────────────────────────────────────────
> ──────────────────────── end opts_exclusive ──────────────
    – opts_exclusive "`allbaselevels' `nobaselevels'"
    = opts_exclusive " "
  ─────────────────────────────────────────────
> ──────────────────────── begin opts_exclusive ────────────
    – version 8.2
    – args opts optname errcode optslab
    – local opts `opts'
    = local opts
    – local n 0
    – while `"`opts'"' != "" {
    = while `""' != "" {
      local ++n
      gettoken item`n' opts : opts, bind
      }
    – if `n' < 2 {
    = if 0 < 2 {
    – exit
  ─────────────────────────────────────────────
> ──────────────────────── end opts_exclusive ──────────────
    – opts_exclusive "`baselevels' `nobaselevels'"
    = opts_exclusive " "
  ─────────────────────────────────────────────
> ──────────────────────── begin opts_exclusive ────────────
    – version 8.2
    – args opts optname errcode optslab
    – local opts `opts'
    = local opts
    – local n 0
    – while `"`opts'"' != "" {
    = while `""' != "" {
      local ++n
      gettoken item`n' opts : opts, bind
      }
    – if `n' < 2 {
```

```
                        = if 0 < 2 {
                        – exit
                        ──────────────────────────────────
> ──────────────────────────────── end opts_exclusive ──────────
            – opts_exclusive "`emptycells' `noemptycells'"
            = opts_exclusive " "
                        ──────────────────────────────────
> ──────────────────────────── begin opts_exclusive ──────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
                        ──────────────────────────────────
> ──────────────────────────────── end opts_exclusive ──────────
            – opts_exclusive "`fvlabel' `nofvlabel'"
            = opts_exclusive " "
                        ──────────────────────────────────
> ──────────────────────────── begin opts_exclusive ──────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
                        ──────────────────────────────────
> ──────────────────────────────── end opts_exclusive ──────────
            – opts_exclusive "`omitted' `noomitted'"
            = opts_exclusive " "
                        ──────────────────────────────────
> ──────────────────────────── begin opts_exclusive ──────────
```

```
                    − version 8.2
                    − args opts optname errcode optslab
                    − local opts `opts'
                    = local opts
                    − local n 0
                    − while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    − if `n' < 2 {
                    = if 0 < 2 {
                    − exit
                 ──────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ────────────
              − opts_exclusive "`lstretch' `nolstretch'"
              = opts_exclusive " "
                 ──────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ──────────
              − version 8.2
              − args opts optname errcode optslab
              − local opts `opts'
              = local opts
              − local n 0
              − while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              − if `n' < 2 {
              = if 0 < 2 {
              − exit
                 ──────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ────────────
            − opts_exclusive "`cnsreport' `fullcnsreport'"
            = opts_exclusive " "
                 ──────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ──────────
              − version 8.2
              − args opts optname errcode optslab
              − local opts `opts'
              = local opts
              − local n 0
              − while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
```

```
                    gettoken item`n' opts : opts, bind
                    }
                  — if `n' < 2 {
                  = if 0 < 2 {
                  — exit
                  ─────────────────────────────────────────────
>  ───────────────────────────────── end opts_exclusive ─────────────
              — opts_exclusive "`coeflegend' `selegend'"
              = opts_exclusive " "
                  ─────────────────────────────────────────────
>  ───────────────────────────────── begin opts_exclusive ───────────
              — version 8.2
              — args opts optname errcode optslab
              — local opts `opts'
              = local opts
              — local n 0
              — while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              — if `n' < 2 {
              = if 0 < 2 {
              — exit
                  ─────────────────────────────────────────────
>  ───────────────────────────────── end opts_exclusive ─────────────
              — opts_exclusive "`noci' `nopvalues'"
              = opts_exclusive " "
                  ─────────────────────────────────────────────
>  ───────────────────────────────── begin opts_exclusive ───────────
              — version 8.2
              — args opts optname errcode optslab
              — local opts `opts'
              = local opts
              — local n 0
              — while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              — if `n' < 2 {
              = if 0 < 2 {
              — exit
                  ─────────────────────────────────────────────
>  ───────────────────────────────── end opts_exclusive ─────────────
              — local K : list sizeof namelist
```

```
                    – gettoken c_diopts c_opts : namelist
                    – opts_exclusive "`coding' `compare'"
                    = opts_exclusive " "
                    ─────────────────────────────────────────────
  > ────────────────────────────────── begin opts_exclusive ─────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────────
  > ────────────────────────────────── end opts_exclusive ─────────────
                    – opts_exclusive "`versus' `compare'"
                    = opts_exclusive " "
                    ─────────────────────────────────────────────
  > ────────────────────────────────── begin opts_exclusive ─────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────────
  > ────────────────────────────────── end opts_exclusive ─────────────
                    – opts_exclusive "`abbrev' `noabbrev'"
                    = opts_exclusive " "
                    ─────────────────────────────────────────────
  > ────────────────────────────────── begin opts_exclusive ─────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
```

```
            = local opts
            − local n 0
            − while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            − if `n' < 2 {
            = if 0 < 2 {
            − exit
            ──────────────────────────────────────────────────
```

> ─────────────────────────── end opts_exclusive ───────────────

```
            − local allbaselevels `allbaselevels' `noallbaselevels'
            = local allbaselevels
            − local baselevels `baselevels' `nobaselevels'
            = local baselevels
            − local emptycells `emptycells' `noemptycells'
            = local emptycells
            − local omitted `omitted' `noomitted'
            = local omitted
            − local lstretch `lstretch' `nolstretch'
            = local lstretch
            − local fvlabel `fvlabel' `nofvlabel'
            = local fvlabel
            − local abbrev `abbrev' `noabbrev'
            = local abbrev
            − if "`allbaselevels'`baselevels'" == "" {
            = if "" == "" {
            − if c(showbaselevels) == "all" {
              local allbaselevels allbaselevels
              }
            − else if c(showbaselevels) == "on" {
              local baselevels baselevels
              }
            − }
            − if "`emptycells'" == "" {
            = if "" == "" {
            − if c(showemptycells) == "off" {
              local emptycells noemptycells
              }
            − }
            − if "`omitted'" == "" {
            = if "" == "" {
            − if c(showomitted) == "off" {
              local omitted noomitted
              }
```

```
- }
- if "`lstretch'" == "" {
= if "" == "" {
- if c(lstretch) == "off" {
  local lstretch nolstretch
  }
- }
- if `:length local cformat' {
= if 0 {
  confirm numeric format `cformat'
  if fmtwidth(`"`cformat'"') > 9 {
  local cformat "%9.0g"
  di "{txt}note: invalid cformat(), using default"
  }
  sreturn local cformat `"`cformat'"'
  local cformat `"cformat(`cformat')"'
  }
- if `:length local sformat' {
= if 0 {
  confirm numeric format `sformat'
  if fmtwidth(`"`sformat'"') > 8 {
  local sformat "%8.2f"
  di "{txt}note: invalid sformat(), using default"
  }
  sreturn local sformat `"`sformat'"'
  local sformat `"sformat(`sformat')"'
  }
- if `:length local pformat' {
= if 0 {
  confirm numeric format `pformat'
  if fmtwidth(`"`pformat'"') > 5 {
  local pformat "%5.3f"
  di "{txt}note: invalid pformat(), using default"
  }
  sreturn local pformat `"`pformat'"'
  local pformat `"pformat(`pformat')"'
  }
- if `K' == 1 & `:length local options' {
= if 2 == 1 & 0 {
  syntax namelist(max=2) [, `DIOPTS']
  }
- if reldif(`level', c(level)) > 1e-3 {
= if reldif(95, c(level)) > 1e-3 {
  local levelopt level(`level')
  }
- Wrapon , `fvwrapon'
```

```
                     = Wrapon ,
                     _____

 > ─────────────────────────────── begin _get_diopts.Wrapon ──────────────
                     ─ capture syntax [, WOrd WIdth]
                     ─ if c(rc) {
                       di as err "invalid fvwrapon() option;"
                       syntax [, WOrd WIdth]
                       exit 198
                       }
                     ─ opts_exclusive "`word' `width'" fvwrapon
                     = opts_exclusive " " fvwrapon
                     _____

 > ─────────────────────────────── begin opts_exclusive ──────────────────
                     ─ version 8.2
                     ─ args opts optname errcode optslab
                     ─ local opts `opts'
                     = local opts
                     ─ local n 0
                     ─ while `"`opts'"' != "" {
                     = while `""' != "" {
                       local ++n
                       gettoken item`n' opts : opts, bind
                       }
                     ─ if `n' < 2 {
                     = if 0 < 2 {
                     ─ exit
                     _____

 > ─────────────────────────────── end opts_exclusive ────────────────────
                     ─ local fvwrapon `word' `width'
                     = local fvwrapon
                     ─ if `:length local fvwrapon' {
                     = if 0 {
                       c_local fvwrapon fvwrapon(`fvwrapon')
                       }
                     _____

 > ─────────────────────────────── end _get_diopts.Wrapon ────────────────
                     ─ if "`fvwrap'" != "" {
                     = if "" != "" {
                       FVWrap, `fvwrap'
                       }
                     ─ c_local `c_diopts' `levelopt' `vsquish' `allbaselevels'
 > `baselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `
 > coeflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `comp
 > are' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `a
 > bbrev'
                     = c_local diopts
```

```
                     - if `K' == 2 {
                     = if 2 == 2 {
                     - c_local `c_opts' `"`options'"'
                     = c_local  options `""'
                     - }
                     - sreturn local coding `coding'
                     = sreturn local coding
                     - sreturn local versus `versus'
                     = sreturn local versus
                     - sreturn local compare `compare'
                     = sreturn local compare
                     - sreturn local level `level'
                     = sreturn local level 95
                     ──────────────────────────────────────────
> ───────────────────────────── end _get_diopts.GetDiopts ─────────────
                     - c_local `name1' `"`diopts'"'
                     = c_local ignore `""'
                     - local snames : s(macros)
                     - foreach sname of local snames {
                     - local S_`sname' = s(`sname')
                     = local S_level = s(level)
                     - }
                     - local S_`sname' = s(`sname')
                     = local S_method = s(method)
                     - }
                     - sreturn clear
                     - GetDiopts DEFAULT
                     ──────────────────────────────────────────
> ───────────────────────────── begin _get_diopts.GetDiopts ─────────────
                     - local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLB
> ASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMP
> TYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(st
> ring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru)
>  FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru)
>  NOABBREV ABBREV
                     - syntax namelist(max=2) [, `DIOPTS' *]
                     = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBA
> SElevels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOE
> MPTYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGE
> ND cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVW
> RAP(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CIT
> YPE(passthru) NOABBREV ABBREV *]
                     - opts_exclusive "`allbaselevels' `noallbaselevels'"
                     = opts_exclusive " "
                     ──────────────────────────────────────────
> ───────────────────────────── begin opts_exclusive ─────────────
```

```
                         – version 8.2
                         – args opts optname errcode optslab
                         – local opts `opts'
                         = local opts
                         – local n 0
                         – while `"`opts'"' != "" {
                         = while `""' != "" {
                           local ++n
                           gettoken item`n' opts : opts, bind
                           }
                         – if `n' < 2 {
                         = if 0 < 2 {
                         – exit
                      ──────────────────────────────────────────────
  > ──────────────────────────────── end opts_exclusive ─────────────
                  – opts_exclusive "`allbaselevels' `nobaselevels'"
                  = opts_exclusive " "
                      ──────────────────────────────────────────────
  > ──────────────────────────────── begin opts_exclusive ───────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                      ──────────────────────────────────────────────
  > ──────────────────────────────── end opts_exclusive ─────────────
                  – opts_exclusive "`baselevels' `nobaselevels'"
                  = opts_exclusive " "
                      ──────────────────────────────────────────────
  > ──────────────────────────────── begin opts_exclusive ───────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
```

```
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  _____
```

> ———————————————————————————————————— end opts_exclusive ——————————————
```
              – opts_exclusive "`emptycells' `noemptycells'"
              = opts_exclusive " "
                  _____
```

> ———————————————————————————————————— begin opts_exclusive ——————————————
```
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  _____
```

> ———————————————————————————————————— end opts_exclusive ——————————————
```
              – opts_exclusive "`fvlabel' `nofvlabel'"
              = opts_exclusive " "
                  _____
```

> ———————————————————————————————————— begin opts_exclusive ——————————————
```
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  _____
```

> ———————————————————————————————————— end opts_exclusive ——————————————
```
              – opts_exclusive "`omitted' `noomitted'"
```

```
                      = opts_exclusive " "
                      ─────────────────────────────────────────────────
>  ─────────────────────────────────── begin opts_exclusive ───────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                      ─────────────────────────────────────────────────
>  ─────────────────────────────────── end opts_exclusive ─────────────
                  – opts_exclusive "`lstretch' `nolstretch'"
                  = opts_exclusive " "
                      ─────────────────────────────────────────────────
>  ─────────────────────────────────── begin opts_exclusive ───────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                      ─────────────────────────────────────────────────
>  ─────────────────────────────────── end opts_exclusive ─────────────
                  – opts_exclusive "`cnsreport' `fullcnsreport'"
                  = opts_exclusive " "
                      ─────────────────────────────────────────────────
>  ─────────────────────────────────── begin opts_exclusive ───────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
```

```
                 – while `"`opts'"' != "" {
                 = while `""' != "" {
                   local ++n
                   gettoken item`n' opts : opts, bind
                   }
                 – if `n' < 2 {
                 = if 0 < 2 {
                 – exit
```
───

> ──────────────────────────── end opts_exclusive ───────────

```
             – opts_exclusive "`coeflegend' `selegend'"
             = opts_exclusive " "
```
───

> ──────────────────────────── begin opts_exclusive ───────────

```
                 – version 8.2
                 – args opts optname errcode optslab
                 – local opts `opts'
                 = local opts
                 – local n 0
                 – while `"`opts'"' != "" {
                 = while `""' != "" {
                   local ++n
                   gettoken item`n' opts : opts, bind
                   }
                 – if `n' < 2 {
                 = if 0 < 2 {
                 – exit
```
───

> ──────────────────────────── end opts_exclusive ───────────

```
             – opts_exclusive "`noci' `nopvalues'"
             = opts_exclusive " "
```
───

> ──────────────────────────── begin opts_exclusive ───────────

```
                 – version 8.2
                 – args opts optname errcode optslab
                 – local opts `opts'
                 = local opts
                 – local n 0
                 – while `"`opts'"' != "" {
                 = while `""' != "" {
                   local ++n
                   gettoken item`n' opts : opts, bind
                   }
                 – if `n' < 2 {
                 = if 0 < 2 {
                 – exit
```

> ── end opts_exclusive ───────────
 – local K : list sizeof namelist
 – gettoken c_diopts c_opts : namelist
 – opts_exclusive "`coding' `compare'"
 = opts_exclusive " "

> ── begin opts_exclusive ───────────
 – version 8.2
 – args opts optname errcode optslab
 – local opts `opts'
 = local opts
 – local n 0
 – while `"`opts'"' != "" {
 = while `""' != "" {
   local ++n
   gettoken item`n' opts : opts, bind
   }
 – if `n' < 2 {
 = if 0 < 2 {
 – exit

> ── end opts_exclusive ───────────
 – opts_exclusive "`versus' `compare'"
 = opts_exclusive " "

> ── begin opts_exclusive ───────────
 – version 8.2
 – args opts optname errcode optslab
 – local opts `opts'
 = local opts
 – local n 0
 – while `"`opts'"' != "" {
 = while `""' != "" {
   local ++n
   gettoken item`n' opts : opts, bind
   }
 – if `n' < 2 {
 = if 0 < 2 {
 – exit

> ── end opts_exclusive ───────────
 – opts_exclusive "`abbrev' `noabbrev'"
 = opts_exclusive " "

> ── begin opts_exclusive ───────────

```
                        – version 8.2
                        – args opts optname errcode optslab
                        – local opts `opts'
                        = local opts
                        – local n 0
                        – while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        – if `n' < 2 {
                        = if 0 < 2 {
                        – exit
                        ─────────────────────────────────────────
```

```
                 – local allbaselevels `allbaselevels' `noallbaselevels'
                 = local allbaselevels
                 – local baselevels `baselevels' `nobaselevels'
                 = local baselevels
                 – local emptycells `emptycells' `noemptycells'
                 = local emptycells
                 – local omitted `omitted' `noomitted'
                 = local omitted
                 – local lstretch `lstretch' `nolstretch'
                 = local lstretch
                 – local fvlabel `fvlabel' `nofvlabel'
                 = local fvlabel
                 – local abbrev `abbrev' `noabbrev'
                 = local abbrev
                 – if "`allbaselevels'`baselevels'" == "" {
                 = if "" == "" {
                 – if c(showbaselevels) == "all" {
                   local allbaselevels allbaselevels
                   }
                 – else if c(showbaselevels) == "on" {
                   local baselevels baselevels
                   }
                 – }
                 – if "`emptycells'" == "" {
                 = if "" == "" {
                 – if c(showemptycells) == "off" {
                   local emptycells noemptycells
                   }
                 – }
                 – if "`omitted'" == "" {
                 = if "" == "" {
```

```
-  if c(showomitted) == "off" {
   local omitted noomitted
   }
-  }
-  if "`lstretch'" == "" {
=  if "" == "" {
-  if c(lstretch) == "off" {
   local lstretch nolstretch
   }
-  }
-  if `:length local cformat' {
=  if 0 {
   confirm numeric format `cformat'
   if fmtwidth(`"`cformat'"') > 9 {
   local cformat "%9.0g"
   di "{txt}note: invalid cformat(), using default"
   }
   sreturn local cformat `"`cformat'"'
   local cformat `"cformat(`cformat')"'
   }
-  if `:length local sformat' {
=  if 0 {
   confirm numeric format `sformat'
   if fmtwidth(`"`sformat'"') > 8 {
   local sformat "%8.2f"
   di "{txt}note: invalid sformat(), using default"
   }
   sreturn local sformat `"`sformat'"'
   local sformat `"sformat(`sformat')"'
   }
-  if `:length local pformat' {
=  if 0 {
   confirm numeric format `pformat'
   if fmtwidth(`"`pformat'"') > 5 {
   local pformat "%5.3f"
   di "{txt}note: invalid pformat(), using default"
   }
   sreturn local pformat `"`pformat'"'
   local pformat `"pformat(`pformat')"'
   }
-  if `K' == 1 & `:length local options' {
=  if 1 == 1 & 0 {
   syntax namelist(max=2) [, `DIOPTS']
   }
-  if reldif(`level', c(level)) > 1e-3 {
=  if reldif(95, c(level)) > 1e-3 {
```

```
                    local levelopt level(`level')
                    }
              – Wrapon , `fvwrapon'
              = Wrapon ,
              _____
>  ─────────────────────────── begin _get_diopts.Wrapon ───────────────
              – capture syntax [, WOrd WIdth]
              – if c(rc) {
                di as err "invalid fvwrapon() option;"
                syntax [, WOrd WIdth]
                exit 198
                }
              – opts_exclusive "`word' `width'" fvwrapon
              = opts_exclusive " " fvwrapon
              _____
>  ─────────────────────────── begin opts_exclusive ───────────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
              _____
>  ─────────────────────────── end opts_exclusive ───────────────
              – local fvwrapon `word' `width'
              = local fvwrapon
              – if `:length local fvwrapon' {
              = if 0 {
                c_local fvwrapon fvwrapon(`fvwrapon')
                }
              _____
>  ─────────────────────────── end _get_diopts.Wrapon ───────────────
              – if "`fvwrap'" != "" {
              = if "" != "" {
                FVWrap, `fvwrap'
                }
              – c_local `c_diopts' `levelopt' `vsquish' `allbaselevels'
> `baselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `
> coeflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `comp
```

```
> are' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `a
> bbrev'
                        = c_local DEFAULT
                        - if `K' == 2 {
                        = if 1 == 2 {
                          c_local `c_opts' `"`options'"'
                          }
                        - sreturn local coding `coding'
                        = sreturn local coding
                        - sreturn local versus `versus'
                        = sreturn local versus
                        - sreturn local compare `compare'
                        = sreturn local compare
                        - sreturn local level `level'
                        = sreturn local level 95
                        ─────────────────────────────────────────
> ───────────────────────────── end _get_diopts.GetDiopts ─────────────
                    - if `"`name2'"' == "" {
                    = if `""' == "" {
                    - GetDiopts DUPS, `options'
                    = GetDiopts DUPS,

                        ─────────────────────────────────────────
> ───────────────────────────── begin _get_diopts.GetDiopts ───────────
                    - local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLB
> ASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMP
> TYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(st
> ring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru)
>  FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru)
>  NOABBREV ABBREV
                    - syntax namelist(max=2) [, `DIOPTS' *]
                    = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBA
> SElevels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOE
> MPTYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGE
> ND cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVW
> RAP(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CIT
> YPE(passthru) NOABBREV ABBREV *]
                    - opts_exclusive "`allbaselevels' `noallbaselevels'"
                    = opts_exclusive " "

                        ─────────────────────────────────────────
> ───────────────────────────── begin opts_exclusive ─────────────
                    - version 8.2
                    - args opts optname errcode optslab
                    - local opts `opts'
                    = local opts
                    - local n 0
                    - while `"`opts'"' != "" {
```

```
= while `""' != "" {
  local ++n
  gettoken item`n' opts : opts, bind
  }
– if `n' < 2 {
= if 0 < 2 {
– exit
```
───

> ───────────────────────────────── end opts_exclusive ──────────────
```
– opts_exclusive "`allbaselevels' `nobaselevels'"
= opts_exclusive " "
```
───

> ───────────────────────────────── begin opts_exclusive ──────────────
```
– version 8.2
– args opts optname errcode optslab
– local opts `opts'
= local opts
– local n 0
– while `"`opts'"' != "" {
= while `""' != "" {
  local ++n
  gettoken item`n' opts : opts, bind
  }
– if `n' < 2 {
= if 0 < 2 {
– exit
```
───

> ───────────────────────────────── end opts_exclusive ──────────────
```
– opts_exclusive "`baselevels' `nobaselevels'"
= opts_exclusive " "
```
───

> ───────────────────────────────── begin opts_exclusive ──────────────
```
– version 8.2
– args opts optname errcode optslab
– local opts `opts'
= local opts
– local n 0
– while `"`opts'"' != "" {
= while `""' != "" {
  local ++n
  gettoken item`n' opts : opts, bind
  }
– if `n' < 2 {
= if 0 < 2 {
– exit
```
───

```
> ————————————————————————— end opts_exclusive ——————————
        – opts_exclusive "`emptycells' `noemptycells'"
        = opts_exclusive " "
        ————————————————————————————————————————————————————
> ———————————————————————— begin opts_exclusive ——————————
        – version 8.2
        – args opts optname errcode optslab
        – local opts `opts'
        = local opts
        – local n 0
        – while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
        – if `n' < 2 {
        = if 0 < 2 {
        – exit
        ————————————————————————————————————————————————————
> ————————————————————————— end opts_exclusive ——————————
        – opts_exclusive "`fvlabel' `nofvlabel'"
        = opts_exclusive " "
        ————————————————————————————————————————————————————
> ———————————————————————— begin opts_exclusive ——————————
        – version 8.2
        – args opts optname errcode optslab
        – local opts `opts'
        = local opts
        – local n 0
        – while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
        – if `n' < 2 {
        = if 0 < 2 {
        – exit
        ————————————————————————————————————————————————————
> ————————————————————————— end opts_exclusive ——————————
        – opts_exclusive "`omitted' `noomitted'"
        = opts_exclusive " "
        ————————————————————————————————————————————————————
> ———————————————————————— begin opts_exclusive ——————————
        – version 8.2
        – args opts optname errcode optslab
        – local opts `opts'
```

```
                          = local opts
                          – local n 0
                          – while `"`opts'"' != "" {
                          = while `""' != "" {
                            local ++n
                            gettoken item`n' opts : opts, bind
                            }
                          – if `n' < 2 {
                          = if 0 < 2 {
                          – exit
                        ─────────────────────────────────────────────
 > ─────────────────────────────── end opts_exclusive ───────────
                  – opts_exclusive "`lstretch' `nolstretch'"
                  = opts_exclusive " "
                        ─────────────────────────────────────────────
 > ─────────────────────────────── begin opts_exclusive ─────────
                          – version 8.2
                          – args opts optname errcode optslab
                          – local opts `opts'
                          = local opts
                          – local n 0
                          – while `"`opts'"' != "" {
                          = while `""' != "" {
                            local ++n
                            gettoken item`n' opts : opts, bind
                            }
                          – if `n' < 2 {
                          = if 0 < 2 {
                          – exit
                        ─────────────────────────────────────────────
 > ─────────────────────────────── end opts_exclusive ───────────
                  – opts_exclusive "`cnsreport' `fullcnsreport'"
                  = opts_exclusive " "
                        ─────────────────────────────────────────────
 > ─────────────────────────────── begin opts_exclusive ─────────
                          – version 8.2
                          – args opts optname errcode optslab
                          – local opts `opts'
                          = local opts
                          – local n 0
                          – while `"`opts'"' != "" {
                          = while `""' != "" {
                            local ++n
                            gettoken item`n' opts : opts, bind
                            }
                          – if `n' < 2 {
```

```
                        = if 0 < 2 {
                        – exit
                        ─────────────────────────────────────
> ─────────────────────────────── end opts_exclusive ─────────────
                        – opts_exclusive "`coeflegend' `selegend'"
                        = opts_exclusive " "
                        ─────────────────────────────────────
> ─────────────────────────────── begin opts_exclusive ─────────────
                        – version 8.2
                        – args opts optname errcode optslab
                        – local opts `opts'
                        = local opts
                        – local n 0
                        – while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        – if `n' < 2 {
                        = if 0 < 2 {
                        – exit
                        ─────────────────────────────────────
> ─────────────────────────────── end opts_exclusive ─────────────
                        – opts_exclusive "`noci' `nopvalues'"
                        = opts_exclusive " "
                        ─────────────────────────────────────
> ─────────────────────────────── begin opts_exclusive ─────────────
                        – version 8.2
                        – args opts optname errcode optslab
                        – local opts `opts'
                        = local opts
                        – local n 0
                        – while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        – if `n' < 2 {
                        = if 0 < 2 {
                        – exit
                        ─────────────────────────────────────
> ─────────────────────────────── end opts_exclusive ─────────────
                        – local K : list sizeof namelist
                        – gettoken c_diopts c_opts : namelist
                        – opts_exclusive "`coding' `compare'"
                        = opts_exclusive " "
```

```
>  ──────────────────────────────────────
> ─────────────────────────── begin opts_exclusive ──────────────
                     – version 8.2
                     – args opts optname errcode optslab
                     – local opts `opts'
                     = local opts
                     – local n 0
                     – while `"`opts'"' != "" {
                     = while `""' != "" {
                       local ++n
                       gettoken item`n' opts : opts, bind
                       }
                     – if `n' < 2 {
                     = if 0 < 2 {
                     – exit
                     ──────────────────────────────────────
>  ──────────────────────────── end opts_exclusive ──────────────
                   – opts_exclusive "`versus' `compare'"
                   = opts_exclusive " "
                     ──────────────────────────────────────
>  ─────────────────────────── begin opts_exclusive ──────────────
                     – version 8.2
                     – args opts optname errcode optslab
                     – local opts `opts'
                     = local opts
                     – local n 0
                     – while `"`opts'"' != "" {
                     = while `""' != "" {
                       local ++n
                       gettoken item`n' opts : opts, bind
                       }
                     – if `n' < 2 {
                     = if 0 < 2 {
                     – exit
                     ──────────────────────────────────────
>  ──────────────────────────── end opts_exclusive ──────────────
                   – opts_exclusive "`abbrev' `noabbrev'"
                   = opts_exclusive " "
                     ──────────────────────────────────────
>  ─────────────────────────── begin opts_exclusive ──────────────
                     – version 8.2
                     – args opts optname errcode optslab
                     – local opts `opts'
                     = local opts
                     – local n 0
                     – while `"`opts'"' != "" {
```

```
                      = while `""' != "" {
                        local ++n
                        gettoken item`n' opts : opts, bind
                        }
                      – if `n' < 2 {
                      = if 0 < 2 {
                      – exit
                      ─────────────────────────────────────────────────
```
> ───────────────────────────── end opts_exclusive ─────────────
```
                  – local allbaselevels `allbaselevels' `noallbaselevels'
                  = local allbaselevels
                  – local baselevels `baselevels' `nobaselevels'
                  = local baselevels
                  – local emptycells `emptycells' `noemptycells'
                  = local emptycells
                  – local omitted `omitted' `noomitted'
                  = local omitted
                  – local lstretch `lstretch' `nolstretch'
                  = local lstretch
                  – local fvlabel `fvlabel' `nofvlabel'
                  = local fvlabel
                  – local abbrev `abbrev' `noabbrev'
                  = local abbrev
                  – if "`allbaselevels'`baselevels'" == "" {
                  = if "" == "" {
                  – if c(showbaselevels) == "all" {
                    local allbaselevels allbaselevels
                    }
                  – else if c(showbaselevels) == "on" {
                    local baselevels baselevels
                    }
                  – }
                  – if "`emptycells'" == "" {
                  = if "" == "" {
                  – if c(showemptycells) == "off" {
                    local emptycells noemptycells
                    }
                  – }
                  – if "`omitted'" == "" {
                  = if "" == "" {
                  – if c(showomitted) == "off" {
                    local omitted noomitted
                    }
                  – }
                  – if "`lstretch'" == "" {
                  = if "" == "" {
```

```
       - if c(lstretch) == "off" {
         local lstretch nolstretch
         }
       - }
       - if `:length local cformat' {
       = if 0 {
         confirm numeric format `cformat'
         if fmtwidth(`"`cformat'"') > 9 {
         local cformat "%9.0g"
         di "{txt}note: invalid cformat(), using default"
         }
         sreturn local cformat `"`cformat'"'
         local cformat `"cformat(`cformat')"'
         }
       - if `:length local sformat' {
       = if 0 {
         confirm numeric format `sformat'
         if fmtwidth(`"`sformat'"') > 8 {
         local sformat "%8.2f"
         di "{txt}note: invalid sformat(), using default"
         }
         sreturn local sformat `"`sformat'"'
         local sformat `"sformat(`sformat')"'
         }
       - if `:length local pformat' {
       = if 0 {
         confirm numeric format `pformat'
         if fmtwidth(`"`pformat'"') > 5 {
         local pformat "%5.3f"
         di "{txt}note: invalid pformat(), using default"
         }
         sreturn local pformat `"`pformat'"'
         local pformat `"pformat(`pformat')"'
         }
       - if `K' == 1 & `:length local options' {
       = if 1 == 1 & 0 {
         syntax namelist(max=2) [, `DIOPTS']
         }
       - if reldif(`level', c(level)) > 1e-3 {
       = if reldif(95, c(level)) > 1e-3 {
         local levelopt level(`level')
         }
       - Wrapon , `fvwrapon'
       = Wrapon ,
      ─────────────────────────────────────────
  > ──────────────────────── begin _get_diopts.Wrapon ──────────────
```

```
                             ─ capture syntax [, WOrd WIdth]
                             ─ if c(rc) {
                               di as err "invalid fvwrapon() option;"
                               syntax [, WOrd WIdth]
                               exit 198
                               }
                             ─ opts_exclusive "`word' `width'" fvwrapon
                             = opts_exclusive " " fvwrapon
                               ───────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ────────────────
                             ─ version 8.2
                             ─ args opts optname errcode optslab
                             ─ local opts `opts'
                             = local opts
                             ─ local n 0
                             ─ while `"`opts'"' != "" {
                             = while `""' != "" {
                               local ++n
                               gettoken item`n' opts : opts, bind
                               }
                             ─ if `n' < 2 {
                             = if 0 < 2 {
                             ─ exit
                               ───────────────────────────────────────────
> ───────────────────────────────── end opts_exclusive ────────────────
                             ─ local fvwrapon `word' `width'
                             = local fvwrapon
                             ─ if `:length local fvwrapon' {
                             = if 0 {
                               c_local fvwrapon fvwrapon(`fvwrapon')
                               }
                               ───────────────────────────────────────────
> ──────────────────────────────── end _get_diopts.Wrapon ──────────────
                       ─ if "`fvwrap'" != "" {
                       = if "" != "" {
                         FVWrap, `fvwrap'
                         }
                       ─ c_local `c_diopts' `levelopt' `vsquish' `allbaselevels'
> `baselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `
> coeflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `comp
> are' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `a
> bbrev'
                       = c_local DUPS
                       ─ if `K' == 2 {
                       = if 1 == 2 {
                         c_local `c_opts' `"`options'"'
```

```
                                }
                  – sreturn local coding `coding'
                  = sreturn local coding
                  – sreturn local versus `versus'
                  = sreturn local versus
                  – sreturn local compare `compare'
                  = sreturn local compare
                  – sreturn local level `level'
                  = sreturn local level 95
                  ──────────────────────────────────────
> ──────────────────────────────── end _get_diopts.GetDiopts ────────────────
              – }
              – else {
                GetDiopts DUPS options, `options'
                c_local `name2' `"`options'"'
                }
              – local DUPS : list DUPS – DEFAULT
              – gettoken DUPS : DUPS
              – if `"`DUPS'"' != "" {
              = if `""' != "" {
                if (strpos(`"`DUPS'"', "(")) {
                gettoken DUPS : DUPS, parse("(")
                local DUPS `"`DUPS'()"'
                }
                di as err "duplicate {bf:`DUPS'} option not allowed"
                exit 198
                }
              – sreturn clear
              – foreach sname of local snames {
              – sreturn local `sname' = `"`S_`sname''"'
              = sreturn local level = `"95"'
              – }
              – sreturn local `sname' = `"`S_`sname''"'
              = sreturn local method = `"noadjust"'
              – }
              ──────────────────────────────────────────
> ──────────────────────────────── end _get_diopts ────────────────
          – local cformat `"`s(cformat)'"'
          = local cformat `""'
          – local sformat `"`s(sformat)'"'
          = local sformat `""'
          – local pformat `"`s(pformat)'"'
          = local pformat `""'
          – _get_eformopts , eformopts(`options') allowed(__all__) sopti
> ons
          = _get_eformopts , eformopts() allowed(__all__) soptions
```

```
> ──────────────────────────────────────────────────
> ─────────────────────────────── begin _get_eformopts ──────────────
                   ─ version 8.0
                   ─ syntax [, eformopts(string asis) soptions ALLOWed(string)
> ]
                   ─ local 0 , `eformopts'
                   = local 0 ,
                   ─ local EFALL NOHR hr NOSHR shr or IRr RRr tr TRatio
                   ─ if "`soptions'" != "" {
                   = if "soptions" != "" {
                   ─ syntax [, EForm1(passthru) EForm `EFALL' * ]
                   = syntax [, EForm1(passthru) EForm NOHR hr NOSHR shr or IRr
> RRr tr TRatio * ]
                   ─ local opts `"`options'"'
                   = local opts `""'
                   ─ local 0 , `eform1' `eform' `nohr' `hr' `noshr' `shr' `or'
> `irr' `rrr' `tr' `tratio'
                   = local 0 ,
                   ─ }
                   ─ if "`allowed'" == "__all__" {
                   = if "__all__" == "__all__" {
                   ─ local allowed `EFALL'
                   = local allowed NOHR hr NOSHR shr or IRr RRr tr TRatio
                   ─ }
                   ─ foreach ef of local allowed {
                   ─ capture confirm name `ef'
                   = capture confirm name NOHR
                   ─ if _rc {
                     di as err "`ef' is not a valid name"
                     exit 198
                     }
                   ─ local efopts `efopts' `=lower("`ef'")'
                   = local efopts  nohr
                   ─ }
                   ─ capture confirm name `ef'
                   = capture confirm name hr
                   ─ if _rc {
                     di as err "`ef' is not a valid name"
                     exit 198
                     }
                   ─ local efopts `efopts' `=lower("`ef'")'
                   = local efopts nohr hr
                   ─ }
                   ─ capture confirm name `ef'
                   = capture confirm name NOSHR
                   ─ if _rc {
```

```
                    di as err "`ef' is not a valid name"
                    exit 198
                    }
  - local efopts `efopts' `=lower("`ef'")'
  = local efopts nohr hr noshr
  - }
  - capture confirm name `ef'
  = capture confirm name shr
  - if _rc {
      di as err "`ef' is not a valid name"
      exit 198
      }
  - local efopts `efopts' `=lower("`ef'")'
  = local efopts nohr hr noshr shr
  - }
  - capture confirm name `ef'
  = capture confirm name or
  - if _rc {
      di as err "`ef' is not a valid name"
      exit 198
      }
  - local efopts `efopts' `=lower("`ef'")'
  = local efopts nohr hr noshr shr or
  - }
  - capture confirm name `ef'
  = capture confirm name IRr
  - if _rc {
      di as err "`ef' is not a valid name"
      exit 198
      }
  - local efopts `efopts' `=lower("`ef'")'
  = local efopts nohr hr noshr shr or irr
  - }
  - capture confirm name `ef'
  = capture confirm name RRr
  - if _rc {
      di as err "`ef' is not a valid name"
      exit 198
      }
  - local efopts `efopts' `=lower("`ef'")'
  = local efopts nohr hr noshr shr or irr rrr
  - }
  - capture confirm name `ef'
  = capture confirm name tr
  - if _rc {
      di as err "`ef' is not a valid name"
```

```
                            exit 198
                            }
              - local efopts `efopts' `=lower("`ef'")'
              = local efopts nohr hr noshr shr or irr rrr tr
              - }
              - capture confirm name `ef'
              = capture confirm name TRatio
              - if _rc {
                di as err "`ef' is not a valid name"
                exit 198
                }
              - local efopts `efopts' `=lower("`ef'")'
              = local efopts nohr hr noshr shr or irr rrr tr tratio
              - }
              - local efopts : list uniq efopts
              - syntax [, EForm1(string) EForm `allowed' ]
              = syntax [, EForm1(string) EForm NOHR hr NOSHR shr or IRr RR
> r tr TRatio ]
              - foreach ef of local efopts {
              - local eform `eform' ``ef''
              = local eform
              - }
              - local eform `eform' ``ef''
              = local eform
              - }
              - local eform `eform' ``ef''
              = local eform
              - }
              - local eform `eform' ``ef''
              = local eform
              - }
              - local eform `eform' ``ef''
              = local eform
              - }
              - local eform `eform' ``ef''
              = local eform
              - }
              - local eform `eform' ``ef''
              = local eform
              - }
              - local eform `eform' ``ef''
              = local eform
              - }
              - local eform `eform' ``ef''
              = local eform
              - }
```

```
-   if `"`eform1'"'=="Odds ratio" {
=   if `""'=="Odds ratio" {
    local eform_cons_ti = "Odds"
    local eform_cons_note = "odds ratios"
    }
-   else if `"`eform1'"'=="Haz. ratio" {
=   else if `""'=="Haz. ratio" {
    local eform_cons_ti = "Hazard"
    local eform_cons_note = "hazard ratios"
    }
-   else if `"`eform1'"'=="Time ratio" {
=   else if `""'=="Time ratio" {
    local eform_cons_ti = "Time"
    local eform_cons_note = "time ratios"
    }
-   else if `"`eform1'"'=="IRR" {
=   else if `""'=="IRR" {
    local eform_cons_ti = "Inc. rate"
    local eform_cons_note = "incidence-rate ratios"
    local eform_cons_ti2 = "incidence rate"
    }
-   else if `"`eform1'"'=="Risk ratio" {
=   else if `""'=="Risk ratio" {
    local eform_cons_ti = "Risk"
    local eform_cons_note = "risk ratios"
    }
-   else if `"`eform1'"'=="Hlth ratio" {
=   else if `""'=="Hlth ratio" {
    local eform_cons_ti = "Health"
    local eform_cons_note = "health ratios"
    }
-   local k : list sizeof eform
-   if `k' {
=   if 0 {
    opts_exclusive "`eform'"
    if `:length local eform1' {
    opts_exclusive "eform() `eform'"
    }
    }
-   if `k' {
=   if 0 {
    if ("`eform'"=="eform") local eform1 = "exp(b)"
    else if ("`eform'"=="hr") {
    local eform1 = "Haz. ratio"
    local eform_cons_ti = "Hazard"
    local eform_cons_note = "hazard ratios"
```

```
                        }
                        else if ("`eform'"=="shr") {
                        local eform1 = "SHR"
                        local eform_cons_ti = "Subhazard"
                        local eform_cons_note = "subhazard ratios"
                        }
                        else if ("`eform'"=="tr") {
                        local eform1 = "Time ratio"
                        local eform_cons_ti = "Time"
                        local eform_cons_note = "time ratios"
                        }
                        else if ("`eform'"=="tratio") {
                        local eform1 = "Time ratio"
                        local eform_cons_ti = "Time"
                        local eform_cons_note = "time ratios"
                        }
                        else if ("`eform'"=="or") {
                        local eform1 = "Odds ratio"
                        if ("`e(cmd)'"=="asclogit" | "`e(cmd)'"=="cmclogit" | "`e(
  > cmd)'"=="cmmixlogit" | "`e(cmd)'"=="cmxtmixlogit" ) {
                        local eform_cons_ti = "Rel. risk"
                        local eform_cons_note = "relative-risk ratios"
                        local eform_cons_ti2 = "relative risk"
                        }
                        else {
                        local eform_cons_ti = "Odds"
                        local eform_cons_note = "odds ratios"
                        }
                        }
                        else if ("`eform'"=="irr") {
                        local eform1 = "IRR"
                        local eform_cons_ti = "Inc. rate"
                        local eform_cons_note = "incidence-rate ratios"
                        local eform_cons_ti2 = "incidence rate"
                        }
                        else if ("`eform'"=="rrr") {
                        local eform1 = "RRR"
                        local eform_cons_ti = "Rel. risk"
                        local eform_cons_note = "relative-risk ratios"
                        local eform_cons_ti2 = "relative risk"
                        }
                        else if ("`eform'"!="nohr") & ("`eform'"!="noshr") {
                        local eform1 = upper("`eform'")
                        }
                        }
                  - sreturn clear
```

```
                - sreturn local options `"'`opts'"'
                = sreturn local options `""'
                - sreturn local opt `eform'
                = sreturn local opt
                - sreturn local str `eform1'
                = sreturn local str
                - if `"'`eform1'"'' != "" {
                = if `""' != "" {
                  sreturn local eform eform(`"'`eform1'"'')
                  }
                - else sreturn local eform ""
                - sreturn local eform_cons_ti `eform_cons_ti'
                = sreturn local eform_cons_ti
                - sreturn local eform_cons_note `eform_cons_note'
                = sreturn local eform_cons_note
                - sreturn local eform_cons_ti2 `eform_cons_ti2'
                = sreturn local eform_cons_ti2
                ─────────────────────────────────────────────
> ──────────────────────────────── end _get_eformopts ────────────────
              - local tr_item = `"'`s(eform_cons_note)'"'
              = local tr_item = `""'
              - if inlist("`bmatrix'", "", "e(b)") & "`e(k_eform)'" == "0" {
              = if inlist("", "", "e(b)") & "" == "0" {
                local eform
                }
              - else local eform `"'`s(str)'"'
              = else local eform `""'
              - local eform_cons_ti `"'`s(eform_cons_ti)'"'
              = local eform_cons_ti `""'
              - local eform_cons_ti2 `"'`s(eform_cons_ti2)'"'
              = local eform_cons_ti2 `""'
              - if ("`e(consonly)'"!="1" | `"'`eform_cons_ti'"''=="") {
              = if ("0"!="1" | `""'=="") {
              - local eformdi `"'`s(str)'"'
              = local eformdi `""'
              - }
              - else {
                local eformdi `"'`eform_cons_ti'"'
                local tr_item = cond(missing("`eform_cons_ti2'"), strlower(`
> "'`eform_cons_ti'"''), `"'`eform_cons_ti2'"'')
                }
              - local coefttl = cond(`"'`eform'"''==`""', `"'`coeftitle'"'', `"'`
> eformdi'"'')
              = local coefttl = cond(`""'==`""', `""', `""')
              - local options `"'`s(options)'"'
              = local options `""'
```

```
                  - _get_diparmopts, diparmopts(`options') level(`level')
                  = _get_diparmopts, diparmopts() level(95)
                  ─────────────────────────────────────────────────────
> ──────────────────────────────── begin _get_diparmopts ──────────────
                  - if _caller() < 8.2 {
                    _get_diparmopts_8 `0'
                    exit
                    }
                  - version 9
                  - local version : di "version " string(_caller()) ":"
                  - syntax [, diparmopts(string asis) EXECute soptions bottom
> plus SYNTAXonly * ]
                  - local goptions `options'
                  = local goptions level(95)
                  - SpliceGlobals junk , `goptions'
                  = SpliceGlobals junk , level(95)
                  ─────────────────────────────────────────────────────
> ──────────────────── begin _get_diparmopts.SpliceGlobals ────────────
                  - syntax name(id="macro name" name=c_diparm) [, diparm(str
> ing asis) Level(cilevel) dof(passthru) syntaxonly ]
                  - if `"`dof'"' == "" & `"`e(df_r)'"' != "" {
                  = if `""' == "" & `""' != "" {
                    capture confirm integer number `e(df_r)'
                    if !c(rc) {
                    local gdof dof(`e(df_r)')
                    }
                    capture
                    }
                  - else local gdof `"`dof'"'
                  = else local gdof `""'
                  - local glevel `level'
                  = local glevel 95
                  - local lopt level(`glevel')
                  = local lopt level(95)
                  - if (`"`diparm'"' == "") exit
                  = if (`""' == "") exit
                  ─────────────────────────────────────────────────────
> ──────────────────── end _get_diparmopts.SpliceGlobals ──────────────
                  - local 0 `", `diparmopts'"'
                  = local 0 `", "'
                  - local diparmopts
                  - local k 0
                  - syntax [, diparm(string asis) * ]
                  - while `"`diparm'"' != "" {
                  = while `""' != "" {
                    local ++k
```

```
                           local single 1
                           local after
                           capture _on_colon_parse `diparm'
                           if !c(rc) {
                           local single 0
                           local diparm `"`s(before)'"'
                           local after `"`s(after)'"'
                           }
                           capture
                           SpliceGlobals diparm , diparm(`diparm') `syntaxonly' `gopt
> ions'
                           local diparm`k' `"`diparm'"'
                           local diparmopts `"`diparmopts' : `diparm'"'
                           if `single' | `"`:list retok after'"' == "" {
                           local 0 `", `options'"'
                           syntax [, diparm(string asis) * ]
                           }
                           else {
                           local diparm `"`after'"'
                           }
                           }
                     − if `"`soptions'"' == "" {
                     = if `""' == "" {
                     − syntax [, diparm(string asis) ]
                     − }
                     − if ("`execute'" == "") {
                     = if ("" == "") {
                     − sreturn clear
                     − sreturn local options `"`options'"'
                     = sreturn local options `""'
                     − sreturn local diparm `"`diparmopts'"'
                     = sreturn local diparm `""'
                     − forval i = 1/`k' {
                     = forval i = 1/0 {
                       sreturn local diparm`i' `"`diparm`i''"'
                       }
                     − sreturn local k `k'
                     = sreturn local k 0
                     − exit
                       ─────────────────────────────────────────────────
>  ──────────────────────────────────────── end _get_diparmopts ──────────────
                   − local NODIPARM : length local nodiparm
                   − if `NODIPARM' {
                   = if 0 {
                     local options
                     }
```

```
- local GTOPTS parse(":") bind quotes
- local k 0
- if !`NODIPARM' {
= if !0 {
- if `"`e(diparm)'"' != "" {
= if `""' != "" {
  local i 0
  local diparm `"`e(diparm)'"'
  }
- else if `"`e(diparm1)'"' != "" {
= else if `"lnalpha, exp label("alpha")"' != "" {
- local i 1
- local diparm `"`e(diparm1)'"'
= local diparm `"lnalpha, exp label("alpha")"'
- }
- while `:length local diparm' {
= while 27 {
- gettoken diparm rest : diparm, `GTOPTS'
= gettoken diparm rest : diparm, parse(":") bind quotes
- while `:length local rest' {
= while 0 {
  local ++k
  local diparm`k' : copy local diparm
  gettoken COLON rest : rest, `GTOPTS'
  gettoken diparm rest : rest, `GTOPTS'
  }
- local ++k
- local diparm`k' : copy local diparm
= local diparm1 : copy local diparm
- local ++i
- local diparm `"`e(diparm`i')'"'
= local diparm `""'
- }
- while `:length local diparm' {
= while 0 {
  gettoken diparm rest : diparm, `GTOPTS'
  while `:length local rest' {
  local ++k
  local diparm`k' : copy local diparm
  gettoken COLON rest : rest, `GTOPTS'
  gettoken diparm rest : rest, `GTOPTS'
  }
  local ++k
  local diparm`k' : copy local diparm
  local ++i
  local diparm `"`e(diparm`i')'"'
```

```
                          }
              ─ }
              ─ if `:length local options' {
              = if 0 {
                local 0 `", `options'"'
                syntax [, diparm(string asis) *]
                if `k' & `:length local diparm' {
                local ++k
                local diparm`k' __sep__
                }
                while `:length local diparm' {
                gettoken diparm rest : diparm, `GTOPTS'
                while `:length local rest' {
                local ++k
                local diparm`k' : copy local diparm
                gettoken COLON rest : rest, `GTOPTS'
                gettoken diparm rest : rest, `GTOPTS'
                }
                local ++k
                local diparm`k' : copy local diparm
                local 0 `", `options'"'
                syntax [, diparm(string asis) *]
                }
                }
              ─ if "`markdown'" != "" {
              = if "" != "" {
                local lsize = c(linesize)
                set linesize 255
                }
              ─ `vv' mata: _coef_table()
              = version 12, missing: mata: _coef_table()
                ─────────────────────────────────────────────────────────
>  ───────────────────────────────────────── begin _get_diopts ─────────────
              ─ version 11
              ─ syntax namelist(max=2) [, *]
              ─ gettoken name1 namelist : namelist
              ─ gettoken name2 namelist : namelist
              ─ GetDiopts diopts options, `options'
              = GetDiopts diopts options,
                ─────────────────────────────────────────────────────────
>  ──────────────────────────────────── begin _get_diopts.GetDiopts ────────────
                ─ local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLB
> ASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMP
> TYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(st
> ring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru)
>  FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru)
```

```
>   NOABBREV ABBREV
                   – syntax namelist(max=2) [, `DIOPTS' *]
                   = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBA
> SElevels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOE
> MPTYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGE
> ND cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVW
> RAP(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CIT
> YPE(passthru) NOABBREV ABBREV *]
                   – opts_exclusive "`allbaselevels' `noallbaselevels'"
                   = opts_exclusive " "
                   ─────────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ───────────────
                   – version 8.2
                   – args opts optname errcode optslab
                   – local opts `opts'
                   = local opts
                   – local n 0
                   – while `"`opts'"' != "" {
                   = while `""' != "" {
                     local ++n
                     gettoken item`n' opts : opts, bind
                     }
                   – if `n' < 2 {
                   = if 0 < 2 {
                   – exit
                   ─────────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ────────────────
                   – opts_exclusive "`allbaselevels' `nobaselevels'"
                   = opts_exclusive " "
                   ─────────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ───────────────
                   – version 8.2
                   – args opts optname errcode optslab
                   – local opts `opts'
                   = local opts
                   – local n 0
                   – while `"`opts'"' != "" {
                   = while `""' != "" {
                     local ++n
                     gettoken item`n' opts : opts, bind
                     }
                   – if `n' < 2 {
                   = if 0 < 2 {
                   – exit
                   ─────────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ────────────────
```

```
                    – opts_exclusive "`baselevels' `nobaselevels'"
                  = opts_exclusive " "
                  ─────────────────────────────────────────────────
>  ───────────────────────────────── begin opts_exclusive ─────────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  ─────────────────────────────────────────────────
>  ────────────────────────────────── end opts_exclusive ──────────────
                  – opts_exclusive "`emptycells' `noemptycells'"
                  = opts_exclusive " "
                  ─────────────────────────────────────────────────
>  ───────────────────────────────── begin opts_exclusive ─────────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
                  – local n 0
                  – while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  ─────────────────────────────────────────────────
>  ────────────────────────────────── end opts_exclusive ──────────────
                  – opts_exclusive "`fvlabel' `nofvlabel'"
                  = opts_exclusive " "
                  ─────────────────────────────────────────────────
>  ───────────────────────────────── begin opts_exclusive ─────────────
                  – version 8.2
                  – args opts optname errcode optslab
                  – local opts `opts'
                  = local opts
```

```
                    — local n 0
                    — while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    — if `n' < 2 {
                    = if 0 < 2 {
                    — exit
                    ─────────────────────────────────────────
>   ───────────────────────────────── end opts_exclusive ─────────────
              — opts_exclusive "`omitted' `noomitted'"
              = opts_exclusive " "
                    ─────────────────────────────────────────
>   ───────────────────────────────── begin opts_exclusive ───────────
              — version 8.2
              — args opts optname errcode optslab
              — local opts `opts'
              = local opts
              — local n 0
              — while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              — if `n' < 2 {
              = if 0 < 2 {
              — exit
                    ─────────────────────────────────────────
>   ───────────────────────────────── end opts_exclusive ─────────────
              — opts_exclusive "`lstretch' `nolstretch'"
              = opts_exclusive " "
                    ─────────────────────────────────────────
>   ───────────────────────────────── begin opts_exclusive ───────────
              — version 8.2
              — args opts optname errcode optslab
              — local opts `opts'
              = local opts
              — local n 0
              — while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              — if `n' < 2 {
              = if 0 < 2 {
```

```
                    – exit
         ———————————————————————————————————————
> ———————————————————————— end opts_exclusive ————————
         – opts_exclusive "`cnsreport' `fullcnsreport'"
         = opts_exclusive " "
         ———————————————————————————————————————
> ———————————————————————— begin opts_exclusive ————————
         – version 8.2
         – args opts optname errcode optslab
         – local opts `opts'
         = local opts
         – local n 0
         – while `"`opts'"' != "" {
         = while `""' != "" {
           local ++n
           gettoken item`n' opts : opts, bind
           }
         – if `n' < 2 {
         = if 0 < 2 {
         – exit
         ———————————————————————————————————————
> ———————————————————————— end opts_exclusive ————————
         – opts_exclusive "`coeflegend' `selegend'"
         = opts_exclusive " "
         ———————————————————————————————————————
> ———————————————————————— begin opts_exclusive ————————
         – version 8.2
         – args opts optname errcode optslab
         – local opts `opts'
         = local opts
         – local n 0
         – while `"`opts'"' != "" {
         = while `""' != "" {
           local ++n
           gettoken item`n' opts : opts, bind
           }
         – if `n' < 2 {
         = if 0 < 2 {
         – exit
         ———————————————————————————————————————
> ———————————————————————— end opts_exclusive ————————
         – opts_exclusive "`noci' `nopvalues'"
         = opts_exclusive " "
         ———————————————————————————————————————
> ———————————————————————— begin opts_exclusive ————————
         – version 8.2
```

```
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────
>  ─────────────────────────────── end opts_exclusive ───────────
                  – local K : list sizeof namelist
                  – gettoken c_diopts c_opts : namelist
                  – opts_exclusive "`coding' `compare'"
                  = opts_exclusive " "
                    ─────────────────────────────────────────
>  ─────────────────────────────── begin opts_exclusive ─────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ─────────────────────────────────────────
>  ─────────────────────────────── end opts_exclusive ───────────
                  – opts_exclusive "`versus' `compare'"
                  = opts_exclusive " "
                    ─────────────────────────────────────────
>  ─────────────────────────────── begin opts_exclusive ─────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
```

```
                        local ++n
                        gettoken item`n' opts : opts, bind
                        }
                      - if `n' < 2 {
                      = if 0 < 2 {
                      - exit
                      ─────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ───────────────
                  - opts_exclusive "`abbrev' `noabbrev'"
                  = opts_exclusive " "
                      ─────────────────────────────────────────
> ──────────────────────────────── begin opts_exclusive ─────────────
                  - version 8.2
                  - args opts optname errcode optslab
                  - local opts `opts'
                  = local opts
                  - local n 0
                  - while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  - if `n' < 2 {
                  = if 0 < 2 {
                  - exit
                      ─────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ───────────────
                  - local allbaselevels `allbaselevels' `noallbaselevels'
                  = local allbaselevels
                  - local baselevels `baselevels' `nobaselevels'
                  = local baselevels
                  - local emptycells `emptycells' `noemptycells'
                  = local emptycells
                  - local omitted `omitted' `noomitted'
                  = local omitted
                  - local lstretch `lstretch' `nolstretch'
                  = local lstretch
                  - local fvlabel `fvlabel' `nofvlabel'
                  = local fvlabel
                  - local abbrev `abbrev' `noabbrev'
                  = local abbrev
                  - if "`allbaselevels'`baselevels'" == "" {
                  = if "" == "" {
                  - if c(showbaselevels) == "all" {
                    local allbaselevels allbaselevels
                    }
```

```
- else if c(showbaselevels) == "on" {
  local baselevels baselevels
  }
- }
- if "`emptycells'" == "" {
= if "" == "" {
- if c(showemptycells) == "off" {
  local emptycells noemptycells
  }
- }
- if "`omitted'" == "" {
= if "" == "" {
- if c(showomitted) == "off" {
  local omitted noomitted
  }
- }
- if "`lstretch'" == "" {
= if "" == "" {
- if c(lstretch) == "off" {
  local lstretch nolstretch
  }
- }
- if `:length local cformat' {
= if 0 {
  confirm numeric format `cformat'
  if fmtwidth(`"`cformat'"') > 9 {
  local cformat "%9.0g"
  di "{txt}note: invalid cformat(), using default"
  }
  sreturn local cformat `"`cformat'"'
  local cformat `"cformat(`cformat')"'
  }
- if `:length local sformat' {
= if 0 {
  confirm numeric format `sformat'
  if fmtwidth(`"`sformat'"') > 8 {
  local sformat "%8.2f"
  di "{txt}note: invalid sformat(), using default"
  }
  sreturn local sformat `"`sformat'"'
  local sformat `"sformat(`sformat')"'
  }
- if `:length local pformat' {
= if 0 {
  confirm numeric format `pformat'
  if fmtwidth(`"`pformat'"') > 5 {
```

```
                      local pformat "%5.3f"
                      di "{txt}note: invalid pformat(), using default"
                      }
                      sreturn local pformat `"`pformat'"'
                      local pformat `"pformat(`pformat')"'
                      }
           -  if `K' == 1 & `:length local options' {
           =  if 2 == 1 & 0 {
                      syntax namelist(max=2) [, `DIOPTS']
                      }
           -  if reldif(`level', c(level)) > 1e-3 {
           =  if reldif(95, c(level)) > 1e-3 {
                      local levelopt level(`level')
                      }
           -  Wrapon , `fvwrapon'
           =  Wrapon ,
                      ──────────────────────────────────────────────────
 > ──────────────────────────── begin _get_diopts.Wrapon ────────────────
           -  capture syntax [, WOrd WIdth]
           -  if c(rc) {
                      di as err "invalid fvwrapon() option;"
                      syntax [, WOrd WIdth]
                      exit 198
                      }
           -  opts_exclusive "`word' `width'" fvwrapon
           =  opts_exclusive " " fvwrapon
                      ──────────────────────────────────────────────────
 > ──────────────────────────── begin opts_exclusive ────────────────────
           -  version 8.2
           -  args opts optname errcode optslab
           -  local opts `opts'
           =  local opts
           -  local n 0
           -  while `"`opts'"' != "" {
           =  while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
           -  if `n' < 2 {
           =  if 0 < 2 {
           -  exit
                      ──────────────────────────────────────────────────
 > ──────────────────────────── end opts_exclusive ──────────────────────
           -  local fvwrapon `word' `width'
           =  local fvwrapon
           -  if `:length local fvwrapon' {
```

```
                                    = if 0 {
                                      c_local fvwrapon fvwrapon(`fvwrapon')
                                      }
                              ─────────────────────────────────────────────
> ─────────────────────────────────── end _get_diopts.Wrapon ──────────────
                          – if "`fvwrap'" != "" {
                          = if "" != "" {
                            FVWrap, `fvwrap'
                            }
                          – c_local `c_diopts' `levelopt' `vsquish' `allbaselevels'
> `baselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `
> coeflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `comp
> are' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `a
> bbrev'
                          = c_local diopts
                          – if `K' == 2 {
                          = if 2 == 2 {
                          – c_local `c_opts' `"`options'"'
                          = c_local  options `""'
                          – }
                          – sreturn local coding `coding'
                          = sreturn local coding
                          – sreturn local versus `versus'
                          = sreturn local versus
                          – sreturn local compare `compare'
                          = sreturn local compare
                          – sreturn local level `level'
                          = sreturn local level 95
                              ─────────────────────────────────────────────
> ─────────────────────────────────── end _get_diopts.GetDiopts ───────────
                          – c_local `name1' `"`diopts'"'
                          = c_local __000007 `""'
                          – local snames : s(macros)
                          – foreach sname of local snames {
                          – local S_`sname' = s(`sname')
                          = local S_level = s(level)
                          – }
                          – local S_`sname' = s(`sname')
                          = local S_k = s(k)
                          – }
                          – sreturn clear
                          – GetDiopts DEFAULT
                              ─────────────────────────────────────────────
> ─────────────────────────────────── begin _get_diopts.GetDiopts ─────────
                          – local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLB
> ASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMP
```

```
> TYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(st
> ring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru)
>  FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru)
>  NOABBREV ABBREV
                        - syntax namelist(max=2) [, `DIOPTS' *]
                        = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBA
> SElevels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOE
> MPTYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGE
> ND cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVW
> RAP(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CIT
> YPE(passthru) NOABBREV ABBREV *]
                        - opts_exclusive "`allbaselevels' `noallbaselevels'"
                        = opts_exclusive " "
                        ─────────────────────────────────────────────────
> ─────────────────────────────── begin opts_exclusive ───────────────
                        - version 8.2
                        - args opts optname errcode optslab
                        - local opts `opts'
                        = local opts
                        - local n 0
                        - while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        - if `n' < 2 {
                        = if 0 < 2 {
                        - exit
                        ─────────────────────────────────────────────────
> ─────────────────────────────── end opts_exclusive ─────────────────
                        - opts_exclusive "`allbaselevels' `nobaselevels'"
                        = opts_exclusive " "
                        ─────────────────────────────────────────────────
> ─────────────────────────────── begin opts_exclusive ───────────────
                        - version 8.2
                        - args opts optname errcode optslab
                        - local opts `opts'
                        = local opts
                        - local n 0
                        - while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        - if `n' < 2 {
                        = if 0 < 2 {
```

```
                        – exit
                       ─────────────────────────────────────────────
> ─────────────────────────────────── end opts_exclusive ───────────
            – opts_exclusive "`baselevels' `nobaselevels'"
            = opts_exclusive " "
                       ─────────────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ─────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
                       ─────────────────────────────────────────────
> ─────────────────────────────────── end opts_exclusive ───────────
            – opts_exclusive "`emptycells' `noemptycells'"
            = opts_exclusive " "
                       ─────────────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ─────────
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
            – while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            – if `n' < 2 {
            = if 0 < 2 {
            – exit
                       ─────────────────────────────────────────────
> ─────────────────────────────────── end opts_exclusive ───────────
            – opts_exclusive "`fvlabel' `nofvlabel'"
            = opts_exclusive " "
                       ─────────────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ─────────
            – version 8.2
```

```
                        — args opts optname errcode optslab
                        — local opts `opts'
                        = local opts
                        — local n 0
                        — while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        — if `n' < 2 {
                        = if 0 < 2 {
                        — exit
                     ─────────────────────────────────────────
 > ─────────────────────────────────── end opts_exclusive ──────────
                   — opts_exclusive "`omitted' `noomitted'"
                   = opts_exclusive " "
                     ─────────────────────────────────────────
 > ─────────────────────────────────── begin opts_exclusive ──────────
                        — version 8.2
                        — args opts optname errcode optslab
                        — local opts `opts'
                        = local opts
                        — local n 0
                        — while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        — if `n' < 2 {
                        = if 0 < 2 {
                        — exit
                     ─────────────────────────────────────────
 > ─────────────────────────────────── end opts_exclusive ──────────
                   — opts_exclusive "`lstretch' `nolstretch'"
                   = opts_exclusive " "
                     ─────────────────────────────────────────
 > ─────────────────────────────────── begin opts_exclusive ──────────
                        — version 8.2
                        — args opts optname errcode optslab
                        — local opts `opts'
                        = local opts
                        — local n 0
                        — while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
```

```
                    }
                  — if `n' < 2 {
                  = if 0 < 2 {
                  — exit
                    _____
>  _____ end opts_exclusive _____
                — opts_exclusive "`cnsreport' `fullcnsreport'"
                = opts_exclusive " "
                    _____
>  _____ begin opts_exclusive _____
                  — version 8.2
                  — args opts optname errcode optslab
                  — local opts `opts'
                  = local opts
                  — local n 0
                  — while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  — if `n' < 2 {
                  = if 0 < 2 {
                  — exit
                    _____
>  _____ end opts_exclusive _____
                — opts_exclusive "`coeflegend' `selegend'"
                = opts_exclusive " "
                    _____
>  _____ begin opts_exclusive _____
                  — version 8.2
                  — args opts optname errcode optslab
                  — local opts `opts'
                  = local opts
                  — local n 0
                  — while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  — if `n' < 2 {
                  = if 0 < 2 {
                  — exit
                    _____
>  _____ end opts_exclusive _____
                — opts_exclusive "`noci' `nopvalues'"
                = opts_exclusive " "
```

```
>──────────────────────────────────── begin opts_exclusive ────────────
     – version 8.2
     – args opts optname errcode optslab
     – local opts `opts'
     = local opts
     – local n 0
     – while `"`opts'"' != "" {
     = while `""' != "" {
       local ++n
       gettoken item`n' opts : opts, bind
       }
     – if `n' < 2 {
     = if 0 < 2 {
     – exit

>──────────────────────────────────── end opts_exclusive ──────────────
     – local K : list sizeof namelist
     – gettoken c_diopts c_opts : namelist
     – opts_exclusive "`coding' `compare'"
     = opts_exclusive " "

>──────────────────────────────────── begin opts_exclusive ────────────
     – version 8.2
     – args opts optname errcode optslab
     – local opts `opts'
     = local opts
     – local n 0
     – while `"`opts'"' != "" {
     = while `""' != "" {
       local ++n
       gettoken item`n' opts : opts, bind
       }
     – if `n' < 2 {
     = if 0 < 2 {
     – exit

>──────────────────────────────────── end opts_exclusive ──────────────
     – opts_exclusive "`versus' `compare'"
     = opts_exclusive " "

>──────────────────────────────────── begin opts_exclusive ────────────
     – version 8.2
     – args opts optname errcode optslab
     – local opts `opts'
     = local opts
```

```
                    — local n 0
                    — while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    — if `n' < 2 {
                    = if 0 < 2 {
                    — exit
```

> ──────────────────────────── end opts_exclusive ──────────────

```
              — opts_exclusive "`abbrev' `noabbrev'"
              = opts_exclusive " "
```

> ──────────────────────────── begin opts_exclusive ──────────────

```
              — version 8.2
              — args opts optname errcode optslab
              — local opts `opts'
              = local opts
              — local n 0
              — while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              — if `n' < 2 {
              = if 0 < 2 {
              — exit
```

> ──────────────────────────── end opts_exclusive ──────────────

```
          — local allbaselevels `allbaselevels' `noallbaselevels'
          = local allbaselevels
          — local baselevels `baselevels' `nobaselevels'
          = local baselevels
          — local emptycells `emptycells' `noemptycells'
          = local emptycells
          — local omitted `omitted' `noomitted'
          = local omitted
          — local lstretch `lstretch' `nolstretch'
          = local lstretch
          — local fvlabel `fvlabel' `nofvlabel'
          = local fvlabel
          — local abbrev `abbrev' `noabbrev'
          = local abbrev
          — if "`allbaselevels'`baselevels'" == "" {
          = if "" == "" {
```

```
- if c(showbaselevels) == "all" {
  local allbaselevels allbaselevels
  }
- else if c(showbaselevels) == "on" {
  local baselevels baselevels
  }
- }
- if "`emptycells'" == "" {
= if "" == "" {
- if c(showemptycells) == "off" {
  local emptycells noemptycells
  }
- }
- if "`omitted'" == "" {
= if "" == "" {
- if c(showomitted) == "off" {
  local omitted noomitted
  }
- }
- if "`lstretch'" == "" {
= if "" == "" {
- if c(lstretch) == "off" {
  local lstretch nolstretch
  }
- }
- if `:length local cformat' {
= if 0 {
  confirm numeric format `cformat'
  if fmtwidth(`"`cformat'"') > 9 {
  local cformat "%9.0g"
  di "{txt}note: invalid cformat(), using default"
  }
  sreturn local cformat `"`cformat'"'
  local cformat `"cformat(`cformat')"'
  }
- if `:length local sformat' {
= if 0 {
  confirm numeric format `sformat'
  if fmtwidth(`"`sformat'"') > 8 {
  local sformat "%8.2f"
  di "{txt}note: invalid sformat(), using default"
  }
  sreturn local sformat `"`sformat'"'
  local sformat `"sformat(`sformat')"'
  }
- if `:length local pformat' {
```

```
                = if 0 {
                  confirm numeric format `pformat'
                  if fmtwidth(`"`pformat'"') > 5 {
                  local pformat "%5.3f"
                  di "{txt}note: invalid pformat(), using default"
                  }
                  sreturn local pformat `"`pformat'"'
                  local pformat `"pformat(`pformat')"'
                  }
                - if `K' == 1 & `:length local options' {
                = if 1 == 1 & 0 {
                  syntax namelist(max=2) [, `DIOPTS']
                  }
                - if reldif(`level', c(level)) > 1e-3 {
                = if reldif(95, c(level)) > 1e-3 {
                  local levelopt level(`level')
                  }
                - Wrapon , `fvwrapon'
                = Wrapon ,
                  ─────────────────────────────────────────────
```

```
                - capture syntax [, WOrd WIdth]
                - if c(rc) {
                  di as err "invalid fvwrapon() option;"
                  syntax [, WOrd WIdth]
                  exit 198
                  }
                - opts_exclusive "`word' `width'" fvwrapon
                = opts_exclusive " " fvwrapon
                  ─────────────────────────────────────────────
```

```
                - version 8.2
                - args opts optname errcode optslab
                - local opts `opts'
                = local opts
                - local n 0
                - while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                - if `n' < 2 {
                = if 0 < 2 {
                - exit
                  ─────────────────────────────────────────────
```

```
                      – local fvwrapon `word' `width'
                      = local fvwrapon
                      – if `:length local fvwrapon' {
                      = if 0 {
                        c_local fvwrapon fvwrapon(`fvwrapon')
                        }
                   ─────────────────────────────────────────────
> ──────────────────────────────────── end _get_diopts.Wrapon ─────────────────
                  – if "`fvwrap'" != "" {
                  = if "" != "" {
                    FVWrap, `fvwrap'
                    }
                  – c_local `c_diopts' `levelopt' `vsquish' `allbaselevels'
> `baselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `
> coeflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `comp
> are' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `a
> bbrev'
                  = c_local DEFAULT
                  – if `K' == 2 {
                  = if 1 == 2 {
                    c_local `c_opts' `"`options'"'
                    }
                  – sreturn local coding `coding'
                  = sreturn local coding
                  – sreturn local versus `versus'
                  = sreturn local versus
                  – sreturn local compare `compare'
                  = sreturn local compare
                  – sreturn local level `level'
                  = sreturn local level 95
                   ─────────────────────────────────────────────
> ──────────────────────────────────── end _get_diopts.GetDiopts ─────────────
                  – if `"`name2'"' == "" {
                  = if `""' == "" {
                  – GetDiopts DUPS, `options'
                  = GetDiopts DUPS,
                   ─────────────────────────────────────────────
> ──────────────────────────────────── begin _get_diopts.GetDiopts ─────────────
                  – local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLB
> ASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMP
> TYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(st
> ring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru)
>  FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru)
>  NOABBREV ABBREV
                  – syntax namelist(max=2) [, `DIOPTS' *]
                  = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBA
```

```
> SElevels ALLBASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOE
> MPTYcells EMPTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGE
> ND cformat(string) sformat(string) pformat(string) CODING VERSUS COMPARE FVW
> RAP(passthru) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CIT
> YPE(passthru) NOABBREV ABBREV *]
                        - opts_exclusive "`allbaselevels' `noallbaselevels'"
                        = opts_exclusive " "
                        ─────────────────────────────────────────────────────
> ─────────────────────────────── begin opts_exclusive ──────────────
                        - version 8.2
                        - args opts optname errcode optslab
                        - local opts `opts'
                        = local opts
                        - local n 0
                        - while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        - if `n' < 2 {
                        = if 0 < 2 {
                        - exit
                        ─────────────────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ───────────────
                        - opts_exclusive "`allbaselevels' `nobaselevels'"
                        = opts_exclusive " "
                        ─────────────────────────────────────────────────────
> ─────────────────────────────── begin opts_exclusive ──────────────
                        - version 8.2
                        - args opts optname errcode optslab
                        - local opts `opts'
                        = local opts
                        - local n 0
                        - while `"`opts'"' != "" {
                        = while `""' != "" {
                          local ++n
                          gettoken item`n' opts : opts, bind
                          }
                        - if `n' < 2 {
                        = if 0 < 2 {
                        - exit
                        ─────────────────────────────────────────────────────
> ──────────────────────────────── end opts_exclusive ───────────────
                      - opts_exclusive "`baselevels' `nobaselevels'"
                      = opts_exclusive " "
                      ─────────────────────────────────────────────────────
```

```
> ────────────────────────────────────── begin opts_exclusive ───────────────

                   – version 8.2
                   – args opts optname errcode optslab
                   – local opts `opts'
                   = local opts
                   – local n 0
                   – while `"`opts'"' != "" {
                   = while `""' != "" {
                     local ++n
                     gettoken item`n' opts : opts, bind
                     }
                   – if `n' < 2 {
                   = if 0 < 2 {
                   – exit
                   ──────────────────────────────────────────────────────

> ────────────────────────────────────── end opts_exclusive ─────────────────

                 – opts_exclusive "`emptycells' `noemptycells'"
                 = opts_exclusive " "
                   ──────────────────────────────────────────────────────

> ────────────────────────────────────── begin opts_exclusive ───────────────

                   – version 8.2
                   – args opts optname errcode optslab
                   – local opts `opts'
                   = local opts
                   – local n 0
                   – while `"`opts'"' != "" {
                   = while `""' != "" {
                     local ++n
                     gettoken item`n' opts : opts, bind
                     }
                   – if `n' < 2 {
                   = if 0 < 2 {
                   – exit
                   ──────────────────────────────────────────────────────

> ────────────────────────────────────── end opts_exclusive ─────────────────

                 – opts_exclusive "`fvlabel' `nofvlabel'"
                 = opts_exclusive " "
                   ──────────────────────────────────────────────────────

> ────────────────────────────────────── begin opts_exclusive ───────────────

                   – version 8.2
                   – args opts optname errcode optslab
                   – local opts `opts'
                   = local opts
                   – local n 0
                   – while `"`opts'"' != "" {
                   = while `""' != "" {
```

```
                         local ++n
                         gettoken item`n' opts : opts, bind
                         }
                       − if `n' < 2 {
                       = if 0 < 2 {
                       − exit
                         ──────────────────────────────────────────
>  ─────────────────────────────────────── end opts_exclusive ─────────────
               − opts_exclusive "`omitted' `noomitted'"
               = opts_exclusive " "
                         ──────────────────────────────────────────
>  ──────────────────────────────────────── begin opts_exclusive ───────────
               − version 8.2
               − args opts optname errcode optslab
               − local opts `opts'
               = local opts
               − local n 0
               − while `"`opts'"' != "" {
               = while `""' != "" {
                 local ++n
                 gettoken item`n' opts : opts, bind
                 }
               − if `n' < 2 {
               = if 0 < 2 {
               − exit
                         ──────────────────────────────────────────
>  ─────────────────────────────────────── end opts_exclusive ─────────────
               − opts_exclusive "`lstretch' `nolstretch'"
               = opts_exclusive " "
                         ──────────────────────────────────────────
>  ──────────────────────────────────────── begin opts_exclusive ───────────
               − version 8.2
               − args opts optname errcode optslab
               − local opts `opts'
               = local opts
               − local n 0
               − while `"`opts'"' != "" {
               = while `""' != "" {
                 local ++n
                 gettoken item`n' opts : opts, bind
                 }
               − if `n' < 2 {
               = if 0 < 2 {
               − exit
                         ──────────────────────────────────────────
>  ─────────────────────────────────────── end opts_exclusive ─────────────
```

```
                – opts_exclusive "`cnsreport' `fullcnsreport'"
                = opts_exclusive " "
                ─────────────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ──────────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
                ─────────────────────────────────────────────
> ─────────────────────────────────── end opts_exclusive ────────────────
                – opts_exclusive "`coeflegend' `selegend'"
                = opts_exclusive " "
                ─────────────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ──────────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
                – while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
                ─────────────────────────────────────────────
> ─────────────────────────────────── end opts_exclusive ────────────────
                – opts_exclusive "`noci' `nopvalues'"
                = opts_exclusive " "
                ─────────────────────────────────────────────
> ─────────────────────────────────── begin opts_exclusive ──────────────
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
```

```
                    — local n 0
                    — while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    — if `n' < 2 {
                    = if 0 < 2 {
                    — exit
                    _____
>  ————————————————————————————————  end opts_exclusive  ——————————————
                  — local K : list sizeof namelist
                  — gettoken c_diopts c_opts : namelist
                  — opts_exclusive "`coding' `compare'"
                  = opts_exclusive " "
                    _____
>  ————————————————————————————————  begin opts_exclusive  ——————————————
                  — version 8.2
                  — args opts optname errcode optslab
                  — local opts `opts'
                  = local opts
                  — local n 0
                  — while `"`opts'"' != "" {
                  = while `""' != "" {
                    local ++n
                    gettoken item`n' opts : opts, bind
                    }
                  — if `n' < 2 {
                  = if 0 < 2 {
                  — exit
                    _____
>  ————————————————————————————————  end opts_exclusive  ——————————————
                — opts_exclusive "`versus' `compare'"
                = opts_exclusive " "
                    _____
>  ————————————————————————————————  begin opts_exclusive  ——————————————
                — version 8.2
                — args opts optname errcode optslab
                — local opts `opts'
                = local opts
                — local n 0
                — while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
```

```
                           — if `n' < 2 {
                           = if 0 < 2 {
                           — exit
                           ─────────────────────────────────────────
>  ───────────────────────────────────── end opts_exclusive ─────────────
            — opts_exclusive "`abbrev' `noabbrev'"
            = opts_exclusive " "
                           ─────────────────────────────────────────
>  ───────────────────────────────────── begin opts_exclusive ───────────
            — version 8.2
            — args opts optname errcode optslab
            — local opts `opts'
            = local opts
            — local n 0
            — while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            — if `n' < 2 {
            = if 0 < 2 {
            — exit
                           ─────────────────────────────────────────
>  ───────────────────────────────────── end opts_exclusive ─────────────
            — local allbaselevels `allbaselevels' `noallbaselevels'
            = local allbaselevels
            — local baselevels `baselevels' `nobaselevels'
            = local baselevels
            — local emptycells `emptycells' `noemptycells'
            = local emptycells
            — local omitted `omitted' `noomitted'
            = local omitted
            — local lstretch `lstretch' `nolstretch'
            = local lstretch
            — local fvlabel `fvlabel' `nofvlabel'
            = local fvlabel
            — local abbrev `abbrev' `noabbrev'
            = local abbrev
            — if "`allbaselevels'`baselevels'" == "" {
            = if "" == "" {
            — if c(showbaselevels) == "all" {
              local allbaselevels allbaselevels
              }
            — else if c(showbaselevels) == "on" {
              local baselevels baselevels
              }
```

```
- }
- if "`emptycells'" == "" {
= if "" == "" {
- if c(showemptycells) == "off" {
  local emptycells noemptycells
  }
- }
- if "`omitted'" == "" {
= if "" == "" {
- if c(showomitted) == "off" {
  local omitted noomitted
  }
- }
- if "`lstretch'" == "" {
= if "" == "" {
- if c(lstretch) == "off" {
  local lstretch nolstretch
  }
- }
- if `:length local cformat' {
= if 0 {
  confirm numeric format `cformat'
  if fmtwidth(`"`cformat'"') > 9 {
  local cformat "%9.0g"
  di "{txt}note: invalid cformat(), using default"
  }
  sreturn local cformat `"`cformat'"'
  local cformat `"cformat(`cformat')"'
  }
- if `:length local sformat' {
= if 0 {
  confirm numeric format `sformat'
  if fmtwidth(`"`sformat'"') > 8 {
  local sformat "%8.2f"
  di "{txt}note: invalid sformat(), using default"
  }
  sreturn local sformat `"`sformat'"'
  local sformat `"sformat(`sformat')"'
  }
- if `:length local pformat' {
= if 0 {
  confirm numeric format `pformat'
  if fmtwidth(`"`pformat'"') > 5 {
  local pformat "%5.3f"
  di "{txt}note: invalid pformat(), using default"
  }
```

```
                    sreturn local pformat `"'`pformat'"'
                    local pformat `"pformat(`pformat')"'
                    }
        – if `K' == 1 & `:length local options' {
        = if 1 == 1 & 0 {
                    syntax namelist(max=2) [, `DIOPTS']
                    }
        – if reldif(`level', c(level)) > 1e-3 {
        = if reldif(95, c(level)) > 1e-3 {
                    local levelopt level(`level')
                    }
        – Wrapon , `fvwrapon'
        = Wrapon ,
                    ──────────────────────────────────────
  > ──────────────────────── begin _get_diopts.Wrapon ──────────────
                    – capture syntax [, WOrd WIdth]
                    – if c(rc) {
                      di as err "invalid fvwrapon() option;"
                      syntax [, WOrd WIdth]
                      exit 198
                      }
                    – opts_exclusive "`word' `width'" fvwrapon
                    = opts_exclusive " " fvwrapon
                    ──────────────────────────────────────
  > ──────────────────────── begin opts_exclusive ──────────────
                    – version 8.2
                    – args opts optname errcode optslab
                    – local opts `opts'
                    = local opts
                    – local n 0
                    – while `"'`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 0 < 2 {
                    – exit
                    ──────────────────────────────────────
  > ──────────────────────── end opts_exclusive ──────────────
                    – local fvwrapon `word' `width'
                    = local fvwrapon
                    – if `:length local fvwrapon' {
                    = if 0 {
                      c_local fvwrapon fvwrapon(`fvwrapon')
                      }
```

```
> ──────────────────────────────────────────────────────
> ─────────────────────────────── end _get_diopts.Wrapon ───────────────────────
                      − if "`fvwrap'" != "" {
                      = if "" != "" {
                        FVWrap, `fvwrap'
                        }
                      − c_local `c_diopts' `levelopt' `vsquish' `allbaselevels'
> `baselevels' `cnsreport' `fullcnsreport' `emptycells' `omitted' `lstretch' `
> coeflegend' `selegend' `cformat' `sformat' `pformat' `coding' `versus' `comp
> are' `fvwrap' `fvwrapon' `fvlabel' `noci' `nopvalues' `markdown' `citype' `a
> bbrev'
                      = c_local DUPS
                      − if `K' == 2 {
                      = if 1 == 2 {
                        c_local `c_opts' `"`options'"'
                        }
                      − sreturn local coding `coding'
                      = sreturn local coding
                      − sreturn local versus `versus'
                      = sreturn local versus
                      − sreturn local compare `compare'
                      = sreturn local compare
                      − sreturn local level `level'
                      = sreturn local level 95

                      ──────────────────────────────────────────────
> ─────────────────────────────── end _get_diopts.GetDiopts ───────────────────
                    − }
                    − else {
                      GetDiopts DUPS options, `options'
                      c_local `name2' `"`options'"'
                      }
                    − local DUPS : list DUPS − DEFAULT
                    − gettoken DUPS : DUPS
                    − if `"`DUPS'"' != "" {
                    = if `""' != "" {
                      if (strpos(`"`DUPS'"', "(")) {
                      gettoken DUPS : DUPS, parse("(")
                      local DUPS `"`DUPS'()"'
                      }
                      di as err "duplicate {bf:`DUPS'} option not allowed"
                      exit 198
                      }
                    − sreturn clear
                    − foreach sname of local snames {
                    − sreturn local `sname' = `"`S_`sname''"'
                    = sreturn local level = `"95"'
```

```
                  – }
                  – sreturn local `sname' = `"'`S_`sname''"'
                  = sreturn local k = `"0"'
                  – }
                  ─────────────────────────────────────────────────────
> ─────────────────────────────────── end _get_diopts ──────────────
                  ─────────────────────────────────────────────────────
> ─────────────────────────────────── begin _diparm ────────────────
                  – version 11
                  – if _caller() < 8.2 {
                  _diparm_8 `0'
                  exit
                  }
                  – syntax anything(name=eqs) [, Level(cilevel) NOTAB DOF(pass
> thru) BMATrix(passthru) VMATrix(passthru) DFMATrix(passthru) COEFLegend SELE
> GEND * ]
                  – tempname T
                  – if `:length local notab' {
                  = if 5 {
                  – .`T' = ._b_diparm.new, level(`level') `dof' `bmatrix' `vma
> trix' `dfmatrix' `coeflegend' `selegend'
                  = .__000008 = ._b_diparm.new, level(95)
                  –class _b_diparm {
                  –        string  LEVEL   = ""
                  –        double  IS_MI   = 0
                  –        string  BMAT    = ""
                  –        string  COLNA   = ""
                  –        string  VMAT    = ""
                  –        string  DFMAT   = ""
                  –        string  COLFUL  = ""
                  –        double  DF      = 0
                  –        double  DF_HOLD = 0
                  –        double  EXTRA   = 1
                  –        string  METHOD  = ""
                  –        double  has_b   = 0
                  –        double  has_v   = 0
                  –        double  has_df  = 0
                  –        double  has_Cns = 0
                  –}
                  ─────────────────────────────────────────────────────
> ─────────────────────────────────── begin _b_diparm.new ──────────
                  – version 11
                  – .IS_MI = `"'`e(mi)'"'' == "mi" & `"'`e(df_mi)'"'' == "matrix
> "
                  = .IS_MI = `""' == "mi" & `""' == "matrix"
                  – if `.IS_MI' {
```

```
                          = if 0 {
                            local ALTOPT DFMATrix(string)
                            }
                          - syntax [, Level(cilevel) DOF(real -1) BMATrix(string) VM
> ATrix(string) EXTRA(real 1) MCOMPARE(passthru) `ALTOPT' ]
                          = syntax [, Level(cilevel) DOF(real -1) BMATrix(string) VM
> ATrix(string) EXTRA(real 1) MCOMPARE(passthru)  ]
                          - _get_mcompare, `mcompare'
                          = _get_mcompare,
                         ─────────────────────────────────────────────────
> ───────────────────────────────── begin _get_mcompare ────────────────
                          - version 11
                          - local cmd `"`e(cmd)'"'
                          = local cmd `"nbreg"'
                          - syntax [name(name=caller)] [, *]
                          - local is_pwc = inlist("pwcompare", "`cmd'", "`caller'"
> ) | inlist("pwmean", "`cmd'", "`caller'")
                          = local is_pwc = inlist("pwcompare", "nbreg", "") | inli
> st("pwmean", "nbreg", "")
                          - local is_marg = inlist("margins", "`cmd'", "`e(cmd2)'"
> , "`caller'")
                          = local is_marg = inlist("margins", "nbreg", "", "")
                          - local OPTIONS NOADJust BONferroni DUNCan DUNNett SCHef
> fe SIDak SNK TUKey ADJustall
                          - if `is_pwc' {
                          = if 0 {
                            syntax [name] [, `OPTIONS' MCOMPare(string) *]
                            }
                          - else {
                          - syntax [name] [, MCOMPare(string) *]
                          - local suboption mcompare()
                          - }
                          - sreturn clear
                          - sreturn local options `"`options'"'
                          = sreturn local options `""'
                          - if `is_pwc' {
                          = if 0 {
                            local METHOD `noadjust' `bonferroni' `duncan' `dunnett
> ' `scheffe' `sidak' `snk' `tukey'
                            local METHOD : list uniq METHOD
                            opts_exclusive "`METHOD'"
                            local ALL `adjustall'
                            opts_exclusive "`noadjust' `ALL'"
                            }
                          - local 0 `", `mcompare'"'
                          = local 0 `", "'
```

```
                            — capture syntax [, `OPTIONS']
                            = capture syntax [, NOADJust BONferroni DUNCan DUNNett S
> CHeffe SIDak SNK TUKey ADJustall]
                            — if c(rc) {
                              di as err "invalid mcompare() option;"
                              di as err "method '`mcompare'' not allowed"
                              error 198
                              }
                            — local METHOD `METHOD' `noadjust' `bonferroni' `duncan'
>  `dunnett' `scheffe' `sidak' `snk' `tukey'
                            = local METHOD
                            — local METHOD : list uniq METHOD
                            — local ALL `ALL' `adjustall'
                            = local ALL
                            — local ALL : list uniq ALL
                            — opts_exclusive "`METHOD'" `suboption'
                            = opts_exclusive "" mcompare()
                            ─────────────────────────────────────────────────
> ───────────────────────────── begin opts_exclusive ─────────────
                            — version 8.2
                            — args opts optname errcode optslab
                            — local opts `opts'
                            = local opts
                            — local n 0
                            — while `"`opts'"' != "" {
                            = while `""' != "" {
                              local ++n
                              gettoken item`n' opts : opts, bind
                              }
                            — if `n' < 2 {
                            = if 0 < 2 {
                            — exit
                            ─────────────────────────────────────────────────
> ───────────────────────────── end opts_exclusive ──────────────
                            — if "`METHOD'" == "" {
                            = if "" == "" {
                            — if "`ALL'" != "" {
                            = if "" != "" {
                              di as err "multiple comparison method required with th
> e adjustall option"
                              exit 198
                              }
                            — local METHOD noadjust
                            — local noadjust noadjust
                            — }
                            — opts_exclusive "`ALL' `noadjust'" `suboption'
```

```
                          = opts_exclusive " noadjust" mcompare()
                          ─────────────────────────────────────────────
> ──────────────────────────── begin opts_exclusive ───────────────
                          – version 8.2
                          – args opts optname errcode optslab
                          – local opts `opts'
                          = local opts  noadjust
                          – local n 0
                          – while `"`opts'"' != "" {
                          = while `"noadjust"' != "" {
                          – local ++n
                          – gettoken item`n' opts : opts, bind
                          = gettoken item1 opts : opts, bind
                          – }
                          – while `"`opts'"' != "" {
                          = while `""' != "" {
                            local ++n
                            gettoken item`n' opts : opts, bind
                            }
                          – if `n' < 2 {
                          = if 1 < 2 {
                          – exit

                          ─────────────────────────────────────────────
> ──────────────────────────── end opts_exclusive ───────────────
                          – local EXCLUDE duncan dunnett snk tukey
                          – if `:list METHOD in EXCLUDE' {
                          = if 0 {
                            if `is_pwc' {
                            local opt : copy local METHOD
                            }
                            else {
                            local opt "mcompare(`METHOD')"
                            }
                            local cmdlist anova manova regress mvreg pwmean
                            if "`cmd'" == "pwcompare" {
                            local cmd `"`e(cmd_est)'"'
                            }
                            if `is_marg' {
                            local cmd margins
                            }
                            if !`:list cmd in cmdlist' | !`is_pwc' {
                            di as err `"method `opt' is not allowed with results f
> rom `cmd'"'
                            exit 322
                            }
                            if `"`e(prefix)'"' == "svy" {
```

```
                             di as err `"method `opt' is not allowed with results u
> sing the svy prefix"'
                             exit 322
                             }
                             local vce `"`e(vce)'"'
                             if !inlist("`vce'", "", "ols") {
                             di as err `"method `opt' is not allowed with results u
> sing vce(`vce')"'
                             exit 322
                             }
                             }
                        - local EXCLUDE duncan dunnett snk tukey scheffe
                        - if `:list METHOD in EXCLUDE' {
                        = if 0 {
                          if "`ALL'" != "" {
                          di as err `"option adjustall is not allowed with metho
> d `METHOD'"'
                          exit 198
                          }
                          }
                        - sreturn local method `"`METHOD'"'
                        = sreturn local method `"noadjust"'
                        - sreturn local adjustall `"`ALL'"'
                        = sreturn local adjustall `""'
                          ──────────────────────────────────────────────────
> ──────────────────────────────────────────── end _get_mcompare ───────────────
                    - if !inlist("`s(method)'", "noadjust", "bonferroni", "sid
> ak") {
                    = if !inlist("noadjust", "noadjust", "bonferroni", "sidak"
> ) {
                      di as err "option `mcompare' not allowed"
                      exit 198
                      }
                    - .METHOD = "`s(method)'"
                    = .METHOD = "noadjust"
                    - .LEVEL = "`level'"
                    = .LEVEL = "95"
                    - if "`bmatrix'" == "" {
                    = if "" == "" {
                    - if `:length local vmatrix' {
                    = if 0 {
                      di as err "option vmatrix() requires option bmatrix()"
                      exit 198
                      }
                    - }
                    - if "`vmatrix'" == "" {
```

```
                        = if "" == "" {
                        - if `:length local dfmatrix' {
                        = if 0 {
                          di as err "option dfmatrix() requires option vmatrix()"
                          exit 198
                          }
                        - }
                        - if `.IS_MI' & "`bmatrix'`vmatrix'`dfmatrix'`e(properties
> )'"=="" {
                        = if 0 & "b V"=="" {
                          local bmatrix e(b_mi)
                          local vmatrix e(V_mi)
                          local dfmatrix e(df_mi)
                          }
                        - if `:length local bmatrix' {
                        = if 0 {
                          .has_b = 1
                          .BMAT = "`bmatrix'"
                          .COLNA = "`:colful `bmatrix''"
                          }
                        - else {
                        - .COLNA = "`:colful e(b)'"
                        = .COLNA = "piq_timing_max:ln_neq piq_timing_max:cb_author
> s_ext piq_timing_max:estimated piq_timing_max:est_late piq_timing_max:o.est_
> early piq_timing_max:wg_ndx_other piq_timing_max:stky_pr_rotemberg piq_timin
> g_max:stky_pr_calvo piq_timing_max:_cons /lnalpha"
                        - .has_Cns = "`e(Cns)'" == "matrix"
                        = .has_Cns = "matrix" == "matrix"
                        - }
                        - if `:length local vmatrix' {
                        = if 0 {
                          .has_v = 1
                          .VMAT = "`vmatrix'"
                          }
                        - if `:length local dfmatrix' {
                        = if 0 {
                          .has_df = 1
                          .DFMAT = "`dfmatrix'"
                          }
                        - if `dof' <= 0 {
                        = if -1 <= 0 {
                        - local df_r 0
                        - Chk4PosInt df_r
                        ────────────────────────────────────────────────────
> ───────────────────────────── begin _b_diparm.Chk4PosInt ─────────────────
                        - version 11
```

```
                        — args ename
                        - if `"`e(`ename')'"' != "" {
                        = if `""' != "" {
                          capture confirm integer number `e(`ename')'
                          if !c(rc) {
                          if `e(`ename')' > 0 {
                          c_local `ename' `e(`ename')'
                          }
                          }
                          }
                        ─────────────────────────────────────
```

> ─────────────────────── end _b_diparm.Chk4PosInt ───────────

```
                    - if `df_r' {
                    = if 0 {
                      .DF = `df_r'
                      }
                    - }
                    - else {
                      .DF = `dof'
                      }
                    - if `extra' > 1 {
                    = if 1 > 1 {
                      .EXTRA = `extra'
                      }
                    ─────────────────────────────────────
```

> ──────────────────────────── end _b_diparm.new ───────────────

```
                  - .`T'.compute `eqs', `options'
                  = .__000008.compute lnalpha, exp
                    ─────────────────────────────────────
```

> ─────────────────────────── begin _b_diparm.compute ──────────

```
                    - version 11
                    - version 11
                    - syntax anything(name=EQS id="equation name(s)") [, NOPro
> b Prob EXP TANH ILOGIT INVLOGIT Function(str) Derivative(str) CI(string) ]
                    - opts_exclusive "`prob' `noprob'"
                    = opts_exclusive " "
                    ─────────────────────────────────────
```

> ──────────────────────────── begin opts_exclusive ────────────

```
                    - version 8.2
                    - args opts optname errcode optslab
                    - local opts `opts'
                    = local opts
                    - local n 0
                    - while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
```

```
                        gettoken item`n' opts : opts, bind
                        }
                      − if `n' < 2 {
                      = if 0 < 2 {
                      − exit
                        ────────────────────────────────────────────
>  ──────────────────────────────────── end opts_exclusive ──────────────
                   − local prob `prob' `noprob'
                   = local prob
                   − if "`ilogit'`invlogit'" != "" {
                   = if "" != "" {
                     local ilogit ilogit
                     }
                   − local builtin `exp' `tanh' `ilogit'
                   = local builtin exp
                   − local fd 0
                   − if `:length local function' {
                   = if 0 {
                     local ++fd
                     }
                   − if `:length local derivative' {
                   = if 0 {
                     local ++fd
                     }
                   − if `fd' == 1 {
                   = if 0 == 1 {
                     di as err "both function() and derivative() must be spec
> ified"
                     exit 198
                     }
                   − if `fd' {
                   = if 0 {
                     local fopt "function()"
                     }
                   − opts_exclusive "`builtin' `fopt'"
                   = opts_exclusive "exp "
                     ──────────────────────────────────────────────
>  ──────────────────────────────────── begin opts_exclusive ──────────────
                   − version 8.2
                   − args opts optname errcode optslab
                   − local opts `opts'
                   = local opts exp
                   − local n 0
                   − while `"`opts'"' != "" {
                   = while `"exp"' != "" {
                   − local ++n
```

```
                    – gettoken item`n' opts : opts, bind
                    = gettoken item1 opts : opts, bind
                    – }
                    – while `"`opts'"' != "" {
                    = while `""' != "" {
                      local ++n
                      gettoken item`n' opts : opts, bind
                      }
                    – if `n' < 2 {
                    = if 1 < 2 {
                    – exit
                    _____
```

```
                    – if `.has_b' {
                    = if 0 {
                      local bmat `"`.BMAT'"'
                      }
                    – else {
                    – local bmat `"e(b)"'
                    – }
                    – foreach EQ of local EQS {
                    – if substr(`"`EQ'"',1,1) != "/" {
                    = if substr(`"lnalpha"',1,1) != "/" {
                    – local eq `"/`EQ'"'
                    = local eq `"/lnalpha"'
                    – }
                    – else local eq : copy local EQ
                    – local el : colnumb `bmat' "`eq'"
                    = local el : colnumb e(b) "/lnalpha"
                    – if inlist(`"`el'"', "", ".") {
                    = if inlist(`"10"', "", ".") {
                      di as err "parameter named {bf:`EQ'} not found"
                      exit 322
                      }
                    – local eqs `eqs' `eq'
                    = local eqs  /lnalpha
                    – }
                    – local neq : list sizeof eqs
                    – if `.has_Cns' {
                    = if 1 {
                    – tempname Cns C
                    – matrix `Cns' = e(Cns)
                    = matrix __000009 = e(Cns)
                    – }
                    – if `neq' != 1 {
                    = if 1 != 1 {
```

```
                        local el 0
                        }
             —  if `.IS_MI' {
             =  if 0 {
                        if `.has_df' {
                        local df = el(`.DFMAT',1,`el')
                        }
                        else {
                        local df = el(e(df_mi),1,`el')
                        }
                        if missing(`df') {
                        local df 0
                        }
                        }
             —  else {
             —  local df = `.DF'
             =  local df = 0
             —  }
             —  tempname z alpha
             —  scalar `alpha' = (100 — `.LEVEL')/100
             =  scalar __00000C = (100 — 95)/100
             —  mata: st_numscalar("`z'", _mc_crit("`.METHOD'", `df' ==
>  0 ? . : `df', st_numscalar("`alpha'"), ., `.EXTRA'))
             =  mata: st_numscalar("__00000B", _mc_crit("noadjust", 0 ==
>   0 ? . : 0, st_numscalar("__00000C"), ., 1))
             —  local isCns 0
             —  if `neq' == 1 {
             =  if 1 == 1 {
             —  tempname b se
             —  if `.has_b' {
             =  if 0 {
                        scalar `b' = el(`.BMAT',1,`el')
                        if `.has_v' {
                        scalar `se' = sqrt(el(`.VMAT',`el',`el'))
                        }
                        else {
                        scalar `se' = 0
                        }
                        }
             —  else {
             —  scalar `b' = _b[`eqs']
             =  scalar __00000D = _b[/lnalpha]
             —  if "`e(V)'" == "matrix" {
             =  if "matrix" == "matrix" {
             —  scalar `se' = _se[`eqs']
             =  scalar __00000E = _se[/lnalpha]
```

```
                    - }
                    - else {
                      scalar `se' = 0
                      }
                    - if `.has_Cns' & `se' == 0 {
                    = if 1 & __00000E == 0 {
                      matrix `C' = `Cns'[1...,`el']
                      matrix `C' = `C''*`C'
                      local isCns = `C'[1,1] != 0
                      }
                    - }
                    - if `se' == 0 {
                    = if __00000E == 0 {
                      scalar `se' = .
                      }
                    - if "`function'" != "" {
                    = if "" != "" {
                      .Function `b' `se' `z' "`function'" "`derivative'"
                      }
                    - else if "`builtin'" != "" {
                    = else if "exp" != "" {
                    - .`builtin' `b' `se' `z'
                    = .exp __00000D __00000E __00000B
                      ─────────────────────────────────────────────────
  > ───────────────────────────────── begin _b_diparm.exp ───────────────
                    - version 11
                    - args b se z
                    - return scalar est = exp(`b')
                    = return scalar est = exp(__00000D)
                    - return scalar se = return(est)*`se'
                    = return scalar se = return(est)*__00000E
                    - return scalar lb = exp(`b'-`z'*`se')
                    = return scalar lb = exp(__00000D-__00000B*__00000E)
                    - return scalar ub = exp(`b'+`z'*`se')
                    = return scalar ub = exp(__00000D+__00000B*__00000E)
                    - return scalar i = 0
                      ─────────────────────────────────────────────────
  > ───────────────────────────────── end _b_diparm.exp ─────────────────
                    - }
                    - else {
                      if ("`prob'" != "noprob") local prob prob
                      .identity `b' `se' `z' `el' "`ci'"
                      }
                    - }
                    - else {
                      .Multiple "`eqs'" `z' "`function'" "`derivative'" "`ci'"
```

```
                        local isCns = r(cns)
                        }
                      – .AddTest `df', `prob'
                      = .AddTest 0,
                      ────────────────────────────────────────────
> ──────────────────────── begin _b_diparm.AddTest ────────────────
                      – version 11
                      – syntax anything(name=df) [, Prob]
                      – return add
                      – if "`prob'" == "" {
                      = if "" == "" {
                      – return scalar p = .
                      – return scalar z = .
                      – exit
                      ────────────────────────────────────────────
> ──────────────────────── end _b_diparm.AddTest ─────────────────
                      – return add
                      – if `df' == 0 {
                      = if 0 == 0 {
                      – return scalar df = .
                      – }
                      – else return scalar df = `df'
                      = else return scalar df = 0
                      – return scalar crit = `z'
                      = return scalar crit = __00000B
                      – return scalar cns = `isCns'
                      = return scalar cns = 0
                      ────────────────────────────────────────────
> ──────────────────────── end _b_diparm.compute ─────────────────
                    – exit
                      ────────────────────────────────────────────
> ───────────────────────────── end _diparm ──────────────────────
                        │
> ──────              │
                      │              Robust
   piq_timing_max │ Coefficient  std. err.      z     P>|z|      [95% conf. inte
> rval]
                      │
> ──────              │
            ln_neq │    –.37019    .0949227   –3.90   0.000     –.556235      –.1
> 84145
   cb_authors_ext │    .668346    .1322078    5.06   0.000      .4092234      .92
> 74686
        estimated │   1.047287    .1353117    7.74   0.000      .782081       1.3
> 12493
         est_late │  –.3692481    .1029583   –3.59   0.000     –.5710427     –.16
```

```
> 74535
      est_early │         0  (omitted)
   wg_ndx_other │   .5079266    .2179569      2.33    0.020     .0807388      .93
> 51144
stky_pr_rotemberg │  -1.249606      .25395     -4.92    0.000    -1.747338     -.75
> 18729
    stky_pr_calvo │  -.7137302    .1526709     -4.67    0.000     -1.01296     -.41
> 45007
            _cons │   1.193328    .2554185      4.67    0.000      .692717      1.6
> 93939
                  │
──────────────────┼──────────────────────────────────────────────────────────────
> ────
         /lnalpha │  -2.282099    .4445348                       -3.153372     -1.4
> 10827
                  │
──────────────────┼──────────────────────────────────────────────────────────────
> ────
            alpha │   .1020697    .0453735                        .0427079      .24
> 39414
                  │
──────────────────┼──────────────────────────────────────────────────────────────
> ────
                  - if "`markdown'" != "" {
                  = if "" != "" {
                    set linesize `lsize'
                    }
                  - if "`eqselect'" == "" & "`eformnote'" != "noeformnote" {
                  = if "" == "" & "" != "noeformnote" {
                  - if `"`eformdi'"'!="" & ("`e(cmd)'"!="gnbreg" | "`e(prefix)'"
> =="svy") {
                  = if `""'!="" & ("nbreg"!="gnbreg" | ""=="svy") {
                    local k_eform `e(k_eform)'
                    if ("`k_eform'"=="") {
                    local k_eform = 1
                    }
                    local k_eq `e(k_eq)'
                    if ("`k_eq'"=="") {
                    local k_eq = 1
                    }
                    if (`k_eform'<`k_eq' & `k_eform') {
                    if ("`e(cmd2)'" == "stintreg" | "`e(cmd2)'" == "streg") & ("
> `e(cmd)'" == "weibull" | "`e(cmd)'" == "gompertz") {
                    }
                    else {
                    _eform_multeq_note efnote : `k_eform' `"`tr_item'"'
                    di as txt "`efnote'"
                    }
                    }
```

```
                }
        - if (`"'`eformdi'"'!="" & "`e(noconstant)'"=="0" & `"'`eform_co
> ns_ti'"'!="" & "`e(consonly)'"!="1") {
        = if (`""'!="" & "0"=="0" & `""'!="" & "0"!="1") {
                if ("`e(cmd)'"=="asclogit" | "`e(cmd)'"=="cmclogit" | "`e(cm
> d)'"=="cmmixlogit" | "`e(cmd)'"=="cmxtmixlogit" ) {
                local asvar = `"'`e(ranvars)'`e(fixvars)'`e(indvars)'"' != ""
                if `"'`e(casevars)'"' != "" & `asvar' {
                local note1 "Exponentiated coefficients represent odds ratio
> s for "
                local note2 "alternative-specific variables (first equation)
>  and "
                local note3 "{help j_cmrisk##|_new:relative-risk ratios} "
                local note4 "for case-specific variables."
                di as txt "{p 0 6 2}Note: `note1'`note2'`note3'`note4'{p_end
> }"
                }
                }
                if "`eform_cons_ti'" == "Inc. rate" {
                local eform_cons_note "incidence rate"
                }
                else if "`eform_cons_ti'" == "Rel. risk" {
                local eform_cons_note "relative risk"
                }
                else if "`eform_cons_ti'" == "Health" {
                local eform_cons_note "health (probability of no disease)"
                }
                else {
                local eform_cons_note = strlower(`"'`eform_cons_ti'"')
                }
                local eform_cons_note "baseline `eform_cons_note'"
                if ("`e(cmd2)'"=="") {
                local cmd `e(cmd)'
                }
                else {
                local cmd `e(cmd2)'
                }
                local f2 = udsubstr("`cmd'",1,2)
                local is_re = ("`f2'"=="xt" | "`f2'"=="me")
                if `is_re' {
                local extranote " (conditional on zero random effects)"
                }
                di as txt "{p 0 6 2}Note: {bf:_cons} estimates " "`eform_con
> s_note'`extranote'" _c
                if ("`e(cmd)'"=="mlogit" | "`e(cmd)'"=="asclogit" | "`e(cmd)
> '"=="cmclogit" | "`e(cmd)'"=="cmmixlogit" | "`e(cmd)'"=="cmxtmixlogit" ) {
```

```
                          di as txt " for each outcome" _c
                          }
                          di as txt ".{p_end}"
                          }
                    ─ }
                    ─ return add
                    ─ if !`keepmc' {
                    = if !0 {
                    ─ return local mcmethod
                    ─ return local mctitle
                    ─ }
                      ──────────────────────────────────────────
```

```
                ─ if "`footnote'" == "" {
                = if "nofootnote" == "" {
                  ml_footnote
                  }
                  ──────────────────────────────────────────────
```

```
            ─ exit
              ──────────────────────────────────────────────────
```

```
          ─ exit
            ────────────────────────────────────────────────────
```

```
        ─ if "`e(chi2_ct)'"!="LR" { exit }
        = if ""!="LR" { exit }
          ──────────────────────────────────────────────────────
```

```
      ─ }
      ─ error `e(rc)'
      = error 0
        ────────────────────────────────────────────────────────
```

```
    ─ version 10: ereturn local cmdline `"nbreg `0'"'
    = version 10: ereturn local cmdline `"nbreg piq_timing_max   ln_neq cb_aut
> hors_ext estimated est_late est_early   wg_ndx_other stky_pr_rotemberg    st
> ky_pr_calvo  if piq_timing_max<60 , vce(r)"'
      ──────────────────────────────────────────────────────────
```

```
  ─ log close
       name:  <unnamed>
        log:  /Users/connorbrennan/Library/CloudStorage/OneDrive-TheUniversityo
> fChicago/mmb/output/stepwise_regressions/piq_timing_max_all_det.smcl
   log type:  smcl
  closed on:  10 Jan 2025, 11:33:23
```