```
          name:  <unnamed>
           log:  /Users/connorbrennan/Library/CloudStorage/OneDrive-TheUniversityo
> fChicago/mmb/output/stepwise_regressions/piq_timing_max_nomrig_all.smcl
      log type:  smcl
     opened on:  12 Sep 2025, 19:25:34
```

```
- capture ! rm ./output/stepwise_regressions/`depvar'_`type'.pdf
= capture ! rm ./output/stepwise_regressions/piq_timing_max_nomrig_all.pdf
- di "*******************************************************************************
> ********"
*********************************************************************************
> **
- di "Outcomes of bi-directional stepwise regressions with `depvar' (type = `t
> ype')"
= di "Outcomes of bi-directional stepwise regressions with piq_timing_max (typ
> e = nomrig_all)"
Outcomes of bi-directional stepwise regressions with piq_timing_max (type = no
> mrig_all)
- di "*******************************************************************************
> ********"
*********************************************************************************
> **
- ${reg_`depvar'_`type'}
= glm piq_timing_max rule_g rule_itr estimated  i.stky_wg#i.pr_ndx i.stky_wg#i
> .not_pr_ndx if piq_timing_max < 99 , family(nbinomial) link(log) vce(robust)
>  nolog
```

```
> ───────────────────────────────────────────────────────────────────── begin
> glm ─────────────────────────────────────────────────────────────────────
  - local version : di "version " string(_caller()) ", missing:"
  - if _by() {
    local BY `"by `_byvars'`_byrc0':"'
    }
  - local vceopts bootopts(noheader notable) jkopts(noheader notable) mark(EXP
> osure OFFset mu INIt T CLuster)
  - `BY' _vce_parserun glm, `vceopts' robustok multivce : `0'
  = _vce_parserun glm, bootopts(noheader notable) jkopts(noheader notable) ma
> rk(EXPosure OFFset mu INIt T CLuster) robustok multivce : piq_timing_max rul
> e_g rule_itr estimated  i.stky_wg#i.pr_ndx i.stky_wg#i.not_pr_ndx if piq_tim
> ing_max < 99 , family(nbinomial) link(log) vce(robust) nolog
```

```
> ──────────────────────────────────────────────────────── begin _vce_parse
> run ─────────────────────────────────────────────────────────────────────
    - version 9
    - local version : di "version " string(_caller()) ":"
    - local bycall = _by()
```

```
    - _on_colon_parse `0'
    = _on_colon_parse glm, bootopts(noheader notable) jkopts(noheader notable)
>   mark(EXPosure OFFset mu INIt T CLuster) robustok multivce : piq_timing_max
> rule_g rule_itr estimated  i.stky_wg#i.pr_ndx i.stky_wg#i.not_pr_ndx if piq_
> timing_max < 99 , family(nbinomial) link(log) vce(robust) nolog
    ─────────────────────────────────────────────────────────────────────

> ───────────────────────────────────────────────── begin _on_colon_pa
> rse ───────────────────────────────────────────────────────────────────
    - 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 `"glm, bootopts(noheader notable) jkopts(noheader notable) mark(EXP
> osure OFFset mu INIt T CLuster) robustok multivce "' == ":" {
        sreturn local after `"`after'"'
        exit
        }
    - while `"`COLON'"' != ":" & `"`after'"' != "" {
    = while `""' != ":" & `": piq_timing_max rule_g rule_itr estimated  i.st
> ky_wg#i.pr_ndx i.stky_wg#i.not_pr_ndx if piq_timing_max < 99 , family(nbinom
> ial) link(log) vce(robust) nolog"' != "" {
      - 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 rule_g rule_itr estimated  i.st
> ky_wg#i.pr_ndx i.stky_wg#i.not_pr_ndx if piq_timing_max < 99 , family(nbinom
> ial) link(log) vce(robust) nolog"' != "" {
        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 `"glm, bootopts(noheader notable) jkopts(noheader
>  notable) mark(EXPosure OFFset mu INIt T CLuster) robustok multivce "'
            - sreturn local after `"`after'"'
            = sreturn local after `" piq_timing_max rule_g rule_itr estimated  i.stk
> y_wg#i.pr_ndx i.stky_wg#i.not_pr_ndx if piq_timing_max < 99 , family(nbinomi
> al) link(log) vce(robust) nolog"'
                ────────────────────────────────────────────────────────────
>  ──────────────────────────────────────────── end _on_colon_pa
>  rse ───
        - local ZERO `"`s(before)'"'
        = local ZERO `"glm, bootopts(noheader notable) jkopts(noheader notable) ma
> rk(EXPosure OFFset mu INIt T CLuster) robustok multivce "'
        - local 0 `"`s(after)'"'
        = local 0 `" piq_timing_max rule_g rule_itr estimated  i.stky_wg#i.pr_ndx
> i.stky_wg#i.not_pr_ndx if piq_timing_max < 99 , family(nbinomial) link(log)
> vce(robust) nolog"'
        - quietly syntax [anything(equalok)] [if] [in] [fw aw pw iw] [, VCE(string
>  asis) VCE1(string asis) LRMODEL * ]
        - if `"`vce'"' == "" {
        = if `"robust"' == "" {
            MYRESULT
            exit
            }
        - local AFTER `"`0'"'
        = local AFTER `" piq_timing_max rule_g rule_itr estimated  i.stky_wg#i.pr_
> ndx i.stky_wg#i.not_pr_ndx if piq_timing_max < 99 , family(nbinomial) link(l
> og) vce(robust) nolog"'
        - local 0 `"`ZERO'"'
        = local 0 `"glm, bootopts(noheader notable) jkopts(noheader notable) mark(
> EXPosure OFFset mu INIt T CLuster) robustok multivce "'
        - syntax name(name=caller id="calling command name") [, WTYPES(string) NOB
> OOTstrap NOJACKknife NOOTHERvce NOTEST PANELdata STdata bootopts(string asis
> ) jkopts(string asis) robustok multivce REQUIREDopts(namelist) NOEQLIST EQop
> ts(passthru) EQARGopts(passthru) noNEEDVARLIST COMMONopts(namelist) MARKopts
```

```
> (passthru) SMARKopts(passthru) RMCOLLopts(passthru) RMDCOLLopts(passthru) NU
> MDEPvars(passthru) NEEDEQUAL ALLDEPSMISsing PARentheses UNPARFIRSTeq OR EQUA
> L 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'" & `:list
>  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 rule_g rule_itr estimated  i.stky_wg#i.pr_ndx
> i.stky_wg#i.not_pr_ndx if piq_timing_max < 99 , family(nbinomial) link(log)
> vce(robust) nolog"'
    - quietly syntax [anything(equalok)] [if/] [in] [`wtypes'] [, VCE(string a
> sis) VCE1(string asis) Robust NODOTS `panelopt' `stopt' `REQOPTLIST' * ]
    = quietly syntax [anything(equalok)] [if/] [in] [fw aw pw iw] [, VCE(strin
> g asis) VCE1(string asis) Robust NODOTS    * ]
    - if `:list vce === vce1' {
    = if 0 {
      local vce1
      }
    - if `"`vce1'"' != "" & "`multivce'" == "" {
    = if `""' != "" & "multivce" == "" {
      di as err "option vce() specified multiple times"
      exit 198
      }
    - if "`robust'" != "" & "`robustok'" == "" {
    = if "" != "" & "robustok" == "" {
      di as err "options vce() and robust may not be combined"
      exit 198
      }
    - if `"`if'"' != "" {
    = if `"piq_timing_max < 99 "' != "" {
    - local if `"if (`if')"'
    = local if `"if (piq_timing_max < 99 )"'
    - }
    - if "`robust'" != "" {
    = if "" != "" {
      local options `"`robust' `options'"'
      }
    - if "`weight'" != "" {
    = if "" != "" {
      local wgt [`weight'`exp']
      }
    - if `"`options'"' != "" {
    = if `"family(nbinomial) link(log) nolog"' != "" {
    - local opts `"`:list retok options'"'
    = local opts `"family(nbinomial) link(log) nolog"'
    - }
    - gettoken uvcetype vceopts : vce, parse(" ,")
    - capture unabVCEtype, `uvcetype'
    = capture unabVCEtype, robust
      ─────────────────────────────────────────────────────────────────────
> ─────────────────────────────────────────────── begin _vce_parserun.unabVCEt
> ype ──────────────────────────────────────────────────────────────────
    - 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 `""' != "" & "multivce" != "" {
       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 !inlist("`caller'","areg","regress", "xtreg") {
        di as err "{p}multiway cluster VCE " "not allowed{p_end}"
        exit 198
        }
        MYRESULT
        exit
        }
        }
    -   }
    -   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.MYRES
  > ULT ──────────────────────────────────────────────────────────────────
        -   args exit
        -   sreturn local exit `"`exit'"'
        =   sreturn local exit `""'
        ──────────────────────────────────────────────────────────────────
  > ──────────────────────────────────────────── end _vce_parserun.MYRES
  > ULT ──────────────────────────────────────────────────────────────────
        -   exit
        ──────────────────────────────────────────────────────────────────
  > ──────────────────────────────────────────── end _vce_parse
  > run ──────────────────────────────────────────────────────────────────
    -   if "`s(exit)'" != "" {
    =   if "" != "" {
        version 10: ereturn local cmdline `"glm `0'"'
        if e(vf) != 1 {
        tempname V
        matrix `V' = e(vf)*e(V)
        version 9: ereturn repost V = `V'
        }
```

```
      version 9: ereturn local clustvar `"`e(cluster)'"'
      version 9: ereturn local cluster
      quietly syntax [anything] [fw aw iw pw] [if] [in] [, noHEADer noTABLE Leve
> l(passthru) eform * ]
      if ! `:length local level' {
      if `"`s(level)'"' != "" {
      local level `"level(`s(level)')"'
      }
      }
      _get_diopts diopts options, `options'
      version 7: Display, `header' `table' `level' `eform' `diopts'
      exit
      }
  - version 7, missing
  - if replay() {
    if _by() {
    error 190
    }
    if "`e(cmd)'" != "glm" {
    error 301
    }
    if "`e(predict)'" == "glm_p" {
    glm_6 `0'
    exit
    }
    Display `0'
    error `e(rc)'
    exit
    }
  - if _caller() < 7 {
    mac drop SGLM_*
    capture noi `BY' glm_6 `0'
    mac drop SGLM_*
    exit _rc
    }
  - mac drop SGLM_running SGLM_nonstan
  - capture noisily `version' `BY' glm_7 `0'
  = capture noisily version 18.5, missing:  glm_7 piq_timing_max rule_g rule_i
> tr estimated  i.stky_wg#i.pr_ndx i.stky_wg#i.not_pr_ndx if piq_timing_max <
> 99 , family(nbinomial) link(log) vce(robust) nolog
    ──────────────────────────────────────────────────────────────────────
> ──────────────────────────────────────────────────────── begin glm.gl
> m_7 ────────────────────────────────────────────────────
    - version 7, missing
    - local oldIC oldic
    - if _caller() < 9 {
```

```
      local iteropt ITERate(integer 50)
      }
    - else local iteropt ITERate(integer `c(maxiter)')
    = else local iteropt ITERate(integer 300)
    - local dltol -1
    - syntax varlist(numeric fv ts) [fw aw pw iw] [if] [in] [, EForm FROM(stri
> ng) LEvel(cilevel) OFFset(varname numeric) LNOFFset(varname numeric) noCONst
> ant Robust CLuster(varname) Family(string) Link(string) ASIS SEARCH IRLS ML
> LTOLerance(real `dltol') SCore(string) NOLOg LOg noTABLE noDISPLAY FISHER(in
> teger -1) noDOTS `iteropt' TRAce SCAle(string) estscale MU(varname) INIt(var
> name) T(string) noHEADer DISP(real 1) VFactor(real 1) EXPosure(varname numer
> ic) moptobj(passthru) * ]
    = syntax varlist(numeric fv ts) [fw aw pw iw] [if] [in] [, EForm FROM(stri
> ng) LEvel(cilevel) OFFset(varname numeric) LNOFFset(varname numeric) noCONst
> ant Robust CLuster(varname) Family(string) Link(string) ASIS SEARCH IRLS ML
> LTOLerance(real -1) SCore(string) NOLOg LOg noTABLE noDISPLAY FISHER(integer
>  -1) noDOTS ITERate(integer 300) TRAce SCAle(string) estscale MU(varname) IN
> It(varname) T(string) noHEADer DISP(real 1) VFactor(real 1) EXPosure(varname
>  numeric) moptobj(passthru) * ]
    - local FROM_ORIG : copy local from
    - 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
    - local negh negh
    - }
    - else {
      local VV "version 8.1:"
      local MM d2
      }
    - GetVCE, `irls' cluster(`cluster') `robust' `options'
    = GetVCE,  cluster()  vce(robust)
      ──────────────────────────────────────────────────────────────────────
> ───────────────────────────────────────────────────────── begin glm.Get
> VCE ─────────────────────────────────────────────────────
    - version 9
    - syntax [fw aw iw pw] [, IRLS BSTRAP BREP(integer -1) JKNIFE JKNIFE1 NW
> EST(string) OIM OPG BHHH UNBiased VCE(string) VCE1(string) VCE2(string) CLus
> ter(varname) Robust * ]
    - if "`weight'" != "" {
    = if "" != "" {
      local wt [`weight'`exp']
      }
    - local len : length local vce
```

```
  − if "`vce'" == bsubstr("unbiased", 1, max(3,`len')) {
  = if "robust" == bsubstr("unbiased", 1, max(3,6)) {
    local vce : copy local vce1
    local vce1 : copy local vce2
    local vce2
    local unbiased "unbiased"
    }
  − local len : length local vce1
  − if "`vce1'" == bsubstr("unbiased", 1, max(3,`len')) {
  = if "" == bsubstr("unbiased", 1, max(3,0)) {
    local vce1 : copy local vce2
    local vce2
    local unbiased "unbiased"
    }
  − local len : length local vce2
  − if "`vce2'" == bsubstr("unbiased", 1, max(3,`len')) {
  = if "" == bsubstr("unbiased", 1, max(3,0)) {
    local vce2
    local unbiased "unbiased"
    }
  − if "`vce2'" != "" {
  = if "" != "" {
    di as err "too many vce() options specified"
    exit 198
    }
  − if ("`bhhh'" != "") local opg opg
  = if ("" != "") local opg opg
  − local oldvce `bstrap' `jknife' `jknife1' `opg' `unbiased'
  = local oldvce
  − if ("`nwest'" != "") local oldvce `"`oldvce' nwest(`newst')"'
  = if ("" != "") local oldvce `" nwest()"'
  − opts_exclusive "`oldvce'"
  = opts_exclusive ""
```

> ─── begin opts_exclus
> ive ───

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

```
                – if `n' < 2 {
                = if 0 < 2 {
                – exit
                ──────────────────────────────────────────────────
>  ──────────────────────────────────────────────────── end opts_exclus
>  ive ──────────────────────────────────────────────────
            – if "`irls'" == "" {
            = if "" == "" {
            – local allow eim
            – }
            – else {
              local allow eim oim
              }
            – local optlist EIM OIM OPG Robust jackknife1 jknife1 UNBiased NATIVE
            – local argoptlist CLuster HAC
            – _vce_parse, opt(`optlist') argopt(`argoptlist') pw(`allow') old : `wt'
>  , vce(`vce') cluster(`cluster') `robust'
            = _vce_parse, opt(EIM OIM OPG Robust jackknife1 jknife1 UNBiased NATIVE)
>   argopt(CLuster HAC) pw(eim) old : , vce(robust) cluster()
                ──────────────────────────────────────────────
>  ──────────────────────────────────────────────────── begin _vce_pa
>  rse ──────────────────────────────────────────────────
              – version 10
              – _on_colon_parse `0'
              = _on_colon_parse , opt(EIM OIM OPG Robust jackknife1 jknife1 UNBiased
>   NATIVE) argopt(CLuster HAC) pw(eim) old : , vce(robust) cluster()
                  ──────────────────────────────────────────
>  ──────────────────────────────────────────────────── begin _on_colon_pa
>  rse ──────────────────────────────────────────────────
                – 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 `", opt(EIM OIM OPG Robust jackknife1 jknife1 UNBiased NATIVE)
>  argopt(CLuster HAC) pw(eim) old "' == ":" {
                    sreturn local after `"`after'"'
                    exit
                    }
                – while `"`COLON'"' != ":" & `"`after'"' != "" {
                = while `""' != ":" & `": , vce(robust) cluster() "' != "" {
                – 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(robust) cluster() "' != "" {
          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 `", opt(EIM OIM OPG Robust jackknife1 jknife1
>  UNBiased NATIVE) argopt(CLuster HAC) pw(eim) old "'
        - sreturn local after `"`after'"'
        = sreturn local after `" , vce(robust) cluster() "'
          ─────────────────────────────────────────────────────────
>  ───────────────────────────────────────────────────── end _on_colon_pa
>  rse ─────────────────────────────────────────────────
        - local 0 `"`s(before)'"'
        = local 0 `", opt(EIM OIM OPG Robust jackknife1 jknife1 UNBiased NATIV
> E) argopt(CLuster HAC) pw(eim) old "'
        - local user `"`s(after)'"'
        = local user `" , vce(robust) cluster() "'
        - 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 EIM
                        ─────────────────────────────────────────
```

> ─── begin _optlist.add
> opt ───

```
        − version 9
        − syntax name(name=optspec) [, PASSthru]
        − local mname = lower("`optspec'")
        = local mname = lower("EIM")
        − if "`passthru'" != "" {
        = if "" != "" {
          local optspec `optspec'(passthru)
          }
        − .options.Arrpush "`optspec'"
        = .options.Arrpush "EIM"
        − .names.Arrpush "`mname'"
        = .names.Arrpush "eim"
                        ─────────────────────────────────────────
```

> ─── end _optlist.add
> opt ───

```
      − }
      − .`o'.addopt `name'
      = .__000001.addopt OIM
                        ─────────────────────────────────────────
```

> ─── begin _optlist.add
> opt ───

```
        − 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.add
> opt ─────────────────────────────────────────────────────────────────
          - }
          - .`o'.addopt `name'
          = .__000001.addopt OPG
          ─────────────────────────────────────────────────────────────

> ───────────────────────────────────────────────── begin _optlist.add
> opt ─────────────────────────────────────────────────────────────────
          - 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.add
> opt ─────────────────────────────────────────────────────────────────
          - }
          - .`o'.addopt `name'
          = .__000001.addopt Robust
          ─────────────────────────────────────────────────────────────

> ───────────────────────────────────────────────── begin _optlist.add
> opt ─────────────────────────────────────────────────────────────────
          - 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.add
> opt ─────────────────────────────────────────────────────────────────
```

```
        - }
        - .`o'.addopt `name'
        = .__000001.addopt jackknife1
```

> ———————————————————————————————————— begin _optlist.add
> opt ————————————————————————————————————

```
        - version 9
        - syntax name(name=optspec) [, PASSthru]
        - local mname = lower("`optspec'")
        = local mname = lower("jackknife1")
        - if "`passthru'" != "" {
        = if "" != "" {
          local optspec `optspec'(passthru)
          }
        - .options.Arrpush "`optspec'"
        = .options.Arrpush "jackknife1"
        - .names.Arrpush "`mname'"
        = .names.Arrpush "jackknife1"
```

> ———————————————————————————————————— end _optlist.add
> opt ————————————————————————————————————

```
        - }
        - .`o'.addopt `name'
        = .__000001.addopt jknife1
```

> ———————————————————————————————————— begin _optlist.add
> opt ————————————————————————————————————

```
        - version 9
        - syntax name(name=optspec) [, PASSthru]
        - local mname = lower("`optspec'")
        = local mname = lower("jknife1")
        - if "`passthru'" != "" {
        = if "" != "" {
          local optspec `optspec'(passthru)
          }
        - .options.Arrpush "`optspec'"
        = .options.Arrpush "jknife1"
        - .names.Arrpush "`mname'"
        = .names.Arrpush "jknife1"
```

> ———————————————————————————————————— end _optlist.add
> opt ————————————————————————————————————

```
        - }
        - .`o'.addopt `name'
        = .__000001.addopt UNBiased
```

```
> ──────────────────────────────────────────────────────── begin _optlist.add
> opt ──────────────────────────────────────────────────────────────────────
          − version 9
          − syntax name(name=optspec) [, PASSthru]
          − local mname = lower("`optspec'")
          = local mname = lower("UNBiased")
          − if "`passthru'" != "" {
          = if "" != "" {
            local optspec `optspec'(passthru)
            }
          − .options.Arrpush "`optspec'"
          = .options.Arrpush "UNBiased"
          − .names.Arrpush "`mname'"
          = .names.Arrpush "unbiased"
                                                                    ──────────
> ──────────────────────────────────────────────────────────── end _optlist.add
> opt ──────────────────────────────────────────────────────────────────────
        − }
        − .`o'.addopt `name'
        = .__000001.addopt NATIVE
                                                                    ──────────
> ──────────────────────────────────────────────────────── begin _optlist.add
> opt ──────────────────────────────────────────────────────────────────────
          − version 9
          − syntax name(name=optspec) [, PASSthru]
          − local mname = lower("`optspec'")
          = local mname = lower("NATIVE")
          − if "`passthru'" != "" {
          = if "" != "" {
            local optspec `optspec'(passthru)
            }
          − .options.Arrpush "`optspec'"
          = .options.Arrpush "NATIVE"
          − .names.Arrpush "`mname'"
          = .names.Arrpush "native"
                                                                    ──────────
> ──────────────────────────────────────────────────────────── end _optlist.add
> opt ──────────────────────────────────────────────────────────────────────
        − }
        − .`a' = ._optlist.new
        = .__000002 = ._optlist.new
        − local argoptlist : list uniq argoptlist
        − foreach name of local argoptlist {
        − .`a'.addopt `name'
        = .__000002.addopt CLuster
                                                                    ──────────
```

```
> ────────────────────────────────────────────────  begin _optlist.add
> opt ────────────────────────────────────────────────────────────────
          − 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.add
> opt ────────────────────────────────────────────────────────────────
        − }
        − .`a'.addopt `name'
        = .__000002.addopt HAC
          ────────────────────────────────────────────────────────────
> ────────────────────────────────────────────────  begin _optlist.add
> opt ────────────────────────────────────────────────────────────────
          − version 9
          − syntax name(name=optspec) [, PASSthru]
          − local mname = lower("`optspec'")
          = local mname = lower("HAC")
          − if "`passthru'" != "" {
          = if "" != "" {
            local optspec `optspec'(passthru)
            }
          − .options.Arrpush "`optspec'"
          = .options.Arrpush "HAC"
          − .names.Arrpush "`mname'"
          = .names.Arrpush "hac"
          ────────────────────────────────────────────────────────────
> ────────────────────────────────────────────────────  end _optlist.add
> opt ────────────────────────────────────────────────────────────────
        − }
        − local OPTNAMES `"`.`o'.dumpnames'"'
          ────────────────────────────────────────────────────────────
> ────────────────────────────────────────────────  begin _optlist.dumpna
> mes ────────────────────────────────────────────────────────────────
          − version 9
          − forval i = 1/`.names.arrnels' {
          = forval i = 1/8 {
```

```
          - local namelist `namelist' `.names[`i']'
          = local namelist  eim
          - }
          - local namelist `namelist' `.names[`i']'
          = local namelist eim oim
          - }
          - local namelist `namelist' `.names[`i']'
          = local namelist eim oim opg
          - }
          - local namelist `namelist' `.names[`i']'
          = local namelist eim oim opg robust
          - }
          - local namelist `namelist' `.names[`i']'
          = local namelist eim oim opg robust jackknife1
          - }
          - local namelist `namelist' `.names[`i']'
          = local namelist eim oim opg robust jackknife1 jknife1
          - }
          - local namelist `namelist' `.names[`i']'
          = local namelist eim oim opg robust jackknife1 jknife1 unbiased
          - }
          - local namelist `namelist' `.names[`i']'
          = local namelist eim oim opg robust jackknife1 jknife1 unbiased nati
> ve
          - }
          - local namelist : list uniq namelist
          - sreturn local namelist `"`namelist'"'
          = sreturn local namelist `"eim oim opg robust jackknife1 jknife1 unb
> iased native"'
          - class exit `"`namelist'"'
          = class exit `"eim oim opg robust jackknife1 jknife1 unbiased native
> "'
            ────────────────────────────────────────────────────────────
> ──────────────────────────────────────────────── end _optlist.dumpna
> mes ─────────────────────────────────────────────────────────────────
        = local OPTNAMES `"eim oim opg robust jackknife1 jknife1 unbiased nati
> ve"'
        - local ARGOPTNAMES `"'.`a'.dumpnames'"'
            ────────────────────────────────────────────────────────────
> ──────────────────────────────────────────────── begin _optlist.dumpna
> mes ─────────────────────────────────────────────────────────────────
          - version 9
          - forval i = 1/`.names.arrnels' {
          = forval i = 1/2 {
          - local namelist `namelist' `.names[`i']'
          = local namelist  cluster
```

```
- }
- local namelist `namelist' `.names[`i']'
= local namelist cluster hac
- }
- local namelist : list uniq namelist
- sreturn local namelist `"`namelist'"'
= sreturn local namelist `"cluster hac"'
- class exit `"`namelist'"'
= class exit `"cluster hac"'
```

```
= local ARGOPTNAMES `"cluster hac"'
- 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 lc = lower("eim")
- local pwlist `pwlist' `lc'
= local pwlist robust cluster eim
- }
- 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) cluster() "'
- syntax [fw aw pw iw] [, VCE(string asis) `robust' `cluster' ]
= syntax [fw aw pw iw] [, VCE(string asis) Robust CLuster(varname) ]
- if `"`vce'"' != "" {
= if `"robust"' != "" {
```

```
          - gettoken name args : vce, parse(" ,")
          - local args : list retok args
          - capture ParseVCE `o' `a' , `name'
          = capture ParseVCE __000001 __000002 , robust
          ─────────────────────────────────────────────────────────
> ─────────────────────────────────────────── begin _vce_parse.Parse
> VCE ─────────────────────────────────────────────────────────────
          - gettoken O 0 : 0, parse(" ,")
          - gettoken A 0 : 0, parse(" ,")
          - local OPTSPECS `"'`.`O'.dumpoptions' `.`A'.dumpoptions'"'
          ─────────────────────────────────────────────────────────
> ─────────────────────────────────────────── begin _optlist.dumpopti
> ons ─────────────────────────────────────────────────────────────
             - version 9
             - forval i = 1/`.options.arrnels' {
             = forval i = 1/8 {
             - local optlist `optlist' `.options[`i']'
             = local optlist  EIM
             - }
             - local optlist `optlist' `.options[`i']'
             = local optlist EIM OIM
             - }
             - local optlist `optlist' `.options[`i']'
             = local optlist EIM OIM OPG
             - }
             - local optlist `optlist' `.options[`i']'
             = local optlist EIM OIM OPG Robust
             - }
             - local optlist `optlist' `.options[`i']'
             = local optlist EIM OIM OPG Robust jackknife1
             - }
             - local optlist `optlist' `.options[`i']'
             = local optlist EIM OIM OPG Robust jackknife1 jknife1
             - }
             - local optlist `optlist' `.options[`i']'
             = local optlist EIM OIM OPG Robust jackknife1 jknife1 UNBiased
             - }
             - local optlist `optlist' `.options[`i']'
             = local optlist EIM OIM OPG Robust jackknife1 jknife1 UNBiased NAT
> IVE
             - }
             - local optlist : list uniq optlist
             - sreturn local optlist `"'`optlist'"'
             = sreturn local optlist `"EIM OIM OPG Robust jackknife1 jknife1 UN
> Biased NATIVE"'
             - class exit `"'`optlist'"'
```

```
              = class exit `"EIM OIM OPG Robust jackknife1 jknife1 UNBiased NATI
> VE"'
              ────────────────────────────────────────────────────────────────
> ───────────────────────────────────────────────────── end _optlist.dumpopti
> ons ───────────────────────────────────────────────────────────────────────
              ────────────────────────────────────────────────────────────────
> ───────────────────────────────────────────────────── begin _optlist.dumpopti
> ons ───────────────────────────────────────────────────────────────────────
              – version 9
              – forval i = 1/`.options.arrnels' {
              = forval i = 1/2 {
              – local optlist `optlist' `.options[`i']'
              = local optlist  CLuster
              – }
              – local optlist `optlist' `.options[`i']'
              = local optlist CLuster HAC
              – }
              – local optlist : list uniq optlist
              – sreturn local optlist `"`optlist'"'
              = sreturn local optlist `"CLuster HAC"'
              – class exit `"`optlist'"'
              = class exit `"CLuster HAC"'
              ────────────────────────────────────────────────────────────────
> ───────────────────────────────────────────────────── end _optlist.dumpopti
> ons ───────────────────────────────────────────────────────────────────────
          = local OPTSPECS `"EIM OIM OPG Robust jackknife1 jknife1 UNBiased NA
> TIVE CLuster HAC"'
              – local OPTNAMES `"`.`O'.dumpnames' `.`A'.dumpnames'"'
              ────────────────────────────────────────────────────────────────
> ───────────────────────────────────────────────────── begin _optlist.dumpna
> mes ───────────────────────────────────────────────────────────────────────
              – version 9
              – forval i = 1/`.names.arrnels' {
              = forval i = 1/8 {
              – local namelist `namelist' `.names[`i']'
              = local namelist  eim
              – }
              – local namelist `namelist' `.names[`i']'
              = local namelist eim oim
              – }
              – local namelist `namelist' `.names[`i']'
              = local namelist eim oim opg
              – }
              – local namelist `namelist' `.names[`i']'
              = local namelist eim oim opg robust
              – }
```

```
              – local namelist `namelist' `.names[`i']'
              = local namelist eim oim opg robust jackknife1
              – }
              – local namelist `namelist' `.names[`i']'
              = local namelist eim oim opg robust jackknife1 jknife1
              – }
              – local namelist `namelist' `.names[`i']'
              = local namelist eim oim opg robust jackknife1 jknife1 unbiased
              – }
              – local namelist `namelist' `.names[`i']'
              = local namelist eim oim opg robust jackknife1 jknife1 unbiased na
> tive
              – }
              – local namelist : list uniq namelist
              – sreturn local namelist `"`namelist'"'
              = sreturn local namelist `"eim oim opg robust jackknife1 jknife1 u
> nbiased native"'
              – class exit `"`namelist'"'
              = class exit `"eim oim opg robust jackknife1 jknife1 unbiased nati
> ve"'
              ─────────────────────────────────────────────────────────
> ───────────────────────────────────────────── end _optlist.dumpna
> mes ────────────────────────────────────────────────────────────
              ─────────────────────────────────────────────────────────
> ───────────────────────────────────────────── begin _optlist.dumpna
> mes ────────────────────────────────────────────────────────────
              – version 9
              – forval i = 1/`.names.arrnels' {
              = forval i = 1/2 {
              – local namelist `namelist' `.names[`i']'
              = local namelist  cluster
              – }
              – local namelist `namelist' `.names[`i']'
              = local namelist cluster hac
              – }
              – local namelist : list uniq namelist
              – sreturn local namelist `"`namelist'"'
              = sreturn local namelist `"cluster hac"'
              – class exit `"`namelist'"'
              = class exit `"cluster hac"'
              ─────────────────────────────────────────────────────────
> ───────────────────────────────────────────── end _optlist.dumpna
> mes ────────────────────────────────────────────────────────────
           = local OPTNAMES `"eim oim opg robust jackknife1 jknife1 unbiased na
> tive cluster hac"'
              – syntax [, `OPTSPECS']
```

```
                = syntax [, EIM OIM OPG Robust jackknife1 jknife1 UNBiased NATIVE CL
> uster HAC]
            − 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 `""' != "" {
              return local vce `OPT'
              continue, break
              }
            − }
            − if `"``OPT''"' != "" {
            = if `"robust"' != "" {
            − return local vce `OPT'
            = return local vce robust
            − continue, break
              }
              }
            ──────────────────────────────────────────────────────────
>  ──────────────────────────────────────────── end _vce_parse.Parse
> VCE ──────────────────────────────────────────────────
          − 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_pa
> rse ────────────────────────────────────────────────────────
   –  if "`r(vce)'" != "" {
   =  if "robust" != "" {
   –  if "`r(cluster)'" != "" {
   =  if "" != "" {
      local cluster `r(cluster)'
      local vce `r(vce)'
      }
   –  else local vce `r(vce)' `r(vceargs)'
   =  else local vce robust
   –  }
```

```
        – _vce_parse, opt(`optlist') argopt(`argoptlist') old :, vce(`vce1')
        = _vce_parse, opt(EIM OIM OPG Robust jackknife1 jknife1 UNBiased NATIVE)
>   argopt(CLuster HAC) old :, vce()
            ─────────────────────────────────────────────────────────
>   ──────────────────────────────────────────────────── begin _vce_pa
>   rse ─────────────────────────────────────────────────────
          – version 10
          – _on_colon_parse `0'
          = _on_colon_parse , opt(EIM OIM OPG Robust jackknife1 jknife1 UNBiased
>    NATIVE) argopt(CLuster HAC) old :, vce()
            ─────────────────────────────────────────────────────────
>   ──────────────────────────────────────────────────── begin _on_colon_pa
>   rse ─────────────────────────────────────────────────────
            – 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 `", opt(EIM OIM OPG Robust jackknife1 jknife1 UNBiased NATIVE)
>   argopt(CLuster HAC) old "' == ":" {
                sreturn local after `"`after'"'
                exit
                }
            – while `"`COLON'"' != ":" & `"`after'"' != "" {
            = while `""' != ":" & `":, vce()"' != "" {
            – 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()"' != "" {
              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 `", opt(EIM OIM OPG Robust jackknife1 jknife1
>  UNBiased NATIVE) argopt(CLuster HAC) old "'
        - sreturn local after `"'`after'"'
        = sreturn local after `", vce()"'
        ────────────────────────────────────────────────────────────────
>  ─────────────────────────────────────────────────────── end _on_colon_pa
>  rse ─────────────────────────────────────────────────────────────────────
        - local 0 `"'`s(before)'"'
        = local 0 `", opt(EIM OIM OPG Robust jackknife1 jknife1 UNBiased NATIV
>  E) argopt(CLuster HAC) old "'
        - local user `"'`s(after)'"'
        = local user `", vce()"'
        - 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 EIM
        ────────────────────────────────────────────────────────────────
>  ─────────────────────────────────────────────────────── begin _optlist.add
>  opt ─────────────────────────────────────────────────────────────────────
        - version 9
        - syntax name(name=optspec) [, PASSthru]
```

```
          – local mname = lower("`optspec'")
          = local mname = lower("EIM")
          – if "`passthru'" != "" {
          = if "" != "" {
            local optspec `optspec'(passthru)
            }
          – .options.Arrpush "`optspec'"
          = .options.Arrpush "EIM"
          – .names.Arrpush "`mname'"
          = .names.Arrpush "eim"
          ────────────────────────────────────────────────
  > ──────────────────────────────────────── end _optlist.add
  > opt ───────────────────────────────────────────────────
          – }
          – .`o'.addopt `name'
          = .__000001.addopt OIM
          ────────────────────────────────────────────────
  > ──────────────────────────────────────── begin _optlist.add
  > opt ───────────────────────────────────────────────────
          – 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.add
  > opt ───────────────────────────────────────────────────
          – }
          – .`o'.addopt `name'
          = .__000001.addopt OPG
          ────────────────────────────────────────────────
  > ──────────────────────────────────────── begin _optlist.add
  > opt ───────────────────────────────────────────────────
          – 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.add
> opt ─────────────────────────────────────────────────────────
       − }
       − .`o'.addopt `name'
       = .__000001.addopt Robust
              ────────────────────────────────────────
> ──────────────────────────────────────────────── begin _optlist.add
> opt ─────────────────────────────────────────────────────────
       − 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.add
> opt ─────────────────────────────────────────────────────────
       − }
       − .`o'.addopt `name'
       = .__000001.addopt jackknife1
              ────────────────────────────────────────
> ──────────────────────────────────────────────── begin _optlist.add
> opt ─────────────────────────────────────────────────────────
       − version 9
       − syntax name(name=optspec) [, PASSthru]
       − local mname = lower("`optspec'")
       = local mname = lower("jackknife1")
       − if "`passthru'" != "" {
       = if "" != "" {
                  local optspec `optspec'(passthru)
                  }
       − .options.Arrpush "`optspec'"
       = .options.Arrpush "jackknife1"
```

```
                    – .names.Arrpush "`mname'"
                    = .names.Arrpush "jackknife1"
```

```
> ──────────────────────────────────────────── end _optlist.add
> opt ─────────────────────────────────────────────────────────
          – }
          – .`o'.addopt `name'
          = .__000001.addopt jknife1
```

```
> ──────────────────────────────────────────── begin _optlist.add
> opt ─────────────────────────────────────────────────────────
          – version 9
          – syntax name(name=optspec) [, PASSthru]
          – local mname = lower("`optspec'")
          = local mname = lower("jknife1")
          – if "`passthru'" != "" {
          = if "" != "" {
            local optspec `optspec'(passthru)
            }
          – .options.Arrpush "`optspec'"
          = .options.Arrpush "jknife1"
          – .names.Arrpush "`mname'"
          = .names.Arrpush "jknife1"
```

```
> ──────────────────────────────────────────── end _optlist.add
> opt ─────────────────────────────────────────────────────────
          – }
          – .`o'.addopt `name'
          = .__000001.addopt UNBiased
```

```
> ──────────────────────────────────────────── begin _optlist.add
> opt ─────────────────────────────────────────────────────────
          – version 9
          – syntax name(name=optspec) [, PASSthru]
          – local mname = lower("`optspec'")
          = local mname = lower("UNBiased")
          – if "`passthru'" != "" {
          = if "" != "" {
            local optspec `optspec'(passthru)
            }
          – .options.Arrpush "`optspec'"
          = .options.Arrpush "UNBiased"
          – .names.Arrpush "`mname'"
          = .names.Arrpush "unbiased"
```

```
> ──────────────────────────────────────────── end _optlist.add
```

```
> opt ─────────────────────────────────────────────────────────
        – }
        – .`o'.addopt `name'
        = .__000001.addopt NATIVE
                    ─────────────────────────────────────────────

> ─────────────────────────────────────────────── begin _optlist.add
> opt ─────────────────────────────────────────────────────────
            – version 9
            – syntax name(name=optspec) [, PASSthru]
            – local mname = lower("`optspec'")
            = local mname = lower("NATIVE")
            – if "`passthru'" != "" {
            = if "" != "" {
              local optspec `optspec'(passthru)
              }
            – .options.Arrpush "`optspec'"
            = .options.Arrpush "NATIVE"
            – .names.Arrpush "`mname'"
            = .names.Arrpush "native"
                    ─────────────────────────────────────────────

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

> ─────────────────────────────────────────────── begin _optlist.add
> opt ─────────────────────────────────────────────────────────
            – 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.add
```

```
> opt ─────────────────────────────────────────────────────────
        − }
        − .`a'.addopt `name'
        = .__000002.addopt HAC
              ──────────────────────────────────────────────────

> ──────────────────────────────────────────── begin _optlist.add
> opt ─────────────────────────────────────────────────────────
          − version 9
          − syntax name(name=optspec) [, PASSthru]
          − local mname = lower("`optspec'")
          = local mname = lower("HAC")
          − if "`passthru'" != "" {
          = if "" != "" {
            local optspec `optspec'(passthru)
            }
          − .options.Arrpush "`optspec'"
          = .options.Arrpush "HAC"
          − .names.Arrpush "`mname'"
          = .names.Arrpush "hac"
              ──────────────────────────────────────────────────

> ──────────────────────────────────────────────── end _optlist.add
> opt ─────────────────────────────────────────────────────────
        − }
        − local OPTNAMES `"`.`o'.dumpnames'"'
              ──────────────────────────────────────────────────

> ──────────────────────────────────────────── begin _optlist.dumpna
> mes ─────────────────────────────────────────────────────────
          − version 9
          − forval i = 1/`.names.arrnels' {
          = forval i = 1/8 {
          − local namelist `namelist' `.names[`i']'
          = local namelist  eim
          − }
          − local namelist `namelist' `.names[`i']'
          = local namelist eim oim
          − }
          − local namelist `namelist' `.names[`i']'
          = local namelist eim oim opg
          − }
          − local namelist `namelist' `.names[`i']'
          = local namelist eim oim opg robust
          − }
          − local namelist `namelist' `.names[`i']'
          = local namelist eim oim opg robust jackknife1
          − }
          − local namelist `namelist' `.names[`i']'
```

```
          = local namelist eim oim opg robust jackknife1 jknife1
          – }
          – local namelist `namelist' `.names[`i']'
          = local namelist eim oim opg robust jackknife1 jknife1 unbiased
          – }
          – local namelist `namelist' `.names[`i']'
          = local namelist eim oim opg robust jackknife1 jknife1 unbiased nati
> ve
          – }
          – local namelist : list uniq namelist
          – sreturn local namelist `"`namelist'"'
          = sreturn local namelist `"eim oim opg robust jackknife1 jknife1 unb
> iased native"'
          – class exit `"`namelist'"'
          = class exit `"eim oim opg robust jackknife1 jknife1 unbiased native
> "'
                ─────────────────────────────────────────────────────
> ──────────────────────────────────────────────────── end _optlist.dumpna
> mes ───────────────────────────────────────────────
        = local OPTNAMES `"eim oim opg robust jackknife1 jknife1 unbiased nati
> ve"'
        – local ARGOPTNAMES `"`.`a'.dumpnames'"'
                ─────────────────────────────────────────────────────
> ──────────────────────────────────────────────────── begin _optlist.dumpna
> mes ───────────────────────────────────────────────
          – version 9
          – forval i = 1/`.names.arrnels' {
          = forval i = 1/2 {
          – local namelist `namelist' `.names[`i']'
          = local namelist  cluster
          – }
          – local namelist `namelist' `.names[`i']'
          = local namelist cluster hac
          – }
          – local namelist : list uniq namelist
          – sreturn local namelist `"`namelist'"'
          = sreturn local namelist `"cluster hac"'
          – class exit `"`namelist'"'
          = class exit `"cluster hac"'
                ─────────────────────────────────────────────────────
> ──────────────────────────────────────────────────── end _optlist.dumpna
> mes ───────────────────────────────────────────────
        = local ARGOPTNAMES `"cluster hac"'
        – 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()"'
    - syntax [fw aw pw iw] [, VCE(string asis) `robust' `cluster' ]
    = syntax [fw aw pw iw] [, VCE(string asis) Robust CLuster(varname) ]
    - 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","cl
> uster") {
      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" | "" != "" {
```
  local vce robust
  }
```
- if "`cluster'" != "" {
= if "" != "" {
```
  local vce cluster
  local args `cluster'
  local markout `cluster'
```

```
                  }
                - return local vce `"'`vce'"'
                = return local vce `""'
                - return local vceargs `"'`args'"'
                = return local vceargs `""'
                - }
                - if "`return(vce)'" != "" {
                = if "" != "" {
                  if `"`return(vceargs)'"' != "" {
                  local ss " "
                  }
                  return local vceopt `"vce(`return(vce)'`ss'`return(vceargs)')"'
                  }
                - if "`return(vce)'" == "cluster" {
                = if "" == "cluster" {
                  return local cluster `return(vceargs)'
                  }
                - if inlist("`return(vce)'", "robust", "cluster") {
                = if inlist("", "robust", "cluster") {
                  return local robust robust
                  }
                - if "`touse'" != "" {
                = if "" != "" {
                  if "`markout'" != "" {
                  markout `touse' `markout', strok
                  }
                  }
               ─────────────────────────────────────────────────────────
> ───────────────────────────────────────────────────── end _vce_pa
> rse ──────────────────────────────────────────────────────────────
            - if "`r(vce)'" != "" {
            = if "" != "" {
              local vce1 `r(vce)' `r(vceargs)'
              }
            - if `"`vce'`vce1'"' != "" {
            = if `"robust"' != "" {
            - if `"`vce1'"' != "" {
            = if `""' != "" {
              if !inlist("oim",`"`vce'"',`"`vce1'"') & !inlist("eim",`"`vce'"',`"`vc
> e1'"') {
              opts_exclusive "vce(`vce') vce(`vce1')"
              }
              else if !inlist("oim",`"`vce'"',`"`vce1'"') {
              local eim eim
              }
              else if !inlist("eim",`"`vce'"',`"`vce1'"') {
```

```
         local oim oim
         }
         else {
         opts_exclusive "vce(`vce') vce(`vce1')"
         }
         local vce `vce' `vce1'
         local vce : list vce - oim
         local vce : list vce - eim
         local vce1
         }
      - if `"`vce'"' == "oim" {
      = if `"robust"' == "oim" {
         local oim oim
         }
      - if `"`vce'"' == "eim" {
      = if `"robust"' == "eim" {
         local eim eim
         }
      - if !("`vce'"=="robust" & "`oldvce'"=="unbiased") & !("`vce'"=="cluster
> " & "`oldvce'"=="unbiased") & !inlist("`oldvce'", "", "`vce'") & !inlist("`v
> ce'", "", "oim", "eim") {
      = if !("robust"=="robust" & ""=="unbiased") & !("robust"=="cluster" & ""
> =="unbiased") & !inlist("", "", "robust") & !inlist("robust", "", "oim", "ei
> m") {
         opts_exclusive `"vce(`vce') `oldvce'"'
         }
      - if !inlist("`vce'", "", "cluster") {
      = if !inlist("robust", "", "cluster") {
      - MapVCE "`irls'" `vce'
      = MapVCE "" robust
         ────────────────────────────────────────────────────────────────
> ───────────────────────────────────────────────────────── begin glm.Map
> VCE ─────────────────────────────────────────────────────────────────
         - gettoken irls 0 : 0
         - local 0 : list retok 0
         - gettoken vce vcerest: 0, parse(", ")
         - local vcerest : list retok vcerest
         - local len : length local vce
         - if inlist(`"`vce'"', "jknife1", "jackknife1") {
         = if inlist(`"robust"', "jknife1", "jackknife1") {
           local norest norest
           local vce jknife1
           local vcespec jknife1
           }
         - else if `"`vce'"' == "hac" {
         = else if `"robust"' == "hac" {
```

```
    if `"`vcerest'"' == "" {
    di as err "option vce(hac) misspecified"
    exit 198
    }
    local vcespec `"`vcerest'"'
    local vcerest
    }
-   else if `"`vce'"' == bsubstr("robust",1,max(1,`len')) {
=   else if `"robust"' == bsubstr("robust",1,max(1,6)) {
-   local norest norest
-   local vce robust
-   local vcespec robust
-   }
-   else if `"`vce'"' == bsubstr("unbiased",1,max(3,`len')) {
=   else if `"robust"' == bsubstr("unbiased",1,max(3,6)) {
    local norest norest
    local vce unbiased
    local vcespec unbiased
    }
-   else if `"`vce'"' == "eim" {
=   else if `"robust"' == "eim" {
    local norest norest
    local vce eim
    local vcespec eim
    }
-   else {
    if `"`vce'"' == "oim" {
    local norest norest
    local vcespec oim
    }
    else if `"`vce'"' == "opg" {
    local norest norest
    local vcespec opg
    }
    else if `"`0'"' != "" {
    if "`irls'" != "" {
    di as err "option vce(`0') is not allowed with irls"
    exit 198
    }
    else {
    local vceopt `"vce(`0')"'
    }
    }
    }
-   if "`norest'" != "" & `"`vcerest'"' != "" {
=   if "norest" != "" & `""'' != "" {
```

```
            di as err "option vce(`0') invalid"
            exit 198
            }
  - sreturn local vce `"`vce'"'
  = sreturn local vce `"robust"'
  - sreturn local vcespec `"`vcespec'"'
  = sreturn local vcespec `"robust"'
  - sreturn local vceopt `"`vceopt'"'
  = sreturn local vceopt `""'
```
──

> ── end glm.Map
> VCE ──
```
    - if `"`s(vce)'"' != "" {
    = if `"robust"' != "" {
    - local vce `s(vce)'
    = local vce robust
    - local `vce' `s(vcespec)'
    = local robust robust
    - }
    - if `"`s(vceopt)'"' != "" {
    = if `""' != "" {
      local options `"`options' `s(vceopt)'"'
      }
    - }
    - }
    - else {
      if "`nwest'" != "" {
      local hac `"`nwest'"'
      }
      }
    - c_local bstrap `"`bstrap'"'
    = c_local bstrap `""'
    - c_local brep `"`brep'"'
    = c_local brep `"-1"'
    - c_local jknife `"`jknife'"'
    = c_local jknife `""'
    - c_local jknife1 `"`jknife1'"'
    = c_local jknife1 `""'
    - c_local hac `"`hac'"'
    = c_local hac `""'
    - c_local oim `"`oim'"'
    = c_local oim `""'
    - c_local opg `"`opg'"'
    = c_local opg `""'
    - c_local unbiased `"`unbiased'"'
    = c_local unbiased `""'
```

```
        - if "`robust'" != "" {
        = if "robust" != "" {
        - c_local robust `"`robust'"'
        = c_local robust `"robust"'
        - }
        - c_local vce `"`vce'"'
        = c_local vce `"robust"'
        - c_local cluster `"`cluster'"'
        = c_local cluster `""'
        - c_local options `"`options'"'
        = c_local options `""'
                                                                              ─────────
>  ──────────────────────────────────────────────────────────────── end glm.Get
> VCE ───────────────────────────────────────────────────────────────────────
        - if "`family'"!= "" {
        = if "nbinomial"!= "" {
        - local argfam `"family(`family')"'
        = local argfam `"family(nbinomial)"'
        - }
        - if "`link'" != "" {
        = if "log" != "" {
        - local arglink `"link(`link')"'
        = local arglink `"link(log)"'
        - }
        - if "`init'" != "" & "`mu'" != "" & "`init'" != "`mu'" {
        = if "" != "" & "" != "" & "" != "" {
          noi di as err "mu() and init() should use the same varname"
          exit 198
          }
        - if "`init'" != "" {
        = if "" != "" {
          local init "`init'"
          }
        - else local init "`mu'"
        = else local init ""
        - if "`dots'" == "nodots" {
        = if "" == "nodots" {
          local dots ""
          }
        - else local dots "dots"
        - if "`unbiased'" != "" {
        = if "" != "" {
          local robust "robust"
          }
        - if `vfactor' <= 0.0 {
        = if 1 <= 0.0 {
```

```
              di as err "vfactor() must be positive"
              exit 198
              }
        − if `iterate' < 0 {
        = if 300 < 0 {
              di as err "iterate() must be positive"
              exit 198
              }
        − _get_diopts diopts options, `options'
        = _get_diopts diopts options,
              ─────────────────────────────────────────────────────────────
  > ──────────────────────────────────────────────────── begin _get_dio
  > pts ───────────────────────────────────────────────────────────────
        − version 11
        − syntax namelist(max=2) [, *]
        − gettoken name1 namelist : namelist
        − gettoken name2 namelist : namelist
        − GetDiopts diopts options, `options'
        = GetDiopts diopts options,
              ─────────────────────────────────────────────────────────────
  > ──────────────────────────────────────────── begin _get_diopts.GetDio
  > pts ───────────────────────────────────────────────────────────────
          − local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLBASElevels NO
  > BASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMPTYcells NOOM
  > ITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(string) sforma
  > t(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru) FVWRAPON(st
  > ring) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru) NOABBREV AB
  > BREV
          − syntax namelist(max=2) [, `DIOPTS' *]
          = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBASElevels ALL
  > BASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EM
  > PTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(s
  > tring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru
  > ) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru
  > ) NOABBREV ABBREV *]
          − opts_exclusive "`allbaselevels' `noallbaselevels'"
          = opts_exclusive " "
              ─────────────────────────────────────────────────────────────
  > ──────────────────────────────────────────────────── begin opts_exclus
  > ive ───────────────────────────────────────────────────────────────
            − version 8.2
            − args opts optname errcode optslab
            − local opts `opts'
            = local opts
            − local n 0
            − while `"`opts'"' != "" {
```

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

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

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

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

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

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

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

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

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

> ── end opts_exclus
> ive ──

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

> ── begin opts_exclus
> ive ──

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

> ── end opts_exclus
> ive ──

```
            – opts_exclusive "`versus' `compare'"
            = opts_exclusive " "
```

> ── begin opts_exclus
> ive ──

```
            – version 8.2
            – args opts optname errcode optslab
            – local opts `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
          _____
```

```
          - 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.Wra
>  pon ────────────────────────────────────────────────────────
      - 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_exclus
>  ive ────────────────────────────────────────────────────────
      - version 8.2
      - args opts optname errcode optslab
      - local opts `opts'
      = local opts
      - local n 0
      - while `"'`opts'"'' != "" {
      = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
```

```
                    }
                  – if `n' < 2 {
                  = if 0 < 2 {
                  – exit
                  ─────────────────────────────────────────
  > ────────────────────────────────────────── end opts_exclus
  > ive ──────────────────────────────────────
                  – local fvwrapon `word' `width'
                  = local fvwrapon
                  – if `:length local fvwrapon' {
                  = if 0 {
                    c_local fvwrapon fvwrapon(`fvwrapon')
                    }
                  ─────────────────────────────────────────
  > ────────────────────────────────────────── end _get_diopts.Wra
  > pon ──────────────────────────────────────
                – 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' `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.GetDio
  > pts ──────────────────────────────────────
              – 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_vcespec = s(vcespec)
          - }
          - local S_`sname' = s(`sname')
          = local S_vce = s(vce)
          - }
          - local S_`sname' = s(`sname')
          = local S_namelist = s(namelist)
          - }
          - 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_optlist = s(optlist)
          - }
          - local S_`sname' = s(`sname')
          = local S_fvops = s(fvops)
          - }
          - sreturn clear
          - GetDiopts DEFAULT
               ─────────────────────────────────────────────────
> ──────────────────────────────────────────────── begin _get_diopts.GetDio
> pts ─────────────────────────────────────────────────────────
          - local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLBASElevels NO
> BASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMPTYcells NOOM
> ITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(string) sforma
> t(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru) FVWRAPON(st
> ring) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru) NOABBREV AB
> BREV
          - syntax namelist(max=2) [, `DIOPTS' *]
          = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBASElevels ALL
> BASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EM
> PTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(s
> tring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru
> ) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru
> ) NOABBREV ABBREV *]
          - opts_exclusive "`allbaselevels' `noallbaselevels'"
          = opts_exclusive " "
               ─────────────────────────────────────────────────
> ──────────────────────────────────────────────────── begin opts_exclus
> ive ─────────────────────────────────────────────────────────
```

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

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

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

> ——— end opts_exclus
> ive ———

```
        — opts_exclusive "`omitted' `noomitted'"
        = opts_exclusive " "
```

> ——— begin opts_exclus
> ive ———

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

> ——— end opts_exclus
> ive ———

```
        — opts_exclusive "`lstretch' `nolstretch'"
        = opts_exclusive " "
```

> ——— begin opts_exclus
> ive ———

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

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

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

> ── begin opts_exclus
> ive ───

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

> ── end opts_exclus
> ive ───

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

> ── begin opts_exclus
> ive ───

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

> ── end opts_exclus
> ive ───

```
            – opts_exclusive "`versus' `compare'"
            = opts_exclusive " "
```

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

```
        – 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_exclus
> ive ──

```
        – version 8.2
        – args opts optname errcode optslab
        – local opts `opts'
```

```
          = local opts
          – local n 0
          – while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          – if `n' < 2 {
          = if 0 < 2 {
          – exit
          ─────────────────────────────────────────────────────
```
> ─── end opts_exclus
> ive ───
```
          – local fvwrapon `word' `width'
          = local fvwrapon
          – if `:length local fvwrapon' {
          = if 0 {
            c_local fvwrapon fvwrapon(`fvwrapon')
            }
          ─────────────────────────────────────────────────────
```
> ─── end _get_diopts.Wra
> pon ───
```
        – 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' `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.GetDio
> pts ───

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

>   ─────────────────────────────────────────────── begin _get_diopts.GetDio
>   pts ───────────────────────────────────────────────────────────────
        – local DIOPTS Level(cilevel) vsquish NOALLBASElevels ALLBASElevels NO
>   BASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EMPTYcells NOOM
>   ITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(string) sforma
>   t(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru) FVWRAPON(st
>   ring) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru) NOABBREV AB
>   BREV
        – syntax namelist(max=2) [, `DIOPTS' *]
        = syntax namelist(max=2) [, Level(cilevel) vsquish NOALLBASElevels ALL
>   BASElevels NOBASElevels BASElevels noCNSReport FULLCNSReport NOEMPTYcells EM
>   PTYcells NOOMITted OMITted NOLSTRETCH LSTRETCH COEFLegend SELEGEND cformat(s
>   tring) sformat(string) pformat(string) CODING VERSUS COMPARE FVWRAP(passthru
>   ) FVWRAPON(string) NOFVLABel FVLABel NOCI NOPValues MARKDOWN CITYPE(passthru
>   ) NOABBREV ABBREV *]
        – opts_exclusive "`allbaselevels' `noallbaselevels'"
        = opts_exclusive " "
          ─────────────────────────────────────────────────────────

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

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

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

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

> ── end opts_exclus
> ive ───

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

> ── begin opts_exclus
> ive ───

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

> ── end opts_exclus
> ive ───

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

> ── begin opts_exclus
> ive ───

```
      − version 8.2
      − args opts optname errcode optslab
      − local opts `opts'
      = local opts
      − local n 0
```

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

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

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

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

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

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

> ──────────────────────────────────────────────────────────── end opts_exclus
> ive ───────────────────────────────────────────────────────────────────────
        – 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.Wra
> pon ───

```
      - 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_exclus
> ive ───

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

> ─── end opts_exclus
> ive ───

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

```
              }
          ─────────────────────────────────────────────────────────────
>  ──────────────────────────────────────────────────── end _get_diopts.Wra
>  pon ─────────────────────────────────────────────────────────────────
          ─ 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' `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.GetDio
>  pts ─────────────────────────────────────────────────────────────────
        ─ 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 vcespec = `"robust"'
      - }
      - sreturn local `sname' = `"`S_`sname''"'
      = sreturn local vce = `"robust"'
      - }
      - sreturn local `sname' = `"`S_`sname''"'
      = sreturn local namelist = `"cluster hac"'
      - }
      - sreturn local `sname' = `"`S_`sname''"'
      = sreturn local after = `", vce()"'
      - }
      - sreturn local `sname' = `"`S_`sname''"'
      = sreturn local before = `", opt(EIM OIM OPG Robust jackknife1 jknife1 U
> NBiased NATIVE) argopt(CLuster HAC) old "'
      - }
      - sreturn local `sname' = `"`S_`sname''"'
      = sreturn local optlist = `"CLuster HAC"'
      - }
      - sreturn local `sname' = `"`S_`sname''"'
      = sreturn local fvops = `"true"'
      - }
      ────────────────────────────────────────────────────────────────
> ─────────────────────────────────────────────────────────── end _get_dio
> pts ──────────────────────────────────────────────────────────────────
     - mlopts mlopts, `options'
     = mlopts mlopts,
      ────────────────────────────────────────────────────────────────
> ─────────────────────────────────────────────────────────── begin mlo
> pts ──────────────────────────────────────────────────────────────────
      - version 8.0
      - local maxoptlist MLOPTs(string) TRace TRACEDIffs GRADient HESSian SHOW
> STEP ITERate(int -1) TOLerance(real -1) LTOLerance(real -1) GTOLerance(real
> -1) NONRTOLerance SHOWNRtolerance SHOWTOLerance NRTOLerance(real -1) QTOLera
> nce(real -1) DIFficult HALFSTEPonly CONSTraints(string) noCNSNOTEs COLlinear
>  TECHnique(passthru) VCE(passthru) DOTS depsilon(passthru) SHOWH NOTCONCAVE(
> 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) LTOL
> erance(real -1) GTOLerance(real -1) NONRTOLerance SHOWNRtolerance SHOWTOLera
> nce NRTOLerance(real -1) QTOLerance(real -1) DIFficult HALFSTEPonly CONSTrai
> nts(string) noCNSNOTEs COLlinear TECHnique(passthru) VCE(passthru) DOTS deps
> ilon(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 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 ]
    - }
    - local mlopts `mlopts' `trace' `tracediffs' `gradient' `hessian' `shows
> tep' `difficult' `halfsteponly' `nonrtolerance' `shownrtolerance' `showtoler
> ance' `dots' `depsilon' `showh' `notconcave' `useviews' `log' `nolog' `nrder
> iv'
    = 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' `cn
> snotes' `collinear' `technique' `vce' `qtol'
    = c_local mlopts
    – if "`rest'" != "" {
    = if "" != "" {
        c_local `rest' `"`options'"'
        }
        ─────────────────────────────────────────────────────────────────
```

```
> pts ──────────────────────────────────────────────────────
    – local cns `s(constraints)'
    = local cns
    – local coll `s(collinear)'
    = local coll
    – if `"`coll'"' != "" & "`irls'" != "" {
    = if `""' != "" & "" != "" {
        version 8: di as err "option {bf:collinear} not allowed"
        exit 198
        }
    – if `ltolerance' == –1 {
    = if –1 == –1 {
    – local ltol 1e–6
    – }
    – else {
        local ltol `ltolerance'
```

```
          if "`irls'" == "" {
          local mlopts `"`mlopts' ltol(`ltol')"'
          }
          }
    -  if `ltol'>=1 | `ltol'<0 {
    =  if 1e-6>=1 | 1e-6<0 {
          di as err "ltolerance() must be in [0,1)"
          exit 198
          }
    -  if "`ml'"!="" & "`irls'"!="" {
    =  if ""!="" & ""!="" {
          di as err "ml and irls options may not be combined"
          exit 198
          }
    -  if "`irls'" != "" {
    =  if "" != "" {
          if `"`from'"' != "" {
          di as err "option {bf:from()} not allowed " "in combination with option
> {bf:irls}"
          exit 198
          }
          if "`search'" != "" {
          di as err "option {bf:search} not allowed " "in combination with option
> {bf:irls}"
          exit 198
          }
          }
    -  if `"`score'"'!="" {
    =  if `""'!="" {
          if "`irls'" != "" {
          di as err "deviance scores are calculated " "postestimation via predict,
>  score"
          exit 198
          }
          confirm new variable `score'
          local nword : word count `score'
          if `nword' > 1 {
          di as err "score() must contain the name of only " "one new variable"
          exit 198
          }
          tempvar scvar
          local scopt score(`scvar')
          }
    -  if `"`cluster'"'!="" {
    =  if `""'!="" {
          if "`jknife'`bstrap'" == "" {
```

```
        local robust "robust"
        }
        local clopt cluster(`cluster')
        }
    - if "`bstrap'" == "" {
    = if "" == "" {
    - if !inlist("`brep'","","-1") {
    = if !inlist("-1","","-1") {
        di as err "brep() only valid with bstrap"
        exit 198
        }
    - else local brep -1
    - }
    - if "`bstrap'" != "" {
    = if "" != "" {
        if `brep' == -1 {
        local brep = 199
        }
        if `brep' <= 40 {
        di as err "bootstrap replications must be > 40"
        exit 198
        }
        }
    - local tsops = index("`varlist'", ".")
    = local tsops = index("piq_timing_max rule_g rule_itr estimated i.stky_wg#
> i.pr_ndx i.stky_wg#i.not_pr_ndx", ".")
        - if `tsops' {
        = if 43 {
        - local PROB `bstrap' `jknife' `jknife1'
        = local PROB
        - if `:length local PROB' {
        = if 0 {
            gettoken PROB : PROB
            if `"`PROB'"' == "jknife1" {
            local PROB "vce(jackknife1)"
            }
            di as error "{p}"
            di as error "cannot use factor variables or "
            di as error "time-series operators with option `PROB'"
            di as error "{p_end}"
            exit 101
            }
        - }
        - if `fisher' != -1 {
        = if -1 != -1 {
            if "`irls'" != "" {
```

```
   di as err "fisher() only valid with Newton-Raphson optimization"
   exit 198
   }
   if `fisher' <= 0 {
   di as err "fisher() must be positive"
   exit 198
   }
   }
-  if `disp' < 0 {
=  if 1 < 0 {
   di as err "disp() must be positive"
   exit 198
   }
-  if `"`scale'"'!="" {
=  if `""'!="" {
   if "`robust'`opg'`hac'`jknife1'`jknife'`bstrap'" != "" {
   di as err "cannot use scale() with alternate variances"
   exit 198
   }
   if `"`scale'"'=="x2" {
   local scale 0
   }
   else if `"`scale'"'=="dev" {
   local scale -1
   }
   else {
   capture confirm number `scale'
   if _rc {
   di as err "invalid scale()"
   exit 198
   }
   if `scale' <= 0 {
   di as err "scale(#) must be positive"
   exit 198
   }
   }
   }
-  if "`scale'" == "-1" & "`irls'" == "" {
=  if "" == "-1" & "" == "" {
   di as err "option {bf:scale(dev)} allowed only with option {bf:irls}"
   exit 198
   }
-  if `disp' != 1 & "`irls'" == "" {
=  if 1 != 1 & "" == "" {
   di as err "disp() allowed only with irls option"
   exit 198
```

```
      }
    - MapFL `"`family'"' `"`link'"'
    = MapFL `"nbinomial"' `"log"'
      ────────────────────────────────────────────────────────
> ──────────────────────────────────────────────────── begin glm.Ma
> pFL ─────────────────────────────────────────────────
    - args f ulink
    - MapFam `f'
    = MapFam nbinomial
      ────────────────────────────────────────────────────────
> ──────────────────────────────────────────────────── begin glm.Map
> Fam ─────────────────────────────────────────────────
      - args f
      - local s1
      - local f = lower(trim(`"`f'"'))
      = local f = lower(trim(`"nbinomial"'))
      - local l = length(`"`f'"')
      = local l = length(`"nbinomial"')
      - if `"`f'"'=="" { local s1 "1" }
      = if `"nbinomial"'=="" { local s1 "1" }
      - else if `"`f'"'==bsubstr("gaussian",1,max(`l',3)) { local s1 "1" }
      = else if `"nbinomial"'==bsubstr("gaussian",1,max(9,3)) { local s1 "1"
>  }
      - else if `"`f'"'==bsubstr("normal",1,`l') { local s1 "1" }
      = else if `"nbinomial"'==bsubstr("normal",1,9) { local s1 "1" }
      - else if `"`f'"'==bsubstr("binomial",1,`l') { local s1 "2" }
      = else if `"nbinomial"'==bsubstr("binomial",1,9) { local s1 "2" }
      - else if `"`f'"'==bsubstr("bernoulli",1,`l') { local s1 "2" }
      = else if `"nbinomial"'==bsubstr("bernoulli",1,9) { local s1 "2" }
      - else if `"`f'"'==bsubstr("poisson",1,`l') { local s1 "3" }
      = else if `"nbinomial"'==bsubstr("poisson",1,9) { local s1 "3" }
      - else if `"`f'"'==bsubstr("gamma",1,max(`l',3)) { local s1 "4" }
      = else if `"nbinomial"'==bsubstr("gamma",1,max(9,3)) { local s1 "4" }
      - else if `"`f'"'==bsubstr("igaussian",1,max(`l',2)) { local s1 "5" }
      = else if `"nbinomial"'==bsubstr("igaussian",1,max(9,2)) { local s1 "5
> " }
      - else if `"`f'"'==bsubstr("inormal",1,max(`l',2)) { local s1 "5" }
      = else if `"nbinomial"'==bsubstr("inormal",1,max(9,2)) { local s1 "5"
> }
      - else if `"`f'"'=="ivg" { local s1 "5" }
      = else if `"nbinomial"'=="ivg" { local s1 "5" }
      - else if `"`f'"'==bsubstr("nbinomial",1,max(2,`l')) { local s1 "6" }
      = else if `"nbinomial"'==bsubstr("nbinomial",1,max(2,9)) { local s1 "6
> " }
      - if "`s1'" != "" {
      = if "6" != "" {
```

```
                  - local s1 "glim_v`s1'"
                  = local s1 "glim_v6"
                  - }
                  - else {
                    local s1 "`f'"
                    }
                  - ret local famcode `s1'
                  = ret local famcode glim_v6
```

> Fam ──

```
          - local fam `"`r(famcode)'"'
          = local fam `"glim_v6"'
          - local mfixed 1
          - local m 1
          - local k 1
          - if `"`fam'"'=="glim_v2" {
          = if `"glim_v6"'=="glim_v2" {
            tokenize `"`f'"'
            if `"`2'"'!="" {
            capture confirm number `2'
            if _rc {
            unabbrev `2'
            local m `"`s(varlist)'"'
            local mfixed 0
            }
            else {
            if `2'>=. | `2'<1 {
            di as err `"`2' in family(binomial `2') invalid"'
            exit 198
            }
            local m `2'
            }
            }
            if `"`3'"'!="" {
            di as err "family(`f') invalid"
            exit 198
            }
            }
          - if `"`fam'"'=="glim_v6" {
          = if `"glim_v6"'=="glim_v6" {
          - tokenize `"`f'"'
          = tokenize `"nbinomial"'
          - if `"`2'"' != "" {
          = if `""' != "" {
            if `"`2'"' != "ml" {
```

```
      confirm number `2'
      if `2'<=0 {
      di as err `"`2' in family(nbinomial `2') invalid"'
      exit 198
      }
      }
      local k `2'
      }
  - if `"`3'"'!="" {
  = if `""'!="" {
      di as err "family(`f') invalid"
      exit 198
      }
  - }
  - if `"`fam'"'~="glim_v1" & `"`fam'"'~="glim_v2" & `"`fam'"'~="glim_v3"
> & `"`fam'"'~="glim_v4" & `"`fam'"'~="glim_v5" & `"`fam'"'~="glim_v6" {
  = if `"glim_v6"'~="glim_v1" & `"glim_v6"'~="glim_v2" & `"glim_v6"'~="gli
> m_v3" & `"glim_v6"'~="glim_v4" & `"glim_v6"'~="glim_v5" & `"glim_v6"'~="glim
> _v6" {
      tokenize `"`f'"'
      if `"`2'"' != "" {
      global SGLM_fa `2'
      }
      if `"`3'"'!="" {
      di as err "family(`f') invalid"
      exit 198
      }
      }
  - MapLink `ulink'
  = MapLink log
      ────────────────────────────────────────────────────
> ─────────────────────────────────────────────── begin glm.MapL
> ink ──────────────────────────────────────────────────
      - args ulink upow rest
      - if `"`rest'"'!="" {
      = if `""'!="" {
        di as err "link(`ulink' `upow' `rest') invalid"
        exit 198
        }
      - local ulink = lower(`"`ulink'"')
      = local ulink = lower(`"log"')
      - local l = length(`"`ulink'"')
      = local l = length(`"log"')
      - local s1 "11"
      - local s2 .
      - if `"`ulink'"'=="" { local s1 "" }
```

```
=   if `"log"'=="" { local s1 "" }
–   else if `"`ulink'"'==bsubstr("identity",1,`l') { local s1 "01"
=   else if `"log"'==bsubstr("identity",1,3) { local s1 "01"
    local s2 1 }
–   else if `"`ulink'"'==bsubstr("reciprocal",1,`l') { local s1 "09"
=   else if `"log"'==bsubstr("reciprocal",1,3) { local s1 "09"
    local s2 –1 }
–   else if `"`ulink'"'=="log" { local s1 "03"
=   else if `"log"'=="log" { local s1 "03"
–   local s2 0 }
–   else if `"`ulink'"'==bsubstr("power",1,max(`l',3)) {
=   else if `"log"'==bsubstr("power",1,max(3,3)) {
    capture confirm number `upow'
    if _rc {
    di as err "invalid # in link(power #)"
    exit 198
    }
    if `upow' == 0 {
    local s1 "03"
    }
    if `upow' == –1 {
    local s1 "09"
    }
    else if `upow' == –2 {
    local s1 "10"
    }
    local s2 `upow'
    local upow
    }
–   else if `"`ulink'"'==bsubstr("opower",1,max(`l',3)) {
=   else if `"log"'==bsubstr("opower",1,max(3,3)) {
    capture confirm number `upow'
    if _rc {
    di as err "invalid # in link(opower #)"
    exit 198
    }
    if `upow'==0 {
    local s1 "02"
    }
    else {
    local s1 "12"
    }
    local s2 `upow'
    local upow
    }
–   else if `"`ulink'"'==bsubstr("logit",1,`l') { local s1 "02"
```

```
    = else if `"log"'==bsubstr("logit",1,3) { local s1 "02"
      local s2 0 }
    - else if `"`ulink'"'==bsubstr("nbinomial",1,max(`l',2)) { local s1 "0
> 4" }
    = else if `"log"'==bsubstr("nbinomial",1,max(3,2)) { local s1 "04" }
    - else if `"`ulink'"'==bsubstr("logc",1,4) { local s1 "05" }
    = else if `"log"'==bsubstr("logc",1,4) { local s1 "05" }
    - else if `"`ulink'"'==bsubstr("loglog",1,max(`l',4)) { local s1 "06"
> }
    = else if `"log"'==bsubstr("loglog",1,max(3,4)) { local s1 "06" }
    - else if `"`ulink'"'==bsubstr("cloglog",1,`l') { local s1 "07" }
    = else if `"log"'==bsubstr("cloglog",1,3) { local s1 "07" }
    - else if `"`ulink'"'==bsubstr("probit",1,`l') { local s1 "08" }
    = else if `"log"'==bsubstr("probit",1,3) { local s1 "08" }
    - else {
      local s1
      local s2 "`upow'"
      }
    - if `"`s1'"' != "" {
    = if `"03"' != "" {
    - local s1 "glim_l`s1'"
    = local s1 "glim_l03"
    - }
    - else {
      local s1 "`ulink'"
      }
    - ret local link `s1'
    = ret local link glim_l03
    - ret local power `s2'
    = ret local power 0
    ─────────────────────────────────────────────────────────────
> ──────────────────────────────────────────────────── end glm.MapL
> ink ──────────────────────────────────────────────────────
    - local link `"`r(link)'"'
    = local link `"glim_l03"'
    - local pow `"`r(power)'"'
    = local pow `"0"'
    - local scale1 = `"`fam'"'=="glim_v2" | `"`fam'"'=="glim_v3" | `"`fam'"'
> =="glim_v6"
    = local scale1 = `"glim_v6"'=="glim_v2" | `"glim_v6"'=="glim_v3" | `"gli
> m_v6"'=="glim_v6"
    - if `"`link'"'=="" {
    = if `"glim_l03"'=="" {
      local link "glim_l11"
      if `"`fam'"'=="glim_v1" { local link "glim_l01"
      local pow 1 }
```

```
            else if `"`fam'"'=="glim_v2" { local link "glim_l02"
            local pow 0 }
            else if `"`fam'"'=="glim_v3" { local link "glim_l03"
            local pow 0 }
            else if `"`fam'"'=="glim_v4" { local link "glim_l09"
            local pow -1 }
            else if `"`fam'"'=="glim_v5" { local link "glim_l10"
            local pow -2 }
            else if `"`fam'"'=="glim_v6" { local link "glim_l03"
            local pow 0 }
            else local link
            }
    - ret local family `"`fam'"'
    = ret local family `"glim_v6"'
    - ret local link `"`link'"'
    = ret local link `"glim_l03"'
    - ret local power `pow'
    = ret local power 0
    - ret local scale `scale1'
    = ret local scale 1
    - ret local m `m'
    = ret local m 1
    - ret local mfixed `mfixed'
    = ret local mfixed 1
    - ret local k `k'
    = ret local k 1
    ─────────────────────────────────────────────────────────
>  ──────────────────────────────────────────────── end glm.Ma
> pFL ──────────────────────────────────────────────────────
    - local family `"`r(family)'"'
    = local family `"glim_v6"'
    - local link `"`r(link)'"'
    = local link `"glim_l03"'
    - local pow `r(power)'
    = local pow 0
    - local scale1 `r(scale)'
    = local scale1 1
    - local m `r(m)'
    = local m 1
    - local mfixed `r(mfixed)'
    = local mfixed 1
    - local k `r(k)'
    = local k 1
    - tempname canon
    - scalar `canon' = 0
    = scalar __000001 = 0
```

```
- if ("`family'" == "glim_v1" & "`link'" == "glim_l01") {
= if ("glim_v6" == "glim_v1" & "glim_l03" == "glim_l01") {
  scalar `canon' = 1
  }
- else if ("`family'"=="glim_v5" & ("`link'"=="glim_l10")) {
= else if ("glim_v6"=="glim_v5" & ("glim_l03"=="glim_l10")) {
  scalar `canon' = 1
  }
- else if ("`family'" == "glim_v3" & "`link'" == "glim_l03") {
= else if ("glim_v6" == "glim_v3" & "glim_l03" == "glim_l03") {
  scalar `canon' = 1
  }
- else if ("`family'" == "glim_v6" & "`link'" == "glim_l04") {
= else if ("glim_v6" == "glim_v6" & "glim_l03" == "glim_l04") {
  scalar `canon' = 1
  }
- else if ("`family'" == "glim_v2" & "`link'" == "glim_l02") {
= else if ("glim_v6" == "glim_v2" & "glim_l03" == "glim_l02") {
  scalar `canon' = 1
  }
- else if ("`family'" == "glim_v4" & "`link'" == "glim_l09") {
= else if ("glim_v6" == "glim_v4" & "glim_l03" == "glim_l09") {
  scalar `canon' = 1
  }
- if "`link'" == "" | "`family'" == "" {
= if "glim_l03" == "" | "glim_v6" == "" {
  di as err "incomplete specification of family() and link()"
  exit 198
  }
- if "`offset'" != "" & "`lnoffset'" != "" {
= if "" != "" & "" != "" {
  di as err "only one of offset() or lnoffset() can be specified"
  exit 198
  }
- if "`offset'" != "" & "`exposure'" != "" {
= if "" != "" & "" != "" {
  di as err "only one of offset() or exposure() can be specified"
  exit 198
  }
- if "`lnoffset'" != "" & "`exposure'" != "" {
= if "" != "" & "" != "" {
  di as err "only one of lnoffset() or exposure() can be specified"
  exit 198
  }
- if "`exposure'" != "" {
= if "" != "" {
```

```
    local lnoffset `exposure'
    local exposure
    }
-  if "`constant'" != "" {
=  if "" != "" {
    local nvar : word count `varlist'"
    if `nvar' == 1 {
    di as err "independent variables required with noconstant option"
    exit 100
    }
    }
-  marksample touse
-  if "`cluster'" != "" {
=  if "" != "" {
    markout `touse' `cluster', strok
    }
-  if "`m'" != "" {
=  if "1" != "" {
-  capture confirm number `m'
=  capture confirm number 1
-  if _rc { markout `touse' `m' }
=  if _rc { markout __000002 1 }
-  }
-  if `"`hac'"' == "" {
=  if `""' == "" {
-  if `"`t'"' ~= "" {
=  if `""' ~= "" {
    di as err "t() only valid with vce(hac ...)"
    exit 198
    }
-  }
-  if "`hac'" != "" {
=  if "" != "" {
    capture xt_tis `t'
    if _rc {
    tsset `t', noquery
    }
    local tvar `"`s(timevar)'"'
    markout `touse' `tvar'
    sort `touse' `tvar'
    cap assert `tvar'[_n-1] != `tvar' if `touse' & (`touse'[_n-1]==1)
    if _rc {
    di as err "repeated time values in sample"
    exit 451
    }
    sort `tvar'
```

```
      }
    - if "`lnoffset'" != "" {
    = if "" != "" {
      capture assert `lnoffset' > 0 if `touse'
      if _rc {
      di as err "exposure() must be greater than zero"
      exit 459
      }
      tempvar offset
      qui gen double `offset' = ln(`lnoffset')
      local offvar "ln(`lnoffset')"
      }
    - 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 tsu
> nab ──────────────────────────────────────────────────────────
    - 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 tsu
> nab ──────────────────────────────────────────────────────────
    - local yname : subinstr local y "." "_"
    - summarize `y' if `touse', meanonly
```

```
      = summarize piq_timing_max if __000002, meanonly
      – if r(N) == 0 { error 2000 }
      – if r(N) == 1 { error 2001 }
      – local nobs = round(r(N),1)
      – MapHAC `nobs' `hac'
      = MapHAC 217
      ──────────────────────────────────────────────────────────────
```

> ── begin glm.Map
> HAC ───

```
      – args nobs f lag
      – local f = lower(trim(`"`f'"'))
      = local f = lower(trim(`""'))
      – local l = length(`"`f'"')
      = local l = length(`""')
      – local s1
      – local s2
      – local intlag 0
      – if `"`f'"'=="" { local s1 "" }
      = if `""'=="" { local s1 "" }
      – else if `"`f'"'==bsubstr("nwest",1,max(`l',2)) {
      = else if `""'==bsubstr("nwest",1,max(0,2)) {
        local s1 "glim_nw1"
        local intlag 1
        }
      – else if `"`f'"'==bsubstr("bartlett",1,max(`l',2)) {
      = else if `""'==bsubstr("bartlett",1,max(0,2)) {
        local s1 "glim_nw1"
        local intlag 1
        }
      – else if `"`f'"'==bsubstr("gallant",1,max(`l',2)) {
      = else if `""'==bsubstr("gallant",1,max(0,2)) {
        local s1 "glim_nw2"
        local intlag 1
        }
      – else if `"`f'"'==bsubstr("parzen",1,max(`l',2)) {
      = else if `""'==bsubstr("parzen",1,max(0,2)) {
        local s1 "glim_nw2"
        local intlag 1
        }
      – else if `"`f'"'==bsubstr("anderson",1,max(`l',2)) { local s1 "glim_nw3
```
> " }
```
      = else if `""'==bsubstr("anderson",1,max(0,2)) { local s1 "glim_nw3" }
      – else { local s1 "`f'" }
      = else { local s1 "" }
      – if "`lag'" != "" {
      = if "" != "" {
```

```
    if `intlag' {
    confirm integer number `lag'
    }
    if `lag' < 0 {
    noi di as err "Newey-West lag must be positive"
    exit 198
    }
    }
  - else local lag = `nobs'-2
  = else local lag = 217-2
  - if `lag' >= `nobs'-2 & `intlag' {
  = if 215 >= 217-2 & 0 {
    local lag = `nobs'-2
    }
  - local s2 `lag'
  = local s2 215
  - ret local hacnam "`s1'"
  = ret local hacnam ""
  - ret local haclag "`s2'"
  = ret local haclag "215"
  - ret local intlag "`intlag'"
  = ret local intlag "0"
  _____
```

> ── end glm.Map
> HAC ───

```
  - local hacnam `"`r(hacnam)'"'
  = local hacnam `""'
  - local haclag `"`r(haclag)'"'
  = local haclag `"215"'
  - local intlag `"`r(intlag)'"'
  = local intlag `"0"'
  - local fwt "1"
  - local awt "1"
  - tempvar wt
  - if "`weight'" != "" {
  = if "" != "" {
    qui gen double `wt' `exp' if `touse'
    local awt "`wt'"
    if `"`weight'"'=="aweight" {
    summ `wt' , meanonly
    qui replace `wt' = `wt'/r(mean)
    }
    else if `"`weight'"'=="fweight" {
    if "`bstrap'`hac'" != "" {
    di as err "fweights not allowed"
    exit 198
```

```
        }
        if "`jknife'" != "" & "`cluster'" != "" {
        sort `cluster' `tvar' `touse'
        cap by `cluster' : assert `wt' == `wt'[_n-1] if `touse' & (`touse'[_n-1]
> ==1)
        if _rc {
        noi di as err "weight must be " "constant within `cluster'"
        exit 198
        }
        }
        summ `touse' [fw=`wt'] if `touse' , meanonly
        local nobs = round(r(N),1)
        local fwt "`wt'"
        local awt "1"
        }
        if "`weight'" == "pweight" {
        local robust "robust"
        }
        }
    - else {
    - qui gen byte `wt' = `touse' if `touse'
    = qui gen byte __000003 = __000002 if __000002
    - }
    - if "`weight'"=="fweight" {
    = if ""=="fweight" {
        local wwt `"[fw=`wt']"'
        }
    - else if "`weight'" == "iweight" {
    = else if "" == "iweight" {
        local wwt `"[iw=`wt']"'
        }
    - else local wwt `"[aw=`wt']"'
    = else local wwt `"[aw=__000003]"'
    - if "`robust'" != "" {
    = if "robust" != "" {
    - if "`hacnam'`opg'`jknife'`jknife1'" != "" {
    = if "" != "" {
        di as err "robust allowed only with hessian matrices"
        exit 198
        }
    - }
    - if "`weight'" != "" {
    = if "" != "" {
        if "`weight'" != "fweight" {
        if "`hacnam'`opg'`jknife'`jknife1'" != "" {
        di as err "only fweights (if any) are available for non-hessian, non-boo
```

```
> tstrap matrices"
      exit 198
      }
      }
      }
  - if `fvops' {
  = if 1 {
  - local rmcoll "version 11: _rmcoll"
  - local fvexp expand
  - }
  - else local rmcoll _rmcoll
  - local is_bin = "`family'" == "glim_v2"
  = local is_bin = "glim_v6" == "glim_v2"
  - if `is_bin' & "`m'" != "" {
  = if 0 & "1" != "" {
    capture assert `m' == 1
    if c(rc) {
    local is_bin 0
    }
    }
  - if "`asis'" != "" {
  = if "" != "" {
    if !`is_bin' {
    di as err "{p 0 0 2}" "option asis not allowed;{break}" "option asis is
> only allowed with family(binomial) " "with a denominator of 1" "{p_end}"
      exit 198
      }
    local is_bin 0
    }
  - if !`fvops' {
  = if !1 {
    local is_bin 0
    }
  - if `is_bin' {
  = if 0 {
    capture assert inlist(`y', 0, 1) if `touse'
    if c(rc) {
    local is_bin 0
    }
    }
  - if "`display'" != "" & "`weight'" == "aweight" {
  = if "" != "" & "" == "aweight" {
    local rmwgt [iw`exp']
    local rmcoll qui `rmcoll'
    }
  - else {
```

```
    – local rmwgt [`weight'`exp']
    = local rmwgt []
    – }
    – if `is_bin' {
    = if 0 {
      if strmatch(`"`from'"',"e(b)*") {
      tempname ehold
      _est hold `ehold', restore nullok
      }
      `rmcoll' `y' `xvars' `rmwgt' if `touse' , noskipline `coll' `constant' `
> fvexp' logit touse(`touse')
      if `"`ehold'"' != "" {
      _est unhold `ehold'
      }
      local VARLIST `r(varlist)'
      gettoken y xvars : VARLIST
      summ `touse' `wwt' if `touse' , meanonly
      local nobs = round(r(N),1)
      }
    – else {
    – `rmcoll' `xvars' `rmwgt' if `touse', `coll' `constant' `fvexp'
    = version 11: _rmcoll  rule_g rule_itr estimated i.stky_wg#i.pr_ndx i.stky
> _wg#i.not_pr_ndx [] if __000002,   expand
note: **0.stky_wg#1.not_pr_ndx** omitted because of collinearity.
note: **1.stky_wg#0.not_pr_ndx** omitted because of collinearity.
note: **1.stky_wg#1.not_pr_ndx** omitted because of collinearity.
    – local xvars `r(varlist)'
    = local xvars rule_g rule_itr estimated 0b.stky_wg#0b.pr_ndx 0b.stky_wg#1.
> pr_ndx 1.stky_wg#0b.pr_ndx 1.stky_wg#1.pr_ndx 0b.stky_wg#0b.not_pr_ndx 0b.st
> ky_wg#1o.not_pr_ndx 1o.stky_wg#0b.not_pr_ndx 1o.stky_wg#1o.not_pr_ndx
    – }
    – global SGLM_V `"`family'"'
    = global SGLM_V `"glim_v6"'
    – global SGLM_L `"`link'"'
    = global SGLM_L `"glim_l03"'
    – global SGLM_A `"`ancilla'"'
    = global SGLM_A `""'
    – global SGLM_y `"`y'"'
    = global SGLM_y `"piq_timing_max"'
    – global SGLM_m `"`m'"'
    = global SGLM_m `"1"'
    – if `"`k'"' == "ml" {
    = if `"1"' == "ml" {
      qui nbreg `y' `xvars' if `touse' [`weight'`exp'], `constant' `offopt' `m
> lopts'
      local k = e(alpha)
```

```
                global SGLM_ml = "ml"
                }
         - global SGLM_a `"`k'"'
         = global SGLM_a `"1"'
         - global SGLM_p `"`pow'"'
         = global SGLM_p `"0"'
         - global SGLM_f `"`fisher'"'
         = global SGLM_f `"-1"'
         - global SGLM_mu
         - global SGLM_s1 `"`scale1'"'
         = global SGLM_s1 `"1"'
         - $SGLM_V -1 `touse'
         = glim_v6 -1 __000002
         ──────────────────────────────────────────────────
  > ─────────────────────────────────────────────── begin glim
  > _v6 ───────────────────────────────────────────
         - version 7
         - args todo eta mu return
         - if `todo' == -1 {
         = if -1 == -1 {
         - local y "$SGLM_y"
         = local y "piq_timing_max"
         - local m "$SGLM_m"
         = local m "1"
         - local touse "`eta'"
         = local touse "__000002"
         - capture assert `y'>=0 if `touse'
         = capture assert piq_timing_max>=0 if __000002
         - if _rc {
           di as err `"dependent variable `y' has negative values"'
           exit 499
           }
         - capture assert `y'==int(`y') if `touse'
         = capture assert piq_timing_max==int(piq_timing_max) if __000002
         - if _rc {
           di as txt `"note: `y' has noninteger values"'
           }
         - global SGLM_vt "Neg. Binomial"
         - local SGLM_a = round($SGLM_a,0.0001)
         = local SGLM_a = round(1,0.0001)
         - global SGLM_vf "u+(`SGLM_a')u^2"
         = global SGLM_vf "u+(1)u^2"
         - global SGLM_mu "glim_mu 0 ."
         - exit
         ──────────────────────────────────────────────────
  > ───────────────────────────────────────────────── end glim
```

```
> _v6 ─────────────────────────────────────────────────────────────
    – $SGLM_L –1 `touse'
    = glim_l03 –1 __000002
      ───────────────────────────────────────────────────────────

> ─────────────────────────────────────────────────────── begin glim_
> l03 ─────────────────────────────────────────────────────────────
      – version 7
      – args todo eta mu return
      – if `todo' == –1 {
      = if –1 == –1 {
      – global SGLM_lt "Log"
      – if "$SGLM_m" == "1" {
      = if "1" == "1" {
      – global SGLM_lf "ln(u)"
      – }
      – else global SGLM_lf "ln(u/$SGLM_m)"
      = else global SGLM_lf "ln(u/1)"
      – exit
      ───────────────────────────────────────────────────────────

> ─────────────────────────────────────────────────────────── end glim_
> l03 ─────────────────────────────────────────────────────────────
    – global SGLM_running 1
    – if "$SGLM_V" == "glim_v1" | "$SGLM_V" == "glim_v3" | "$SGLM_V" == "glim_
> v4" | "$SGLM_V" == "glim_v5" {
    = if "glim_v6" == "glim_v1" | "glim_v6" == "glim_v3" | "glim_v6" == "glim_
> v4" | "glim_v6" == "glim_v5" {
      if "$SGLM_L" == "glim_l02" | "$SGLM_L" == "glim_l04" | "$SGLM_L" == "gli
> m_l05" | "$SGLM_L" == "glim_l06" | "$SGLM_L" == "glim_l07" | "$SGLM_L" == "g
> lim_l08" | "$SGLM_L" == "glim_l12" {
      global SGLM_nonstan 1
      }
      }
    – if "$SGLM_V" == "glim_v2" {
    = if "glim_v6" == "glim_v2" {
      if "$SGLM_L" == "glim_l04" {
      global SGLM_nonstan 1
      }
      }
    – if "$SGLM_V" == "glim_v6" {
    = if "glim_v6" == "glim_v6" {
    – if "$SGLM_L" == "glim_l02" | "$SGLM_L" == "glim_l05" | "$SGLM_L" == "gli
> m_l06" | "$SGLM_L" == "glim_l07" | "$SGLM_L" == "glim_l08" | "$SGLM_L" == "g
> lim_l12" {
    = if "glim_l03" == "glim_l02" | "glim_l03" == "glim_l05" | "glim_l03" == "
> glim_l06" | "glim_l03" == "glim_l07" | "glim_l03" == "glim_l08" | "glim_l03"
>  == "glim_l12" {
```

```
      global SGLM_nonstan 1
      }
   - }
   - local mllog `log' `nolog'
   = local mllog  nolog
   - _parse_iterlog, `log' `nolog'
   = _parse_iterlog,  nolog
```

> ─── begin _parse_iter
> log ───

```
      - version 16
      - syntax [, NOLOG LOG]
      - if "`log'`nolog'" != "" {
      = if "nolog" != "" {
      - opts_exclusive "`log' `nolog'"
      = opts_exclusive " nolog"
```

> ─── begin opts_exclus
> ive ───

```
      - version 8.2
      - args opts optname errcode optslab
      - local opts `opts'
      = local opts  nolog
      - local n 0
      - while `"`opts'"' != "" {
      = while `"nolog"' != "" {
      - 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_exclus
> ive ───

```
   - }
   - else if "`c(iterlog)'" == "on" {
   = else if "on" == "on" {
     local log log
     }
```

```
              – else {
                local nolog nolog
                }
              – sreturn local log `log'
              = sreturn local log
              – sreturn local nolog `nolog'
              = sreturn local nolog nolog
              ─────────────────────────────────────────────────────
  > ────────────────────────────────────────────── end _parse_iter
  > log ──────────────────────────────────────────────────────────
              – local log "`s(nolog)'"
              = local log "nolog"
              – if `"`log'"'!="" {
              = if `"nolog"'!="" {
              – local iflog `"*"'
              – }
              – else { local iflog "noi" }
              – if "`offset'" != "" {
              = if "" != "" {
                local moffset = "-`offset'"
                }
              – local reg = "$SGLM_V" == "glim_v1" & "$SGLM_L" == "glim_l01"
              = local reg = "glim_v6" == "glim_v1" & "glim_l03" == "glim_l01"
              – if "`irls'" == "" {
              = if "" == "" {
              – tempvar eta mu dmu v z W
              – tempname Wscale b0
              – if !inlist("`vce'", "eim", "opg") {
              = if !inlist("robust", "eim", "opg") {
              – local oim "oim"
              – }
              – if "`from'" == "" & "`search'" == "" {
              = if "" == "" & "" == "" {
              – quietly {
              – if `"`init'"'!="" {
              = if `""'!="" {
                gen double `mu' = `init' if `touse'
                }
              – else {
              – sum `y' `wwt' if `touse'
              = sum piq_timing_max [aw=__000003] if __000002
              – if "$SGLM_V" != "glim_v2" {
              = if "glim_v6" != "glim_v2" {
              – gen double `mu' = (`y'+r(mean))/(`m'+1)
              = gen double __000005 = (piq_timing_max+r(mean))/(1+1)
              – }
```

```
    – else {
      gen double `mu' = `m'*(`y'+.5)/(`m'+1)
      }
    – }
    – capture drop `eta'
    = capture drop __000004
    – $SGLM_L 0 `eta' `mu'
    = glim_l03 0 __000004 __000005
```
───

> ── begin glim_

> l03 ───

```
    – version 7
    – args todo eta mu return
    – if `todo' == -1 {
    = if 0 == -1 {
      global SGLM_lt "Log"
      if "$SGLM_m" == "1" {
      global SGLM_lf "ln(u)"
      }
      else global SGLM_lf "ln(u/$SGLM_m)"
      exit
      }
    – if `todo' == 0 {
    = if 0 == 0 {
    – gen double `eta' = ln(`mu'/$SGLM_m)
    = gen double __000004 = ln(__000005/1)
    – exit
```
───

> ── end glim_

> l03 ───

```
    – $SGLM_V 1 `eta' `mu' `v'
    = glim_v6 1 __000004 __000005 __000007
```
───

> ─── begin glim

> _v6 ───

```
    – version 7
    – args todo eta mu return
    – if `todo' == -1 {
    = if 1 == -1 {
      local y "$SGLM_y"
      local m "$SGLM_m"
      local touse "`eta'"
      capture assert `y'>=0 if `touse'
      if _rc {
      di as err `"dependent variable `y' has negative values"'
      exit 499
```

```
      }
      capture assert `y'==int(`y') if `touse'
      if _rc {
      di as txt `"note: `y' has noninteger values"'
      }
      global SGLM_vt "Neg. Binomial"
      local SGLM_a = round($SGLM_a,0.0001)
      global SGLM_vf "u+(`SGLM_a')u^2"
      global SGLM_mu "glim_mu 0 ."
      exit
      }
   -  if `todo' == 0 {
   =  if 1 == 0 {
      gen double `eta' = -ln1p($SGLM_a/`mu')
      exit
      }
   -  if `todo' == 1 {
   =  if 1 == 1 {
   -  gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
   =  gen double __000007 = __000005+__000005*__000005*1
   -  exit
```
```
      ──────────────────────────────────────────────────────────────
>  ──────────────────────────────────────────────────────── end glim
>  _v6 ─────────────────────────────────────────────────────────────
      -  $SGLM_L 2 `eta' `mu' `dmu'
      =  glim_l03 2 __000004 __000005 __000006
      ──────────────────────────────────────────────────────────────
>  ────────────────────────────────────────────────────── begin glim_
>  l03 ─────────────────────────────────────────────────────────────
      -  version 7
      -  args todo eta mu return
      -  if `todo' == -1 {
      =  if 2 == -1 {
         global SGLM_lt "Log"
         if "$SGLM_m" == "1" {
         global SGLM_lf "ln(u)"
         }
         else global SGLM_lf "ln(u/$SGLM_m)"
         exit
         }
      -  if `todo' == 0 {
      =  if 2 == 0 {
         gen double `eta' = ln(`mu'/$SGLM_m)
         exit
         }
      -  if `todo' == 1 {
```

```
    = if 2 == 1 {
      gen double `mu' = $SGLM_m*exp(`eta')
      exit
      }
    - if `todo' == 2 {
    = if 2 == 2 {
    - gen double `return' = `mu'
    = gen double __000006 = __000005
    - exit
    _____
```

```
> l03 ────────────────────────────────────────────────────────────────
    - gen double `z' = `eta' + (`y'-`mu')/`dmu' `moffset'
    = gen double __000008 = __000004 + (piq_timing_max-__000005)/__000006
    - gen double `W' = `dmu'*`dmu'/`v'
    = gen double __000009 = __000006*__000006/__000007
    - summ `W' `wwt', meanonly
    = summ __000009 [aw=__000003], meanonly
    - scalar `Wscale' = r(mean)
    = scalar __00000A = r(mean)
    - if "`cns'" != "" & _caller() >= 11 {
    = if "" != "" & _caller() >= 11 {
      foreach c in `cns' {
      local c`c' : constraint `c'
      local c`c'new = subinstr( "`c`c''","[`y']","",.)
      constraint `c' `c`c'new'
      }
      `VV' cap noisily quietly cnsreg `z' `xvars' [iw=`W'*`wt'/`Wscale'], cons
> tr(`cns') mse1 `constant'
      foreach c in `cns' {
      constraint `c' `c`c''
      }
      }
    - else {
    - `VV' cap noisily quietly _regress `z' `xvars' [iw=`W'*`wt'/`Wscale'], ms
> e1 `constant'
    = version 18.5, missing: cap noisily quietly _regress __000008 rule_g rule
> _itr estimated 0b.stky_wg#0b.pr_ndx 0b.stky_wg#1.pr_ndx 1.stky_wg#0b.pr_ndx
> 1.stky_wg#1.pr_ndx 0b.stky_wg#0b.not_pr_ndx 0b.stky_wg#1o.not_pr_ndx 1o.stky
> _wg#0b.not_pr_ndx 1o.stky_wg#1o.not_pr_ndx [iw=__000009*__000003/__00000A],
> mse1
    _____
```

```
> lay ──────────────────────────────────────────────────────────────
    - 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_mcomp
>  are ─────────────────────────────────────────────────
          - version 11
          - local cmd `"`e(cmd)'"'
          = local cmd `"regress"'
          - syntax [name(name=caller)] [, *]
          - local is_pwc = inlist("pwcompare", "`cmd'", "`caller'") | inlist("pw
>  mean", "`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 SIDak SNK T
>  UKey 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' `scheffe' `s
>  idak' `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 S
> NK 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' `sc
> heffe' `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_exclus
> ive ─────────────────────────────────────────────────────────────────
          - version 8.2
          - args opts optname errcode optslab
          - local opts `opts'
          = local opts
          - local n 0
          - while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          - if `n' < 2 {
          = if 0 < 2 {
          - exit
          ─────────────────────────────────────────────────────────────────
> ──────────────────────────────────────────────────────── end opts_exclus
> ive ─────────────────────────────────────────────────────────────────
          - if "`METHOD'" == "" {
          = if "" == "" {
          - if "`ALL'" != "" {
          = if "" != "" {
            di as err "multiple comparison method required with the adjustall op
> tion"
            exit 198
            }
```

```
          - local METHOD noadjust
          - local noadjust noadjust
          - }
          - opts_exclusive "`ALL' `noadjust'" `suboption'
          = opts_exclusive " noadjust" mcompare()
```

> ─── begin opts_exclus
> ive ──

```
          - 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_exclus
> ive ──

```
          - 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 p
> refix"'
                    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 `METHOD'"'
                    exit 198
                    }
                    }
          – sreturn local method `"`METHOD'"'
          = sreturn local method `"noadjust"'
          – sreturn local adjustall `"`ALL'"'
          = sreturn local adjustall `""'
                    ─────────────────────────────────────────────────────────
>  ─────────────────────────────────────────────────────────────── end _get_mcomp
> are ─────────────────────────────────────────────────────────────
        – 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_dio
> pts ─────────────────────────────────────────────────────────────
          – 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.GetDio
> pts ───────────────────────────────────────────
          − 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_exclus
> ive ───────────────────────────────────────────
          − version 8.2
          − args opts optname errcode optslab
          − local opts `opts'
          = local opts
          − local n 0
          − while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          − if `n' < 2 {
          = if 0 < 2 {
          − exit
          ─────────────────────────────────────────────────────────
> ───────────────────────────────────────────────────── end opts_exclus
> ive ───────────────────────────────────────────
          − opts_exclusive "`allbaselevels' `nobaselevels'"
          = opts_exclusive " "
          ─────────────────────────────────────────────────────────
> ─────────────────────────────────────────────────── begin opts_exclus
> ive ───────────────────────────────────────────
          − version 8.2
          − args opts optname errcode optslab
          − local opts `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
```

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

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

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

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

```
            - 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')
              }
```

```
            - if "`fvwrap'" != "" {
            = if "fvwrap(1)" != "" {
```

```
              - FVWrap, `fvwrap'
              = FVWrap, fvwrap(1)
            ────────────────────────────────────────────────
>  ────────────────────────────────────────────────── begin _get_diopts.FVW
> rap ──────────────────────────────────────
              - syntax, fvwrap(integer)
              - if `fvwrap' < 0 {
              = if 1 < 0 {
                di as err "{p}invalid option {bf:fvwrap(`fvwrap')}; " "nonnegati
> ve integer required{p_end}"
                exit 198
                }
            ────────────────────────────────────────────────
>  ────────────────────────────────────────────────── end _get_diopts.FVW
> rap ──────────────────────────────────────
              - }
              - 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                       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.GetDio
> pts ──────────────────────────────────────
            - 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.GetDio
>  pts ────────────────────────────────────────────────────
         – 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_exclus
>  ive ────────────────────────────────────────────────────
         – version 8.2
         – args opts optname errcode optslab
         – local opts `opts'
         = local opts
         – local n 0
         – while `"`opts'"' != "" {
         = while `""' != "" {
           local ++n
           gettoken item`n' opts : opts, bind
           }
         – if `n' < 2 {
         = if 0 < 2 {
         – exit
         ────────────────────────────────────────────────────────────
>  ──────────────────────────────────────────────────────── end opts_exclus
>  ive ────────────────────────────────────────────────────
         – opts_exclusive "`allbaselevels' `nobaselevels'"
         = opts_exclusive " "
         ────────────────────────────────────────────────────────────
```

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

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

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

```
          – if `n' < 2 {
          = if 0 < 2 {
          – exit
          ────────────────────────────────────────────
```

> ── end opts_exclus
> ive ──

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

> ── begin opts_exclus
> ive ──

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

> ── end opts_exclus
> ive ──

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

> ── begin opts_exclus
> ive ──

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

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

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

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

```
> ─────────────────────────────────────────────── end opts_exclus
> ive ──────────────────────────────────────────────────────────
          – 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.Wra
> pon ───

```
          - 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_exclus
> ive ───

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

> ── end opts_exclus
> ive ───

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

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```
  _____
> ──────────────────────────────────────────────── end _get_diopts.Wra
> pon ──────────────────────────────────────────────────────────────
        – 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.GetDio
> pts ──────────────────────────────────────────────────────────────
        – if `"`name2'"' == "" {
        = if `""' == "" {
        – GetDiopts DUPS, `options'
        = GetDiopts DUPS,
        _____
> ──────────────────────────────────────────────── begin _get_diopts.GetDio
> pts ──────────────────────────────────────────────────────────────
        – 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_exclus
> ive ────────────────────────────────────────────────────────────
          – version 8.2
          – args opts optname errcode optslab
          – local opts `opts'
          = local opts
          – local n 0
          – while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          – if `n' < 2 {
          = if 0 < 2 {
          – exit
          ─────────────────────────────────────────────────────
> ─────────────────────────────────────────────────── end opts_exclus
> ive ────────────────────────────────────────────────────────────
          – opts_exclusive "`allbaselevels' `nobaselevels'"
          = opts_exclusive " "
          ─────────────────────────────────────────────────────
> ─────────────────────────────────────────────────── begin opts_exclus
> ive ────────────────────────────────────────────────────────────
          – version 8.2
          – args opts optname errcode optslab
          – local opts `opts'
          = local opts
          – local n 0
          – while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          – if `n' < 2 {
          = if 0 < 2 {
          – exit
          ─────────────────────────────────────────────────────
> ─────────────────────────────────────────────────── end opts_exclus
> ive ────────────────────────────────────────────────────────────
          – opts_exclusive "`baselevels' `nobaselevels'"
          = opts_exclusive " "
          ─────────────────────────────────────────────────────
```

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

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

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

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

> ─────────────────────────────────────────────── begin opts_exclus
> ive ────────────────────────────────────────────────────────────
              – version 8.2
              – args opts optname errcode optslab
```

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

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

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

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

```
 – 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.Wra
  > pon ─────────────────────────────────────────────────────────────────
          - 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_exclus
> ive ─────────────────────────────────────────────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
              = if 0 < 2 {
              – exit
              ─────────────────────────────────────────────────
> ───────────────────────────────────────────────── end opts_exclus
> ive ─────────────────────────────────────────────────
              – local fvwrapon `word' `width'
              = local fvwrapon
              – if `:length local fvwrapon' {
              = if 0 {
                c_local fvwrapon fvwrapon(`fvwrapon')
                }
              ─────────────────────────────────────────────────
> ───────────────────────────────────────────────── end _get_diopts.Wra
> pon ─────────────────────────────────────────────────
           – 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 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 method = `"noadjust"'
      – }
      – sreturn local `sname' = `"`S_`sname''"'
      = sreturn local options = `"level(95.00) fvwrap(1)"'
      – }
```

```
      – 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_ta
> ble ──────────────────────────────────────────────────────────────────
        - version 11
        - local vv : di "version " string(max(11,_caller())) ", missing:"
        - 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) PMATrix
> (string) TSMATrix(string) ROWCFormat(string) ROWPFormat(string) ROWSFormat(s
> tring) NOROWCI MMATrix(string) MVMATrix(string) MEMATrix(string) BSTDMATrix(
> string) CNSMATrix(string) PCLASSMATrix(string) Level(cilevel) prefix(name) c
> nszero(string) suffix(name) OFFSETlist(string asis) `beta' `standardized' NO
> CI NOPValues `dftable' `dfonly' dfci DFPValues dfmissing `groups' COEFLegend
>  selegend `fvignore' `flignore' `showginvariant' `nolabel' `nofootnote' `wra
> p' sort `pisematrix' depname(string) COEFTitle(string) coeftitle2(string) pt
> itle(string) cititle(string) NOMCLEGend noCNSReport FULLCNSReport `noclustre
> port' cformat(passthru) sformat(passthru) pformat(passthru) NOFirst First SH
> OWEQns neq(integer -1) NODIPARM NOTEST SEParator(integer 0) NOSKIP OFFSETONL
> Y1 PLus NOEQCHECK EFORMALL CITYPE(string) eqselect(string) cidisjoint noEFOR
> MNOTE * ]
        = syntax [, cmdextras BMATrix(string) VMATrix(string) EMATrix(string)
> DFMATrix(string) EQMATrix(string) ROWMATrix(string) CIMATrix(string) PMATrix
> (string) TSMATrix(string) ROWCFormat(string) ROWPFormat(string) ROWSFormat(s
> tring) NOROWCI MMATrix(string) MVMATrix(string) MEMATrix(string) BSTDMATrix(
> string) CNSMATrix(string) PCLASSMATrix(string) Level(cilevel) prefix(name) c
> nszero(string) suffix(name) OFFSETlist(string asis) Beta  NOCI NOPValues   d
> fci DFPValues dfmissing  COEFLegend selegend       sort  depname(string) COE
> FTitle(string) coeftitle2(string) ptitle(string) cititle(string) NOMCLEGend
> noCNSReport FULLCNSReport  cformat(passthru) sformat(passthru) pformat(passt
> hru) NOFirst First SHOWEQns neq(integer -1) NODIPARM NOTEST SEParator(intege
> r 0) NOSKIP OFFSETONLY1 PLus NOEQCHECK EFORMALL CITYPE(string) eqselect(stri
> ng) cidisjoint 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
          }
          }
        — _novce_other_mats, cimatrix("`cimatrix'") pmatrix("`pmatrix'") tsmat
> rix("`tsmatrix'") `noci' `nopvalues' `dfci' `dfpvalues' `cidisjoint'
        = _novce_other_mats, cimatrix("") pmatrix("") tsmatrix("")
                          ─────────────────────────────────────────
> ─────────────────────────────────────── begin _coef_table._novce_other_m
> ats ─────────────────────────────────────────────────────────────────────
          — syntax [anything], [ CIMATrix(string) PMATrix(string) TSMATrix(str
> ing) NOCI NOPValues dfci DFPValues cidisjoint ]
          — if ("`pmatrix'"=="" & "`tsmatrix'"=="" & "`e(V)'"=="" & "`cimatrix
> '"!="" & "`noci'"!="") {
          = if (""=="" & ""=="" & "matrix"=="" & ""!="" & ""!="") {
            sreturn local cimatrix "empt"
            }
          — if ("`pmatrix'"=="" & "`tsmatrix'"!="" & "`e(V)'"=="" & "`cimatrix
> '"=="" & ("`noci'"!=""|"`nopvalues'"!="")) {
          = if (""=="" & ""!="" & "matrix"=="" & ""=="" & (""!=""|""!="")) {
            sreturn local noci "empt"
            sreturn local nopvalues "empt"
            }
          — if ("`pmatrix'"=="" & "`tsmatrix'"=="" & "`e(V)'"=="" & "`cimatrix
> '"!="" & "`noci'"!="") {
          = if (""=="" & ""=="" & "matrix"=="" & ""!="" & ""!="") {
            sreturn local cimatrix "empt"
            }
          — if ("`pmatrix'"!="" & "`tsmatrix'"=="" & "`e(V)'"=="" & "`cimatrix
> '"=="" & "`nopvalues'"!="") {
          = if (""!="" & ""=="" & "matrix"=="" & ""=="" & ""!="") {
            sreturn local pmatrix "empt"
            }
          — if ("`pmatrix'"!="" & "`tsmatrix'"=="" & "`e(V)'"=="" & "`cimatrix
> '"=="" & "`noci'"!="") {
          = if (""!="" & ""=="" & "matrix"=="" & ""=="" & ""!="") {
            sreturn local noci "empt"
            }
          — if ("`pmatrix'"!="") {
          = if (""!="") {
            tempname pmat isvalid
            capture matrix `pmat' = `pmatrix'
            local rc = _rc
            if (`rc') {
            display as error "invalid {bf:pmatrix()}"
```

```
exit 198
}
else {
local k: rowsof `pmat'
if (`k'>1 | `k'==0) {
display as error "{bf:pmatrix()} should be a row vector"
exit 198
}
}
scalar `isvalid' = 1
mata: _is_in_0_1void("`pmat'", "`isvalid'")
if (`isvalid'==0) {
display as error "invalid {bf:pmatrix()}"
di as txt "{p 4 4 2}"
di as smcl as err "{bf:pmatrix()}"
di as smcl as err "should contain values inside"
di as smcl as err "the interval [0,1]."
di as smcl as err "{p_end}"
exit 198
}
}
- if ("`tsmatrix'"!="") {
= if (""!="") {
tempname tmat
capture matrix `tmat' = `tsmatrix'
local rc = _rc
if (`rc') {
display as error "invalid {bf:tsmatrix()}"
exit 198
}
else {
local k: rowsof `tmat'
if (`k'>1 | `k'==0) {
display as error "{bf:tsmatrix()} should be a row vector"
exit 198
}
}
}
- if ("`cimatrix'"!="") {
= if (""!="") {
tempname cimat isvalid
capture matrix `cimat' = `cimatrix'
local rc = _rc
if (`rc') {
display as error "invalid {bf:cimatrix()}"
exit 198
```

```
          }
          if ("`cidisjoint'"=="" & "`e(disjoint)'"=="") {
          scalar `isvalid' = 1
          mata: _is_in_ci("`cimat'", "`isvalid'")
          if (`isvalid'==0) {
          display as error "invalid {bf:cimatrix()}"
          di as txt "{p 4 4 2}"
          di as smcl as err "{bf:cimatrix()}"
          di as smcl as err "lower limit should be"
          di as smcl as err "smaller than the upper"
          di as smcl as err "limit."
          di as smcl as err "{p_end}"
          exit 198
          }
          }
          }
  -  if ("`e(V)'"=="" & "`dfci'"!="" & "`pmatrix'"!="") {
  =  if ("matrix"=="" & ""!="" & ""!="") {
      opts_exclusive "pmatrix() `dfci'"
      }
  -  if ("`e(V)'"=="" & "`dfci'"!="" & "`tsmatrix'"!="") {
  =  if ("matrix"=="" & ""!="" & ""!="") {
      opts_exclusive "tsmatrix() `dfci'"
      }
  -  if ("`e(V)'"=="" & "`dfci'"!="" & "`cimatrix'"!="") {
  =  if ("matrix"=="" & ""!="" & ""!="") {
      opts_exclusive "cimatrix() `dfci'"
      }
  -  if ("`e(V)'"=="" & "`dfpvalues'"!="" & "`pmatrix'"!="") {
  =  if ("matrix"=="" & ""!="" & ""!="") {
      opts_exclusive "pmatrix() `dfci'"
      }
  -  if ("`e(V)'"=="" & "`dfpvalues'"!="" & "`tsmatrix'"!="") {
  =  if ("matrix"=="" & ""!="" & ""!="") {
      opts_exclusive "tsmatrix() `dfpvalues'"
      }
  -  if ("`e(V)'"=="" & "`dfpvalues'"!="" & "`cimatrix'"!="") {
  =  if ("matrix"=="" & ""!="" & ""!="") {
      opts_exclusive "cimatrix() `dfpvalues'"
      }
          ────────────────────────────────────────────────────
>  ──────────────────────────────────────── end _coef_table._novce_other_m
>  ats ─────────────────────────────────────────────────────
        -  if ("`s(cimatrix)'"=="empt") {
        =  if (""=="empt") {
          local cimatrix ""
```

```
          }
        - if ("`s(pmatrix)'"=="empt") {
        = if (""=="empt") {
          local pmatrix ""
          }
        - if ("`s(noci)'"=="empt") {
        = if (""=="empt") {
          local noci ""
          }
        - if ("`s(nopvalues)'"=="empt") {
        = if (""=="empt") {
          local nopvalues ""
          }
        - if ("`e(V)'"!="" & "`cidisjoint'"!="") {
        = if ("matrix"!="" & ""!="") {
          display in red "option {bf:cidisjoint} not allowed when e(V) is post
> ed"
          exit 198
          }
        - else local fvlabel `nofvlabel' `fvlabel'
        = else local fvlabel
        - local type `coeflegend' `selegend'
        = local type
        - opts_exclusive "`type' `standardized'"
        = opts_exclusive " "
          ───────────────────────────────────────────────────────────
>  ──────────────────────────────────────────────── begin opts_exclus
>  ive ──────────────────────────────────────────────────────────────
        - version 8.2
        - args opts optname errcode optslab
        - local opts `opts'
        = local opts
        - local n 0
        - while `"`opts'"' != "" {
        = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
        - if `n' < 2 {
        = if 0 < 2 {
        - exit
          ───────────────────────────────────────────────────────────
>  ──────────────────────────────────────────────────── end opts_exclus
>  ive ──────────────────────────────────────────────────────────────
        - 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' `groups' `df
> ci' `dfpvalues'
  = local type
  - }
  - opts_exclusive "`type'"
  = opts_exclusive ""
          ─────────────────────────────────────────────────────────────────
> ──────────────────────────────────────────────── begin opts_exclus
> ive ─────────────────────────────────────────────────────────────
  - version 8.2
  - args opts optname errcode optslab
  - local opts `opts'
  = local opts
  - local n 0
  - while `"`opts'"' != "" {
  = while `""' != "" {
          local ++n
          gettoken item`n' opts : opts, bind
          }
  - if `n' < 2 {
  = if 0 < 2 {
```

```
          – exit
       ─────────────────────────────────────────────────
> ──────────────────────────────────────────────── end opts_exclus
> ive ────────────────────────────────────────────────
          – opts_exclusive "`first' `nofirst'"
          = opts_exclusive " "
       ─────────────────────────────────────────────────
> ─────────────────────────────────────────────── begin opts_exclus
> ive ────────────────────────────────────────────────
          – version 8.2
          – args opts optname errcode optslab
          – local opts `opts'
          = local opts
          – local n 0
          – while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          – if `n' < 2 {
          = if 0 < 2 {
          – exit
       ─────────────────────────────────────────────────
> ──────────────────────────────────────────────── end opts_exclus
> ive ────────────────────────────────────────────────
          – opts_exclusive "`first' `showeqns'"
          = opts_exclusive " showeqns"
       ─────────────────────────────────────────────────
> ─────────────────────────────────────────────── begin opts_exclus
> ive ────────────────────────────────────────────────
          – 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_exclus
>  ive ───────────────────────────────────────────────────
          − local cnsreport `cnsreport' `fullcnsreport'
          = local cnsreport nocnsreport
          − opts_exclusive "`cnsreport'"
          = opts_exclusive "nocnsreport"
          ─────────────────────────────────────────────
>  ──────────────────────────────────────────  begin opts_exclus
>  ive ───────────────────────────────────────────────────
          − 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_exclus
>  ive ───────────────────────────────────────────────────
          − 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_mcomp
> are ──────────────────────────────────────────────────────────────
          – 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 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 `"fvwrap(1)"'
          – 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 `", noadjust"'
          – 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' `dunnett' `
> 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_exclus
> ive ───────────────────────────────────────────────────────
          - 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_exclus
> ive ───────────────────────────────────────────────────────
          - if "`METHOD'" == "" {
          = if "noadjust" == "" {
            if "`ALL'" != "" {
            di as err "multiple comparison method required with the adjustall
> option"
            exit 198
            }
            local METHOD noadjust
            local noadjust noadjust
            }
          - opts_exclusive "`ALL' `noadjust'" `suboption'
```

```
          = opts_exclusive " noadjust" mcompare()
          ─────────────────────────────────────────────────────
>  ──────────────────────────────────────────────  begin opts_exclus
>  ive ─────────────────────────────────────────────────────────────
          − 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_exclus
>  ive ─────────────────────────────────────────────────────────────
          − 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(`vc
> e')"'
          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 `METHOD'"'
          exit 198
          }
          }
        - sreturn local method `"'`METHOD'"'
        = sreturn local method `"noadjust"'
        - sreturn local adjustall `"'`ALL'"'
        = sreturn local adjustall `""'
          ────────────────────────────────────────────────────────────────
>  ─────────────────────────────────────────────────────────── end _get_mcomp
> are ──────────────────────────────────────────────────────────────────
        - 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_exclus
> ive ──────────────────────────────────────────────────────────────────
        - version 8.2
        - args opts optname errcode optslab
        - local opts `opts'
        = local opts
```

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

> —— end opts_exclus
> ive ——

```
        - 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_dio
> pts ——

```
        - 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.GetDio
> pts ——

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

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

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

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

> ──────────────────────────────────────────────────────── begin opts_exclus
> ive ─────────────────────────────────────────────────────────────────────
                  – version 8.2
                  – args opts optname errcode optslab
```

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

```
> ive ───────────────────────────────────────────────────

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

```
> ive ───────────────────────────────────────────────────

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

```
> ive ───────────────────────────────────────────────────

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

```
> ive ───────────────────────────────────────────────────

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

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

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

> ─────────────────────────────────────── end opts_exclus
> ive ──────────────────────────────────────────
              – opts_exclusive "`cnsreport' `fullcnsreport'"
              = opts_exclusive " "
        _____

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

> ─────────────────────────────────────── end opts_exclus
> ive ──────────────────────────────────────────
              – opts_exclusive "`coeflegend' `selegend'"
              = opts_exclusive " "
        _____

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

```
> ───────────────────────────────────────────────── end opts_exclus
> ive ──────────────────────────────────────────────────────────
              − opts_exclusive "`noci' `nopvalues'"
              = opts_exclusive " "
              ──────────────────────────────────────────────────

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

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

```
            - opts_exclusive "`versus' `compare'"
            = opts_exclusive " "
```

> ── begin opts_exclus
> ive ──

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

> ── end opts_exclus
> ive ──

```
            - opts_exclusive "`abbrev' `noabbrev'"
            = opts_exclusive " "
```

> ── begin opts_exclus
> ive ──

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

> ── end opts_exclus
> ive ──

```
            - 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.Wra
> pon ──────────────────────────────────────────────────────────────────
           - 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_exclus
> ive ───────────────────────────────────────────────────────────────────
             - version 8.2
```

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

> ── end opts_exclus
> ive ──

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

> ── end _get_diopts.Wra
> pon ──

```
              – if "`fvwrap'" != "" {
              = if "fvwrap(1)" != "" {
              – FVWrap, `fvwrap'
              = FVWrap, fvwrap(1)
              _____
```

> ── begin _get_diopts.FVW
> rap ──

```
              – syntax, fvwrap(integer)
              – if `fvwrap' < 0 {
              = if 1 < 0 {
                di as err "{p}invalid option {bf:fvwrap(`fvwrap')}; " "nonnega
```
> tive integer required{p_end}"
```
                exit 198
                }
              _____
```

> ── end _get_diopts.FVW
> rap ──

```
              – }
              – 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'

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

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

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

> ── end opts_exclus
> ive ───

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

> ── begin opts_exclus
> ive ───

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

> ── end opts_exclus
> ive ───

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

> ── begin opts_exclus
> ive ───

```
           – version 8.2
           – args opts optname errcode optslab
           – local opts `opts'
           = local opts
           – local n 0
```

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

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

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

```
        – 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
              ─────────────────────────────────────────
> ────────────────────────────────────────────────── begin opts_exclus
> ive ───────────────────────────────────────────────────────
                − version 8.2
                − args opts optname errcode optslab
                − local opts `opts'
                = local opts
                − local n 0
                − while `"`opts'"' != "" {
                = while `""' != "" {
                  local ++n
                  gettoken item`n' opts : opts, bind
                  }
                − if `n' < 2 {
                = if 0 < 2 {
                − exit
              ─────────────────────────────────────────
> ──────────────────────────────────────────────────── end opts_exclus
> ive ───────────────────────────────────────────────────────
                − local fvwrapon `word' `width'
                = local fvwrapon
                − if `:length local fvwrapon' {
                = if 0 {
                  c_local fvwrapon fvwrapon(`fvwrapon')
                  }
              ─────────────────────────────────────────
> ──────────────────────────────────────────────────── end _get_diopts.Wra
> pon ───────────────────────────────────────────────────
                − 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.GetDio
> pts ──────────────────────────────────────────────────────
              – if `"`name2'"' == "" {
              = if `"options"' == "" {
                GetDiopts DUPS, `options'
                }
              – else {
              – GetDiopts DUPS options, `options'
              = GetDiopts DUPS options,
              ─────────────────────────────────────────────────

> ──────────────────────────────────────────────── begin _get_diopts.GetDio
> pts ──────────────────────────────────────────────────────
              – 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_exclus
> ive ──────────────────────────────────────────────────────
              – version 8.2
              – args opts optname errcode optslab
              – local opts `opts'
              = local opts
              – local n 0
              – while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              – if `n' < 2 {
```

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

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

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

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

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

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

```
         - 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_exclus
> ive ─────────────────────────────────────────────────────────────────
              – local fvwrapon `word' `width'
              = local fvwrapon
              – if `:length local fvwrapon' {
              = if 0 {
                c_local fvwrapon fvwrapon(`fvwrapon')
                }
                ─────────────────────────────────────────────────────
> ──────────────────────────────────────────────────── end _get_diopts.Wra
> pon ─────────────────────────────────────────────────────────────────
              – 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 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.GetDio
> pts ─────────────────────────────────────────────────────────────────
            – 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_dio
> pts ──

```
          - 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_dio
> pts ──

```
          - 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.GetDio
> pts ──

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

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

```
                - opts_exclusive "`fvlabel' `nofvlabel'"
                = opts_exclusive " "

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

>  ─────────────────────────────────────────────── end opts_exclus
> ive ──────────────────────────────────────────────
                - opts_exclusive "`omitted' `noomitted'"
                = opts_exclusive " "

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

>  ─────────────────────────────────────────────── end opts_exclus
> ive ──────────────────────────────────────────────
                - opts_exclusive "`lstretch' `nolstretch'"
                = opts_exclusive " "

>  ─────────────────────────────────────────── begin opts_exclus
```

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

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

> ── end opts_exclus
> ive ───

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

> ── begin opts_exclus
> ive ───

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

> ── end opts_exclus
> ive ───

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

> ── begin opts_exclus
> ive ───

```
         - version 8.2
         - args opts optname errcode optslab
         - local opts `opts'
         = local opts
         - local n 0
```

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

> ─────────────────────────────────────────────────── end opts_exclus
> ive ────────────────────────────────────────────────────────────────
              – opts_exclusive "`versus' `compare'"
              = opts_exclusive " "
              _____

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

> ─────────────────────────────────────────────────── end opts_exclus
> ive ────────────────────────────────────────────────────────────────
              – opts_exclusive "`abbrev' `noabbrev'"
              = opts_exclusive " "
              _____

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

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

                  ──────────────────────────────────────────────────────
 > ──────────────────────────────────────────────── end opts_exclus
 > ive ─────────────────────────────────────────────────────────
                  - 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.Wra
  > pon ───────────────────────────────────────────────────────────────
       - 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_exclus
> ive ───

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

> ── end opts_exclus
> ive ───

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

> ── end _get_diopts.Wra
> pon ───

```
                 – if "`fvwrap'" != "" {
                 = if "fvwrap(1)" != "" {
                 – FVWrap, `fvwrap'
                 = FVWrap, fvwrap(1)
                ───────────────────────────────────────────────
```

> ── begin _get_diopts.FVW
> rap ───

```
                    – syntax, fvwrap(integer)
                    – if `fvwrap' < 0 {
                    = if 1 < 0 {
                      di as err "{p}invalid option {bf:fvwrap(`fvwrap')}; " "nonnega
```

```
> tive integer required{p_end}"
               exit 198
               }
           _____

> ──────────────────────────────────────────── end _get_diopts.FVW
> rap ──────────────────────────────────────────────────────────
           – }
           – 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                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.GetDio
> pts ──────────────────────────────────────────────────────────
           – 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.GetDio
> pts ──────────────────────────────────────────────────────────
```

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

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

> ── end opts_exclus
> ive ───

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

> ── begin opts_exclus
> ive ───

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

> ── end opts_exclus
> ive ───

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

> ── begin opts_exclus
> ive ───

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

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

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

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

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

> ──────────────────────────────────────────────── end opts_exclus
> ive ───────────────────────────────────────────────────────────────
               − local fvwrapon `word' `width'
               = local fvwrapon
               − if `:length local fvwrapon' {
               = if 0 {
                 c_local fvwrapon fvwrapon(`fvwrapon')
                 }
             ─────────────────────────────────────────────

> ──────────────────────────────────────────────── end _get_diopts.Wra
> pon ───────────────────────────────────────────────────────────────
             − 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.GetDio
> pts ─────────────────────────────────────────────────
            - if `"`name2'"' == "" {
            = if `""' == "" {
            - GetDiopts DUPS, `options'
            = GetDiopts DUPS,
            ─────────────────────────────────────────────────
> ───────────────────────────────────────────── begin _get_diopts.GetDio
> pts ─────────────────────────────────────────────────
            - 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_exclus
> ive ─────────────────────────────────────────────────
            - version 8.2
            - args opts optname errcode optslab
            - local opts `opts'
```

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

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

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

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

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

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

```
> ———————————————————————————————————————— end opts_exclus
> ive ———————————————————————————————————————————————
          – opts_exclusive "`abbrev' `noabbrev'"
          = opts_exclusive " "
        _____
```

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

```
> ———————————————————————————————————————— end opts_exclus
> ive ———————————————————————————————————————————————
          – 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.Wra
> pon ───

```
        ─ 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_exclus
> ive ──

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

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

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

                  ─────────────────────────────────────────────
> ──────────────────────────────────────────── end _get_diopts.Wra
> pon ─────────────────────────────────────────────────────────
                  – 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

                  ─────────────────────────────────────────────
> ──────────────────────────────────────────── end _get_diopts.GetDio
> pts ─────────────────────────────────────────────────────────
              – }
              – 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_dio
>  pts ───────────────────────────────────────────────────────────────
        ─ local cformat `"`s(cformat)'"'
        = local cformat `""'
        ─ local sformat `"`s(sformat)'"'
        = local sformat `""'
        ─ local pformat `"`s(pformat)'"'
        = local pformat `""'
        ─ _get_eformopts , eformopts(`options') allowed(__all__) soptions
        = _get_eformopts , eformopts() allowed(__all__) soptions
              ─────────────────────────────────────────
>  ───────────────────────────────────────────────── begin _get_eformo
>  pts ───────────────────────────────────────────────────────────────
        ─ 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 T
> Ratio * ]
          - local opts `"`options'"'
          = local opts `""'
          - local 0 , `eform1' `eform' `nohr' `hr' `noshr' `shr' `or' `irr' `r
> rr' `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 TRa
  > tio ]
          - 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_eformo
> pts ──
```
                 − 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_diparmo
> pts ──
```
                 − 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 SYN
> TAXonly * ]
          - local goptions `options'
          = local goptions level(95)
          - SpliceGlobals junk , `goptions'
          = SpliceGlobals junk , level(95)
          ──────────────────────────────────────────────────────────
> ──────────────────────────────────────── begin _get_diparmopts.SpliceGlob
> als ───────────────────────────────────────────────────────────────
          - syntax name(id="macro name" name=c_diparm) [, diparm(string asis
> ) Level(cilevel) dof(passthru) syntaxonly ]
          - if `"`dof'"' == "" & `"`e(df_r)'"' != "" {
          = if `""' == "" & `"217"' != "" {
          - capture confirm integer number `e(df_r)'
          = capture confirm integer number 217
          - if !c(rc) {
          - local gdof dof(`e(df_r)')
          = local gdof dof(217)
          - }
          - 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.SpliceGlob
> als ───────────────────────────────────────────────────────────────
          - 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' `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 `""' == "" {
    −  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_diparmo
> pts ────────────────────────────────────────────────────────
    −  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_dio
> pts ──────────────────────────────────────────────────────────
          - 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.GetDio
> pts ──────────────────────────────────────────────────────────
          - 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_exclus
> ive ──────────────────────────────────────────────────────────
          - version 8.2
          - args opts optname errcode optslab
          - local opts `opts'
          = local opts
          - local n 0
          - while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          - if `n' < 2 {
          = if 0 < 2 {
```

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

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

> ─── begin opts_exclus
> ive ──

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

> ─── end opts_exclus
> ive ──

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

> ─── begin opts_exclus
> ive ──

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

> ─── end opts_exclus
> ive ──

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

> ─── begin opts_exclus

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

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

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

> ─── end opts_exclus
> ive ───

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

> ─── begin opts_exclus
> ive ───

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

> ─── end opts_exclus
> ive ───

```
          – opts_exclusive "`versus' `compare'"
          = opts_exclusive " "
```

> ─── begin opts_exclus
> ive ───

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

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

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

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

          ─────────────────────────────────────────────
> ─────────────────────────────────────────────────── end opts_exclus
> ive ─────────────────────────────────────────────────
                 – 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.Wra
> pon ───

```
        − 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_exclus
> ive ───

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

> ─── end opts_exclus

```
> ive ─────────────────────────────────────────────────────────
              – local fvwrapon `word' `width'
              = local fvwrapon
              – if `:length local fvwrapon' {
              = if 0 {
                c_local fvwrapon fvwrapon(`fvwrapon')
                }
              ─────────────────────────────────────────────────
> ───────────────────────────────────────────── end _get_diopts.Wra
> pon ─────────────────────────────────────────────────────────
              – if "`fvwrap'" != "" {
              = if "fvwrap(1)" != "" {
              – FVWrap, `fvwrap'
              = FVWrap, fvwrap(1)
              ─────────────────────────────────────────────────
> ───────────────────────────────────────────── begin _get_diopts.FVW
> rap ─────────────────────────────────────────────────────────
              – syntax, fvwrap(integer)
              – if `fvwrap' < 0 {
              = if 1 < 0 {
                di as err "{p}invalid option {bf:fvwrap(`fvwrap')}; " "nonnega
> tive integer required{p_end}"
                exit 198
                }
              ─────────────────────────────────────────────────
> ───────────────────────────────────────────── end _get_diopts.FVW
> rap ─────────────────────────────────────────────────────────
              – }
              – 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                      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.GetDio
> pts ─────────────────────────────────────────────────
          − c_local `name1' `"`diopts'"'
          = c_local __00000C `"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.GetDio
> pts ─────────────────────────────────────────────────
          − 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_exclus
> ive ─────────────────────────────────────────────────
          − version 8.2
          − args opts optname errcode optslab
          − local opts `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 "`allbaselevels' `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 "`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
          ─────────────────────────────────────────────
```

```
> ─────────────────────────────────────────────────────── end opts_exclus
> ive ──────────────────────────────────────────────────────────────
            − opts_exclusive "`emptycells' `noemptycells'"
            = opts_exclusive " "
            ──────────────────────────────────────────────────────

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

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

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

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

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

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

> ─── end opts_exclus
> ive ──

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

> ─── begin opts_exclus
> ive ──

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

> ─── end opts_exclus
> ive ──

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

> ─── begin opts_exclus
> ive ──

```
                – version 8.2
                – args opts optname errcode optslab
                – local opts `opts'
                = local opts
                – local n 0
```

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

```
        — 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.Wra
> pon ───

```
           - 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_exclus
> ive ───

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

```
  ───────────────────────────────────────────
> ──────────────────────────────────────────────── end opts_exclus
> ive ────────────────────────────────────────────
             ─ local fvwrapon `word' `width'
             = local fvwrapon
             ─ if `:length local fvwrapon' {
             = if 0 {
               c_local fvwrapon fvwrapon(`fvwrapon')
               }
             ─────────────────────────────────────────
> ──────────────────────────────────────────── end _get_diopts.Wra
> pon ─────────────────────────────────────────────
             ─ 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.GetDio
> pts ─────────────────────────────────────────────
           ─ if `"`name2'"' == "" {
           = if `""' == "" {
           ─ GetDiopts DUPS, `options'
           = GetDiopts DUPS,
             ─────────────────────────────────────────
> ──────────────────────────────────────────── begin _get_diopts.GetDio
> pts ─────────────────────────────────────────────
             ─ 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_exclus
> ive ────────────────────────────────────────────────────
            - version 8.2
            - args opts optname errcode optslab
            - local opts `opts'
            = local opts
            - local n 0
            - while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            - if `n' < 2 {
            = if 0 < 2 {
            - exit
            ─────────────────────────────────────────────────
> ──────────────────────────────────────────────────────── end opts_exclus
> ive ────────────────────────────────────────────────────
            - opts_exclusive "`allbaselevels' `nobaselevels'"
            = opts_exclusive " "
            ─────────────────────────────────────────────────
> ──────────────────────────────────────────────────────── begin opts_exclus
> ive ────────────────────────────────────────────────────
            - version 8.2
            - args opts optname errcode optslab
            - local opts `opts'
            = local opts
            - local n 0
            - while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
```

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

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

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

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

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

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

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

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

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

> ────────────────────────────────────────────────── end _get_diopts.Wra
> pon ─────────────────────────────────────────────────────
            – 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 k = `"0"'
              - }
              ─────────────────────────────────────────
```

```
            - 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 `r(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_cons_ti'"'
> !="" & "`e(consonly)'"!="1") {
        = if (`""'!="" & ""=="0" & `""'!="" & ""!="1") {
          if ("`e(cmd)'"=="asclogit" | "`e(cmd)'"=="cmclogit" | "`e(cmd)'"=="c
> mmixlogit" | "`e(cmd)'"=="cmxtmixlogit" ) {
          local asvar = `"`e(ranvars)'`e(fixvars)'`e(indvars)'"' != ""
          if `"`e(casevars)'"' != "" & `asvar' {
          local note1 "Exponentiated coefficients represent odds ratios 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_cons_note'`
> extranote'" _c
            if ("`e(cmd)'"=="mlogit" | "`e(cmd)'"=="asclogit" | "`e(cmd)'"=="cmc
> logit" | "`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_ta
> ble ───────────────────────────────────────────────────────────
          ─────────────────────────────────────────────────────────────
> ───────────────────────────────────────────────────────── end _ereturn_disp
> lay ──────────────────────────────────────────────────────────
    - }
    - if e(N)>=. {exit 459}
    - if _rc {exit _rc}
    - capture drop `eta'
    = capture drop __000004
    - capture drop `mu'
    = capture drop __000005
    - predict double `eta', xb
    = predict double __000004, xb
          ─────────────────────────────────────────────────────────────
```

```
> ─────────────────────────────────────────────────────────────────────── begin pred
> ict ─────────────────────────────────────────────────────────────────────────
      - version 8.2, missing
      - if "`e(cmd)'" == "rocreg" & "`e(predict)'" == "" {
      = if "regress" == "rocreg" & "regres_p" == "" {
        di as err "predict not allowed after nonparametric ROC"
        exit 198
        }
      - if "`e(mi)'"!="" & "`e(b)'"!="matrix" {
      = if ""!="" & "matrix"!="matrix" {
        error 321
        }
      - if _caller()<=5 | "`e(predict)'"=="" {
      = if _caller()<=5 | "regres_p"=="" {
        _predict `0'
        }
      - else {
      - local v : display string(_caller())
      - version `v', missing
      = version 7, missing
      - `e(predict)' `0'
      = regres_p double __000004, xb
        ─────────────────────────────────────────────────────────────────────
> ─────────────────────────────────────────────────────────────────────── begin regre
> s_p ─────────────────────────────────────────────────────────────────────────
      - local vv : display "version " string(_caller()) ", missing:"
      - version 6, missing
      - syntax [anything] [if] [in] [, SCores * ]
      - if `"`scores'"' != "" {
      = if `""' != "" {
        GenScores `0'
        exit
        }
      - local xopts COVratio DFBeta(string) DFIts E(string) Hat Leverage Pr(
> string) Welsch YStar(string)
      - if "`e(prefix)'" != "" {
      = if "" != "" {
        local svyopts Residuals Cooksd RSTAndard RSTUdent STDF STDR
        }
      - else if "`e(vcetype)'" == "Robust" {
      = else if "" == "Robust" {
        local svyopts Cooksd RSTAndard RSTUdent STDF STDR
        }
      - local myopts `xopts' `svyopts'
      = local myopts COVratio DFBeta(string) DFIts E(string) Hat Leverage Pr
> (string) Welsch YStar(string)
```

```
      - if "`e(prefix)'" != "" | "`e(vcetype)'" == "Robust" {
      = if "" != "" | "" == "Robust" {
        if "`e(vcetype)'" == "Robust" {
        local msg after robust estimation
        }
        else local msg after `e(prefix)' estimation
        syntax [anything] [if] [in] [, `myopts' *]
        if "`dfbeta'" != "" {
        local dfbopt dfbeta(`dfbeta')
        }
        if "`e(prefix)'" == "svy" | "`e(vcetype)'" == "Robust" {
        if "`e'" != "" {
        local eopt e(`e')
        }
        if "`pr'" != "" {
        local propt pr(`pr')
        }
        if "`ystar'" != "" {
        local ysopt ystar(`ystar')
        }
        }
        _prefix_nonoption `msg', `cooksd' `covrati' `dfbopt' `dfits' `eopt'
>  `hat' `leverag' `propt' `rstandard' `rstudent' `stdf' `stdr' `welsch' `ysopt
>  '
        }
      - _pred_se "`myopts'" `0'
      = _pred_se "COVratio DFBeta(string) DFIts E(string) Hat Leverage Pr(st
>  ring) Welsch YStar(string)" double __000004, xb
                ─────────────────────────────────────────────────────────────
>  ─────────────────────────────────────────────────── begin _pred
>  _se ───────────────────────────────────────────────────────────────
      - version 6.0, missing
      - sret clear
      - gettoken ouser 0 : 0
      - local orig `"`0'"'
      = local orig `" double __000004, xb"'
      - gettoken varn 0 : 0, parse(" ,[")
      - gettoken nxt : 0, parse(" ,[(")
      - if !(`"`nxt'"'=="" | `"`nxt'"'=="if" | `"`nxt'"'=="in" | `"`nxt'"'
>  ==",") {
      = if !(`"__000004"'=="" | `"__000004"'=="if" | `"__000004"'=="in" |
>  `"__000004"'==",") {
      - local typ `varn'
      = local typ double
      - gettoken varn 0 : 0, parse(" ,[")
      - }
```

```
        – syntax [if] [in] [, `ouser' CONStant(varname numeric) noOFFset *]
        = syntax [if] [in] [, COVratio DFBeta(string) DFIts E(string) Hat Le
> verage Pr(string) Welsch YStar(string) CONStant(varname numeric) noOFFset *]
        – if `"`options'"' != "" {
        = if `"xb"' != "" {
        – _predict `orig'
        = _predict  double __000004, xb
        – sret local done 1
        – exit
```
```
> ─────────────────────────────────────────────────────── end _pred
> _se ──────────────────────────────────────────────────────────
        – if `s(done)' { exit }
        = if 1 { exit }
```
```
> ─────────────────────────────────────────────────────── end regre
> s_p ──────────────────────────────────────────────────────────
        – }
```
```
> ─────────────────────────────────────────────────────── end pred
> ict ──────────────────────────────────────────────────────────
      – $SGLM_L 1 `eta' `mu'
      = glim_l03 1 __000004 __000005
```
```
> ─────────────────────────────────────────────────────── begin glim_
> l03 ──────────────────────────────────────────────────────────
      – version 7
      – args todo eta mu return
      – if `todo' == –1 {
      = if 1 == –1 {
        global SGLM_lt "Log"
        if "$SGLM_m" == "1" {
        global SGLM_lf "ln(u)"
        }
        else global SGLM_lf "ln(u/$SGLM_m)"
        exit
        }
      – if `todo' == 0 {
      = if 1 == 0 {
        gen double `eta' = ln(`mu'/$SGLM_m)
        exit
        }
      – if `todo' == 1 {
      = if 1 == 1 {
      – gen double `mu' = $SGLM_m*exp(`eta')
      = gen double __000005 = 1*exp(__000004)
```

```
     – exit
     ─────────────────────────────────────────────────────
>  ─────────────────────────────────────────────────────  end glim_
>  l03 ───────────────────────────────────────────────────
     – $SGLM_mu `mu'
     = glim_mu 0 . __000005
     ─────────────────────────────────────────────────────
>  ─────────────────────────────────────────────────────  begin glim
>  _mu ───────────────────────────────────────────────────
     – version 7
     – args min max mu
     – tempname eps
     – scalar `eps' = 1e–8
     = scalar __00000C = 1e–8
     – replace `mu' = `min'+`eps' if `mu'<=`min'+`eps'
     = replace __000005 = 0+__00000C if __000005<=0+__00000C
     – replace `mu' = `max'-`eps' if `mu'>=`max'-`eps'
     = replace __000005 = .-__00000C if __000005>=.-__00000C
     ─────────────────────────────────────────────────────
>  ─────────────────────────────────────────────────────  end glim
>  _mu ───────────────────────────────────────────────────
     – mat `b0' = e(b)
     = mat __00000B = e(b)
     – _post_vce_rank, checksize
     ─────────────────────────────────────────────────────
>  ─────────────────────────────────────────────────────  begin _post_vce_r
>  ank ───────────────────────────────────────────────────
     – syntax, [CHecksize]
     – if "`checksize'" != "" {
     = if "checksize" != "" {
     – tempname V
     – capture matrix `V' = e(V)
     = capture matrix __00000C = e(V)
     – if _rc {
       exit
       }
     – local cols = colsof(`V')
     = local cols = colsof(__00000C)
     – if `cols' == 0 {
     = if 12 == 0 {
       exit
       }
     – }
     – tempname V Vi rank
     – mat `V' = e(V)
     = mat __00000D = e(V)
```

```
        - mat `Vi' = invsym(`V')
        = mat __00000E = invsym(__00000D)
        - sca `rank' = rowsof(`V') - diag0cnt(`Vi')
        = sca __00000F = rowsof(__00000D) - diag0cnt(__00000E)
        - mata:st_numscalar("e(rank)", st_numscalar("`rank'"))
        = mata:st_numscalar("e(rank)", st_numscalar("__00000F"))
        ─────────────────────────────────────────────────────────────
> ──────────────────────────────────────────────────────────── end _post_vce_r
> ank ───────────────────────────────────────────────────────────────
      - local k = e(rank)
      - local from "`b0'"
      = local from "__00000B"
      - replace `z' = sum(`wt'*(`y'-`mu')^2/`v')
      = replace __000008 = sum(__000003*(piq_timing_max-__000005)^2/__000007)
      - global SGLM_ph = `z'[_N]/(`nobs'-`k')
      = global SGLM_ph = __000008[_N]/(217-7)
      - }
      - }
      - if "`from'" != "" & "`search'" == "" {
      = if "__00000B" != "" & "" == "" {
      - local initopt `"init(`from') search(off)"'
      = local initopt `"init(__00000B) search(off)"'
      - }
      - else local initopt `"search(on) maxfeas(100)"'
      - if `reg' & `"`offopt'`FROM_ORIG'"'=="" {
      = if 0 & `""'=="" {
        local iterate 0
        local nowarn "nowarning"
        }
      - local initopt "`initopt' iter(`iterate') `nowarn' "
      = local initopt "init(__00000B) search(off) iter(300)   "
      - if "`estscale'" != "" & "$SGLM_V" == "glim_v1" {
      = if "" != "" & "glim_v6" == "glim_v1" {
        local MM d0
        mat `b0' = e(b), $SGLM_ph
        local from "`b0'"
        local initopt `"init(`from', copy) search(off)"'
        }
      - if `"`scale'"'=="" {
      = if `""'=="" {
      - local scale `scale1'
      = local scale 1
      - local cd
      - }
      - else if `scale'==0 {
      = else if 1==0 {
```

```
        if `scale1' {
        local cd "square root of Pearson"
        local cd "`cd' X2-based dispersion"
        }
        }
-     else {
        if !`scale1' | (`scale1' & `scale'!=1) {
        local cd "dispersion equal to square"
        local cd "`cd' root of `scale'"
        }
        }
-     if `scale1' == 1 & `scale' != `scale1' {
=     if 1 == 1 & 1 != 1 {
        global SGLM_s1 = `scale1'
        local fixme 1
        }
-     else {
-     global SGLM_s1 = `scale'
=     global SGLM_s1 = 1
-     local fixme 0
-     }
-   tempname newdev
-   if "`opg'`unbiased'" != "" {
=   if "" != "" {
        if "`scopt'" == "" {
        tempvar scvar
        local scopt score(`scvar')
        }
        if "`unbiased'" != "" {
        local cll "`clopt'"
        local robust
        local clopt
        }
        }
-   if (!`iterate') { `iflog' di }
=   if (!300) { * di }
-   global GLIST : all globals "SGLM_*"
-   if "`estscale'" != "" & "$SGLM_V" == "glim_v1" {
=   if "" != "" & "glim_v6" == "glim_v1" {
        local sigma2 /sigma2
        local glim_lf glim_lf_scale
        global SGLM_estscale 1
        }
-   else {
-   local glim_lf glim_lf
-   global SGLM_estscale 0
```

```
      – }
      – `VV' ml model `MM' `glim_lf' (`yname': `y' = `xvars', `constant' `offopt
> ') `sigma2' [`weight'`exp'] if `touse', collinear missing max nooutput nopre
> serve `mlopts' title(Generalized linear models) `scopt' `robust' `clopt' `ml
> log' `initopt' `trace' `negh' `moptobj'
      = version 18.5, missing: ml model e2 glim_lf (piq_timing_max: piq_timing_m
> ax = rule_g rule_itr estimated 0b.stky_wg#0b.pr_ndx 0b.stky_wg#1.pr_ndx 1.st
> ky_wg#0b.pr_ndx 1.stky_wg#1.pr_ndx 0b.stky_wg#0b.not_pr_ndx 0b.stky_wg#1o.no
> t_pr_ndx 1o.stky_wg#0b.not_pr_ndx 1o.stky_wg#1o.not_pr_ndx,  )  [] if __0000
> 02, collinear missing max nooutput nopreserve  title(Generalized linear mode
> ls)  robust  nolog init(__00000B) search(off) iter(300)     negh
        ─────────────────────────────────────────────────────────────────────
> ─────────────────────────────────────────────────────────────────── begin
>  ml ───────────────────────────────────────────────────────────────────────
      – if _caller()>=11 {
      – mopt `0'
      = mopt model e2 glim_lf (piq_timing_max: piq_timing_max = rule_g rule_it
> r estimated 0b.stky_wg#0b.pr_ndx 0b.stky_wg#1.pr_ndx 1.stky_wg#0b.pr_ndx 1.s
> tky_wg#1.pr_ndx 0b.stky_wg#0b.not_pr_ndx 0b.stky_wg#1o.not_pr_ndx 1o.stky_wg
> #0b.not_pr_ndx 1o.stky_wg#1o.not_pr_ndx,  )  [] if __000002, collinear missi
> ng max nooutput nopreserve  title(Generalized linear models)  robust  nolog
> init(__00000B) search(off) iter(300)     negh
        ─────────────────────────────────────────────────────────────────────
> ─────────────────────────────────────────────────────────────────── begin m
> opt ───────────────────────────────────────────────────────────────────────
          – 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 18.5: capture noi Model  e2 glim_lf (piq_timing_max: piq_tim
> ing_max = rule_g rule_itr estimated 0b.stky_wg#0b.pr_ndx 0b.stky_wg#1.pr_ndx
>  1.stky_wg#0b.pr_ndx 1.stky_wg#1.pr_ndx 0b.stky_wg#0b.not_pr_ndx 0b.stky_wg#
> 1o.not_pr_ndx 1o.stky_wg#0b.not_pr_ndx 1o.stky_wg#1o.not_pr_ndx,  )  [] if _
> _000002, collinear missing max nooutput nopreserve  title(Generalized linear
>  models)  robust  nolog init(__00000B) search(off) iter(300)     negh
                  ────────────────────────────────────────────────────────────
> ───────────────────────────────────────────────────────── begin mopt.Mo
> del ───────────────────────────────────────────────────────────────────
        – local version = string(_caller())
        – local vv : di "version `version':"
        = local vv : di "version 18.5:"
        – version 12
        – syntax anything(id="model" name=spec) [if] [in] [fw aw pw iw] [, B
> RACKET COLlinear MISSing CONTinue lf0(string) INIT(string) CONSTraints(strin
> g) noCNSNOTEs VCE(passthru) NEGH NOPREserve TECHnique(string) ITERID(string)
>  CRITtype(string) OBS(numlist max=1 >0) TItle(string) WALDtest(integer –1) S
> VY SUBpop(string) SRSsubpop noSVYadjust SCore(passthru) noOUTput noSCVARS GR
> OUP(varname) ITERPROLOG(string) DERIVPROLOG(string) DERIVH(string) DERIVSCAL
> E(string) DERIV(string) nrderiv GNWMATrix(string) KAUXiliary(numlist int >=0
> ) MAXimize MINimize USERinfo(namelist) PUPDATED Robust CLuster(passthru) mop
> tobj(string) USEVIEWS * ]
        – if `"`moptobj'"' == "" {
        = if `""' == "" {
        – Clear
                  ────────────────────────────────────────────────────────────
> ───────────────────────────────────────────────────────── begin mopt.Cl
> ear ───────────────────────────────────────────────────────────────────
        – 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.Cl
>  ear ────────────────────────────────────────────────────────────
                    - }
                    - local maxmin `minimize' `maximize'
                    = local maxmin  maximize
                    - opts_exclusive "`maxmin'"
                    = opts_exclusive "maximize"
                    ─────────────────────────────────────────
>  ──────────────────────────────────────────────  begin opts_exclus
>  ive ────────────────────────────────────────────────────────────
                    - 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_exclus
>  ive ────────────────────────────────────────────────────────────
                    - if `:length local maxmin' {
                    = if 8 {
                    - local interactive 0
                    - }
                    - else local interactive 1
```

```
            - _get_diparmopts, diparmopts(`options') soptions syntaxonly
            = _get_diparmopts, diparmopts(nolog search(off) iter(300)) soptions
> syntaxonly
            ──────────────────────────────────────────────────────────
> ──────────────────────────────────────────────────────── begin _get_diparmo
> pts ──────────────────────────────────────────────────────────────
            - 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 S
> YNTAXonly * ]
            - local goptions `options'
            = local goptions
            - SpliceGlobals junk , `goptions'
            = SpliceGlobals junk ,
            ──────────────────────────────────────────────────────────
> ──────────────────────────────────────────────────── begin _get_diparmopts.SpliceGlob
> als ──────────────────────────────────────────────────────────────
            - syntax name(id="macro name" name=c_diparm) [, diparm(string as
> is) Level(cilevel) dof(passthru) syntaxonly ]
            - if `"`dof'"' == "" & `"`e(df_r)'"' != "" {
            = if `""' == "" & `"217"' != "" {
            - capture confirm integer number `e(df_r)'
            = capture confirm integer number 217
            - if !c(rc) {
            - local gdof dof(`e(df_r)')
            = local gdof dof(217)
            - }
            - 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.SpliceGlob
> als ──────────────────────────────────────────────────────────────
            - local 0 `", `diparmopts'"'
            = local 0 `", nolog search(off) iter(300)"'
```

```
 - 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 `"nolog search(off) iter(300)"'
 - 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
_____
```

```
  – 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 `"nolog search(off) iter(300)"'
  – if `interactive' & `:length local options' {
  = if 0 & 27 {
    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 248 {
               – local ++ieq
               – gettoken eq eqspec : eqspec, bind
               – if bsubstr(trim("`eq'"),1,1) == "/" {
               = if bsubstr(trim("(piq_timing_max: piq_timing_max = rule_g rule_itr
>  estimated 0b.stky_wg#0b.pr_ndx 0b.stky_wg#1.pr_ndx 1.stky_wg#0b.pr_ndx 1.st
> ky_wg#1.pr_ndx 0b.stky_wg#0b.not_pr_ndx 0b.stky_wg#1o.not_pr_ndx 1o.stky_wg#
> 0b.not_pr_ndx 1o.stky_wg#1o.not_pr_ndx,  )"),1,1) == "/" {
                   local eq = bsubstr(trim("`eq'"),2,.)
                   local spec : subinstr local spec "/`eq'" `"("`eq'":`fparm')"', wor
> d
                   }
               – else {
               – gettoken p1 p2 : eq, parse("()")
               – local p2 = trim(`"`p2'"')
               = local p2 = trim(`"piq_timing_max: piq_timing_max = rule_g rule_itr
>  estimated 0b.stky_wg#0b.pr_ndx 0b.stky_wg#1.pr_ndx 1.stky_wg#0b.pr_ndx 1.st
> ky_wg#1.pr_ndx 0b.stky_wg#0b.not_pr_ndx 0b.stky_wg#1o.not_pr_ndx 1o.stky_wg#
> 0b.not_pr_ndx 1o.stky_wg#1o.not_pr_ndx,  )"')
                   – if bsubstr("`p2'",1,1) == "," {
                   = if bsubstr("piq_timing_max: piq_timing_max = rule_g rule_itr estim
> ated 0b.stky_wg#0b.pr_ndx 0b.stky_wg#1.pr_ndx 1.stky_wg#0b.pr_ndx 1.stky_wg#
> 1.pr_ndx 0b.stky_wg#0b.not_pr_ndx 0b.stky_wg#1o.not_pr_ndx 1o.stky_wg#0b.not
> _pr_ndx 1o.stky_wg#1o.not_pr_ndx,  )",1,1) == "," {
                       gettoken comma p2 : p2, parse(",")
                       local p2 = trim(`"`p2'"')
                       }
                   – if `"`p1'`p2'"' == "()" {
                   = if `"(piq_timing_max: piq_timing_max = rule_g rule_itr estimated 0
> b.stky_wg#0b.pr_ndx 0b.stky_wg#1.pr_ndx 1.stky_wg#0b.pr_ndx 1.stky_wg#1.pr_n
> dx 0b.stky_wg#0b.not_pr_ndx 0b.stky_wg#1o.not_pr_ndx 1o.stky_wg#0b.not_pr_nd
> x 1o.stky_wg#1o.not_pr_ndx,  )"' == "()" {
                       local spec : subinstr local spec "`eq'" "(eq`ieq':)", word
                       }
                   – }
               – }
               – while `:length local eqspec' {
               = while 4 {
               – 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')"', wor
> d

                      }
          – 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')"', wor
> d

              }
              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 18.5: mark __00000D if __000002  [],
          – tempname eqlist
          – .`eqlist' = ._eqlist.new, eqopts(NOCONStant FREEParm) eqargopts(OF
> Fset EXPosure) noneedvarlist numdepvars(0) needequal
          = .__00000E = ._eqlist.new, eqopts(NOCONStant FREEParm) eqargopts(OF
> Fset 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._i
> nit ───────────────────────────────────────────────────────────────
            – version 9.2
            – .n_eq = 0
            – .gl_if = ""
            – .gl_in = ""
            – .gl_wgt = ""
            – .gl_options = ""
            – .eq_list = {}
           ──────────────────────────────────────────────────
> ──────────────────────────────────────────────────────── end _eqlist._i
> nit ───────────────────────────────────────────────────────────────
            – ._setup `0'
            = ._setup , eqopts(NOCONStant FREEParm) eqargopts(OFFset EXPosure)
>  noneedvarlist numdepvars(0) needequal
           ──────────────────────────────────────────────────
> ──────────────────────────────────────────────────────── begin _eqlist._se
> tup ───────────────────────────────────────────────────────────────
            – version 9.2
            – .mark_list = {}
            – .mark_name = {}
            – .mark_opts.reset
           ──────────────────────────────────────────────────
> ──────────────────────────────────────────────────────── begin _optlist.re
> set ───────────────────────────────────────────────────────────────
            – version 9
            – .options = {}
            – .names = {}
           ──────────────────────────────────────────────────
> ──────────────────────────────────────────────────────── end _optlist.re
> set ───────────────────────────────────────────────────────────────
            – .smark_list = {}
            – .smark_name = {}
            – .smark_opts.reset
           ──────────────────────────────────────────────────
> ──────────────────────────────────────────────────────── begin _optlist.re
```

```
> set ─────────────────────────────────────────────────────────
              – version 9
              – .options = {}
              – .names = {}
              ─────────────────────────────────────────────
> ───────────────────────────────────────────────── end _optlist.re
> set ─────────────────────────────────────────────────────────
              – .rmcoll_list = {}
              – .rmcoll_name = {}
              – .rmcoll_opts.reset
              ─────────────────────────────────────────────
> ───────────────────────────────────────────────── begin _optlist.re
> set ─────────────────────────────────────────────────────────
              – version 9
              – .options = {}
              – .names = {}
              ─────────────────────────────────────────────
> ───────────────────────────────────────────────── end _optlist.re
> set ─────────────────────────────────────────────────────────
              – .rmdcoll_list = {}
              – .rmdcoll_name = {}
              – .rmdcoll_opts.reset
              ─────────────────────────────────────────────
> ───────────────────────────────────────────────── begin _optlist.re
> set ─────────────────────────────────────────────────────────
              – version 9
              – .options = {}
              – .names = {}
              ─────────────────────────────────────────────
> ───────────────────────────────────────────────── end _optlist.re
> set ─────────────────────────────────────────────────────────
              – syntax [, EQopts(namelist) EQARGopts(namelist) noNEEDVARLIST C
> OMMONopts(string asis) MARKopts(namelist) SMARKopts(namelist) RMCOLLopts(nam
> elist) RMDCOLLopts(namelist) NUMDEPvars(numlist integer >=0) NEEDEQUAL WTYPE
> S(string) IGNORENOCONS ]
              – .eq_opts_allowed.reset
              ─────────────────────────────────────────────
> ───────────────────────────────────────────────── begin _optlist.re
> set ─────────────────────────────────────────────────────────
              – version 9
              – .options = {}
              – .names = {}
              ─────────────────────────────────────────────
> ───────────────────────────────────────────────── end _optlist.re
> set ─────────────────────────────────────────────────────────
              – foreach opt of local eqopts {
```

```
              — .eq_opts_allowed.addopt `opt'
              = .eq_opts_allowed.addopt NOCONStant
                    ─────────────────────────────────────────────

>  ───────────────────────────────────────────────────────  begin _optlist.add
> opt ──────────────────────────────────────────────────────────────────
              — 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.add
> opt ──────────────────────────────────────────────────────────────────
              — }
              — .eq_opts_allowed.addopt `opt'
              = .eq_opts_allowed.addopt FREEParm
                    ─────────────────────────────────────────────

>  ───────────────────────────────────────────────────────  begin _optlist.add
> opt ──────────────────────────────────────────────────────────────────
              — 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.add
> opt ──────────────────────────────────────────────────────────────────
              — }
              — foreach opt of local eqargopts {
              — .eq_opts_allowed.addopt `opt', passthru
              = .eq_opts_allowed.addopt OFFset, passthru
                    ─────────────────────────────────────────────
```

```
> ─────────────────────────────────────────────────── begin _optlist.add
> opt ─────────────────────────────────────────────────────────────────
              ─ 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.add
> opt ─────────────────────────────────────────────────────────────────
              ─ }
              ─ .eq_opts_allowed.addopt `opt', passthru
              = .eq_opts_allowed.addopt EXPosure, passthru
              ─────────────────────────────────────────────────────────

> ─────────────────────────────────────────────────── begin _optlist.add
> opt ─────────────────────────────────────────────────────────────────
              ─ 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.add
> opt ─────────────────────────────────────────────────────────────────
              ─ }
              ─ 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._se
> tup ——————————————————————————————————————————————————————————
```

```
> ———————————————————————————————————————————————————— end _eqlist.
> new ——————————————————————————————————————————————————————————
          — .`eqlist'.parse `spec'
          = .__00000E.parse  (piq_timing_max: piq_timing_max = rule_g rule_itr
>  estimated 0b.stky_wg#0b.pr_ndx 0b.stky_wg#1.pr_ndx 1.stky_wg#0b.pr_ndx 1.st
> ky_wg#1.pr_ndx 0b.stky_wg#0b.not_pr_ndx 0b.stky_wg#1o.not_pr_ndx 1o.stky_wg#
> 0b.not_pr_ndx 1o.stky_wg#1o.not_pr_ndx,  )  []
```

```
> ——————————————————————————————————————————————————— begin _eqlist.pa
> rse ——————————————————————————————————————————————————————————
          — version 9.2
          — ._init
```

```
> ——————————————————————————————————————————————————— begin _eqlist._i
```

```
> nit ─────────────────────────────────────────────────────────
               – version 9.2
               – .n_eq = 0
               – .gl_if = ""
               – .gl_in = ""
               – .gl_wgt = ""
               – .gl_options = ""
               – .eq_list = {}
               ─────────────────────────────────────────────────
> ──────────────────────────────────────────────── end _eqlist._i
> nit ─────────────────────────────────────────────────────────
          – local MARKOPTLIST `"`.mark_opts.dumpoptions'"'
          ──────────────────────────────────────────────────────
> ──────────────────────────────────────── begin _optlist.dumpopti
> ons ─────────────────────────────────────────────────────────
               – 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.dumpopti
> ons ─────────────────────────────────────────────────────────
          = local MARKOPTLIST `""'
          – local SMARKOPTLIST `"`.smark_opts.dumpoptions'"'
          ──────────────────────────────────────────────────────
> ──────────────────────────────────────── begin _optlist.dumpopti
> ons ─────────────────────────────────────────────────────────
               – 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.dumpopti
> ons ─────────────────────────────────────────────────────────
```

```
            = local SMARKOPTLIST `""'
            - local RMCOLLOPTLIST `"'`.rmcoll_opts.dumpoptions'"'
                  ─────────────────────────────────────────────
> ─────────────────────────────────────────── begin _optlist.dumpopti
> ons ─────────────────────────────────────────────────────────────────
            - 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.dumpopti
> ons ─────────────────────────────────────────────────────────────────
            = local RMCOLLOPTLIST `""'
            - local RMDCOLLOPTLIST `"'`.rmdcoll_opts.dumpoptions'"'
                  ─────────────────────────────────────────────
> ─────────────────────────────────────────── begin _optlist.dumpopti
> ons ─────────────────────────────────────────────────────────────────
            - 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.dumpopti
> ons ─────────────────────────────────────────────────────────────
            = local RMDCOLLOPTLIST `""'
            - _parse expand EQ GL : 0, gweight common( `MARKOPTLIST' `SMARKOPT
> LIST' `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 = rule_g rule_itr est
> imated 0b.stky_wg#0b.pr_ndx 0b.stky_wg#1.pr_ndx 1.stky_wg#0b.pr_ndx 1.stky_w
> g#1.pr_ndx 0b.stky_wg#0b.not_pr_ndx 0b.stky_wg#1o.not_pr_ndx 1o.stky_wg#0b.n
> ot_pr_ndx 1o.stky_wg#1o.not_pr_ndx,  )  []"', parse(",()[]")
- local rebind = `"`1'"' != "(" & `"`2'"' == "("
= local rebind = `"("' != "(" & `"piq_timing_max: piq_timing_max =
>  rule_g rule_itr estimated 0b.stky_wg#0b.pr_ndx 0b.stky_wg#1.pr_ndx 1.stky_w
> g#0b.pr_ndx 1.stky_wg#1.pr_ndx 0b.stky_wg#0b.not_pr_ndx 0b.stky_wg#1o.not_pr
> _ndx 1o.stky_wg#0b.not_pr_ndx 1o.stky_wg#1o.not_pr_ndx"' == "("
- }
- 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' `SMARK
> OPTLIST' `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') `.needequal' `.
> noneedvarlist' wtypes(`.wtypes') `.nocons_ignore'
              = .eq_list[1] = ._eqspec.new, numdepvars(0) needequal noneedvarlis
> t 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 noNE
> EDVARLIST 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(600000284140):piq_timing_max: piq_timing
> _max = rule_g rule_itr estimated 0b.stky_wg#0b.pr_ndx 0b.stky_wg#1.pr_ndx 1.
> stky_wg#0b.pr_ndx 1.stky_wg#1.pr_ndx 0b.stky_wg#0b.not_pr_ndx 0b.stky_wg#1o.
> not_pr_ndx 1o.stky_wg#0b.not_pr_ndx 1o.stky_wg#1o.not_pr_ndx
              ─────────────────────────────────────────────────
> ──────────────────────────────────────────────────────── begin _eqspec.pa
> rse ───────────────────────────────────────────────────────────────
              – version 9.2
              – _on_colon_parse `0'
              = _on_colon_parse __key(600000284140):piq_timing_max: piq_timing
> _max = rule_g rule_itr estimated 0b.stky_wg#0b.pr_ndx 0b.stky_wg#1.pr_ndx 1.
> stky_wg#0b.pr_ndx 1.stky_wg#1.pr_ndx 0b.stky_wg#0b.not_pr_ndx 0b.stky_wg#1o.
> not_pr_ndx 1o.stky_wg#0b.not_pr_ndx 1o.stky_wg#1o.not_pr_ndx
              ─────────────────────────────────────────────────
> ──────────────────────────────────────────────────────── begin _on_colon_pa
> rse ───────────────────────────────────────────────────────────────
              – 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(600000284140)"' == ":" {
                sreturn local after `"`after'"'
                exit
                }
              – while `"`COLON'"' != ":" & `"`after'"' != "" {
              = while `""' != ":" & `":piq_timing_max: piq_timing_max = rule
> _g rule_itr estimated 0b.stky_wg#0b.pr_ndx 0b.stky_wg#1.pr_ndx 1.stky_wg#0b.
> pr_ndx 1.stky_wg#1.pr_ndx 0b.stky_wg#0b.not_pr_ndx 0b.stky_wg#1o.not_pr_ndx
> 1o.stky_wg#0b.not_pr_ndx 1o.stky_wg#1o.not_pr_ndx"' != "" {
              – 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 `":"' != ":" & `"piq_timing_max: piq_timing_max = rule
> _g rule_itr estimated 0b.stky_wg#0b.pr_ndx 0b.stky_wg#1.pr_ndx 1.stky_wg#0b.
> pr_ndx 1.stky_wg#1.pr_ndx 0b.stky_wg#0b.not_pr_ndx 0b.stky_wg#1o.not_pr_ndx
> 1o.stky_wg#0b.not_pr_ndx 1o.stky_wg#1o.not_pr_ndx"' != "" {
              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 `"__key(600000284140)"'
            — sreturn local after `"`after'"'
            = sreturn local after `"piq_timing_max: piq_timing_max = rule_
> g rule_itr estimated 0b.stky_wg#0b.pr_ndx 0b.stky_wg#1.pr_ndx 1.stky_wg#0b.p
> r_ndx 1.stky_wg#1.pr_ndx 0b.stky_wg#0b.not_pr_ndx 0b.stky_wg#1o.not_pr_ndx 1
> o.stky_wg#0b.not_pr_ndx 1o.stky_wg#1o.not_pr_ndx"'
                    ─────────────────────────────────────────
> ─────────────────────────────────────────────── end _on_colon_pa
> rse ──────────────────────────────────────────────────────
            — local ol `s(before)'
            = local ol __key(600000284140)
            — if `:list sizeof ol' {
            = if 1 {
            — local OPTLIST `"`.`ol'.dumpoptions'"'
                    ─────────────────────────────────────────
> ─────────────────────────────────────────────── begin _optlist.dumpopti
> ons ──────────────────────────────────────────────────────
```

```
               – 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) EXPosure(
> passthru)
               – }
               – local optlist : list uniq optlist
               – sreturn local optlist `"`optlist'"'
               = sreturn local optlist `"NOCONStant FREEParm OFFset(passthru)
>  EXPosure(passthru)"'
               – class exit `"`optlist'"'
               = class exit `"NOCONStant FREEParm OFFset(passthru) EXPosure(p
> assthru)"'
               ─────────────────────────────────────────────────────
> ──────────────────────────────────────────────── end _optlist.dumpopti
> ons ────────────────────────────────────────────────────────────
             = local OPTLIST `"NOCONStant FREEParm OFFset(passthru) EXPosure(
> passthru)"'
             – local OPTNAMES `"`.`ol'.dumpnames'"'
               ─────────────────────────────────────────────────────
> ──────────────────────────────────────────────── begin _optlist.dumpna
> mes ────────────────────────────────────────────────────────────
               – 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 exposure
> "'
            – class exit `"`namelist'"'
            = class exit `"noconstant freeparm offset exposure"'
            ──────────────────────────────────────────────────
> ──────────────────────────────────────────── end _optlist.dumpna
> mes ────────────────────────────────────────────────
            = 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 = rule_g rule_itr est
> imated 0b.stky_wg#0b.pr_ndx 0b.stky_wg#1.pr_ndx 1.stky_wg#0b.pr_ndx 1.stky_w
> g#1.pr_ndx 0b.stky_wg#0b.not_pr_ndx 0b.stky_wg#1o.not_pr_ndx 1o.stky_wg#0b.n
> ot_pr_ndx 1o.stky_wg#1o.not_pr_ndx"'
            – if `"`.wtypes'"' != "" {
            = if `""' != "" {
              local wgt "[`.wtypes']"
              }
            – syntax [anything(equalok)] [if] [in] `wgt' [, `OPTLIST' `NOCON
> S' *]
            = syntax [anything(equalok)] [if] [in]  [, NOCONStant FREEParm O
> FFset(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 14 {
              - 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
                ─────────────────────────────────────────────────────
```

```
              – 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
                ─────────────────────────────────────────────────────
```

```
              – }
              – 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 `"= rule_g rule_itr estimated 0b.stky_wg#0b.pr_ndx 0b.stky_
>  wg#1.pr_ndx 1.stky_wg#0b.pr_ndx 1.stky_wg#1.pr_ndx 0b.stky_wg#0b.not_pr_ndx
>  0b.stky_wg#1o.not_pr_ndx 1o.stky_wg#0b.not_pr_ndx 1o.stky_wg#1o.not_pr_ndx"'
>   == "" {
                if 0`.needequal' {
                if `.needvarlist' | (`:length local DEPVARS' != 0 & `.n_depvar
>  s') {
                di as err "equal sign required to separate depvars from indepv
>  ars"
                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 tsu
>   nab ─────────────────────────────────────────────────────────
        −   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(int
> eger 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 tsu
> nab ───

```
                – }
                – if `:list sizeof INDEPVARS' {
                = if 11 {
                – fvunab INDEPVARS : `INDEPVARS'
                = fvunab INDEPVARS :  rule_g rule_itr estimated 0b.stky_wg#0b.pr
> _ndx 0b.stky_wg#1.pr_ndx 1.stky_wg#0b.pr_ndx 1.stky_wg#1.pr_ndx 0b.stky_wg#0
> b.not_pr_ndx 0b.stky_wg#1o.not_pr_ndx 1o.stky_wg#0b.not_pr_ndx 1o.stky_wg#1o
> .not_pr_ndx
                ─────────────────────────────────────────────────
```

> ── begin fvu
> nab ───

```
                – version 11
                – _on_colon_parse `0'
                = _on_colon_parse INDEPVARS :  rule_g rule_itr estimated 0b.st
> ky_wg#0b.pr_ndx 0b.stky_wg#1.pr_ndx 1.stky_wg#0b.pr_ndx 1.stky_wg#1.pr_ndx 0
> b.stky_wg#0b.not_pr_ndx 0b.stky_wg#1o.not_pr_ndx 1o.stky_wg#0b.not_pr_ndx 1o
> .stky_wg#1o.not_pr_ndx
                ─────────────────────────────────────────────────
```

> ── begin _on_colon_pa
> rse ───

```
                – 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 `"INDEPVARS "' == ":" {
                  sreturn local after `"`after'"'
                  exit
```

```
                            }
            − while `"`COLON'"' != ":" & `"`after'"' != "" {
            = while `""' != ":" & `":   rule_g rule_itr estimated 0b.stky
> _wg#0b.pr_ndx 0b.stky_wg#1.pr_ndx 1.stky_wg#0b.pr_ndx 1.stky_wg#1.pr_ndx 0b.
> stky_wg#0b.not_pr_ndx 0b.stky_wg#1o.not_pr_ndx 1o.stky_wg#0b.not_pr_ndx 1o.s
> tky_wg#1o.not_pr_ndx"' != "" {
                        − 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 `":"' != ":" & `"   rule_g rule_itr estimated 0b.stky
> _wg#0b.pr_ndx 0b.stky_wg#1.pr_ndx 1.stky_wg#0b.pr_ndx 1.stky_wg#1.pr_ndx 0b.
> stky_wg#0b.not_pr_ndx 0b.stky_wg#1o.not_pr_ndx 1o.stky_wg#0b.not_pr_ndx 1o.s
> tky_wg#1o.not_pr_ndx"' != "" {
                          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 `"INDEPVARS "'
                      − sreturn local after `"`after'"'
                      = sreturn local after `"   rule_g rule_itr estimated 0b.stky_
> wg#0b.pr_ndx 0b.stky_wg#1.pr_ndx 1.stky_wg#0b.pr_ndx 1.stky_wg#1.pr_ndx 0b.s
> tky_wg#0b.not_pr_ndx 0b.stky_wg#1o.not_pr_ndx 1o.stky_wg#0b.not_pr_ndx 1o.st
```

```
> ky_wg#1o.not_pr_ndx"'
                                ──────────────────────────────────────
> ──────────────────────────────────────────────── end _on_colon_pa
> rse ─────────────────────────────────────────────────────────────
                 – local 0 `"`s(before)'"'
                 = local 0 `"INDEPVARS "'
                 – syntax name(id="macro name" name=user)
                 – local 0 `"`s(after)'"'
                 = local 0 `"  rule_g rule_itr estimated 0b.stky_wg#0b.pr_ndx 0
> b.stky_wg#1.pr_ndx 1.stky_wg#0b.pr_ndx 1.stky_wg#1.pr_ndx 0b.stky_wg#0b.not_
> pr_ndx 0b.stky_wg#1o.not_pr_ndx 1o.stky_wg#0b.not_pr_ndx 1o.stky_wg#1o.not_p
> r_ndx"'
                 – syntax [varlist(ts fv default=none)] [, MIN(integer 1) MAX(i
> nteger 32000) NAME(string) ]
                 – c_local `user' `varlist'
                 = c_local INDEPVARS rule_g rule_itr estimated 0b.stky_wg#0b.pr
> _ndx 0b.stky_wg#1.pr_ndx 1.stky_wg#0b.pr_ndx 1.stky_wg#1.pr_ndx 0b.stky_wg#0
> b.not_pr_ndx 0b.stky_wg#1o.not_pr_ndx 1o.stky_wg#0b.not_pr_ndx 1o.stky_wg#1o
> .not_pr_ndx
                 – local n : list sizeof varlist
                 – if (`min' <= `n' & `n' <= `max') exit
                 = if (1 <= 11 & 11 <= 32000) exit
                                ──────────────────────────────────────
> ──────────────────────────────────────────────────────── end fvu
> nab ─────────────────────────────────────────────────────────────
                – }
                – if inlist("noconstant", "`noconstant'", "`constant'") {
                = if inlist("noconstant", "", "") {
                  if "`INDEPVARS'" == "" & ! `.nocons_ignore' {
                  di as err "independent variables are required when option noco
> nstant 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 = `"rule_g rule_itr estimated 0b.stky_wg#0b.pr_ndx
> 0b.stky_wg#1.pr_ndx 1.stky_wg#0b.pr_ndx 1.stky_wg#1.pr_ndx 0b.stky_wg#0b.not
> _pr_ndx 0b.stky_wg#1o.not_pr_ndx 1o.stky_wg#0b.not_pr_ndx 1o.stky_wg#1o.not_
> pr_ndx"'
            – .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.pa
> rse ──
```
        – }
        – local MARKOPTLIST `"`.mark_opts.dumpoptions'"'
```

> ────────────────────────────────────── begin _optlist.dumpopti
> ons ───
```
        – 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.dumpopti
> ons ───
```
        = local MARKOPTLIST `""'
        – local MARKOPTNAMES `"`.mark_opts.dumpnames'"'
```

> ────────────────────────────────────── begin _optlist.dumpna
> mes ───
```
        – 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.dumpna
 > mes ─────────────────────────────────────────────────────────
               = local MARKOPTNAMES `""'
               ─ local OPTLIST1 : subinstr local MARKOPTLIST "(passthru)" "(strin
 > g asis)", all
               ─ local SMARKOPTLIST `"`.smark_opts.dumpoptions'"'
               ──────────────────────────────────────────────
 > ──────────────────────────────────────────────── begin _optlist.dumpopti
 > ons ─────────────────────────────────────────────────────────
               ─ 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.dumpopti
 > ons ─────────────────────────────────────────────────────────
               = local SMARKOPTLIST `""'
               ─ local SMARKOPTNAMES `"`.smark_opts.dumpnames'"'
               ──────────────────────────────────────────────
 > ──────────────────────────────────────────────── begin _optlist.dumpna
 > mes ─────────────────────────────────────────────────────────
               ─ 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.dumpna
> mes ─────────────────────────────────────────────────────────────
              = local SMARKOPTNAMES `""'
              - local OPTLIST1s : subinstr local SMARKOPTLIST "(passthru)" "(str
> ing asis)", all
              - local RMCOLLOPTLIST `"'`.rmcoll_opts.dumpoptions'"'
              ─────────────────────────────────────────────────────

> ─────────────────────────────────────────────── begin _optlist.dumpopti
> ons ─────────────────────────────────────────────────────────────
                 - 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.dumpopti
> ons ─────────────────────────────────────────────────────────────
              = local RMCOLLOPTLIST `""'
              - local RMCOLLOPTNAMES `"'`.rmcoll_opts.dumpnames'"'
              ─────────────────────────────────────────────────────

> ─────────────────────────────────────────────── begin _optlist.dumpna
> mes ─────────────────────────────────────────────────────────────
                 - 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.dumpna
> mes ─────────────────────────────────────────────────────────────
              = local RMCOLLOPTNAMES `""'
              - local OPTLIST2 : subinstr local RMCOLLOPTLIST "(passthru)" "(str
> ing asis)", all
              - local RMDCOLLOPTLIST `"'`.rmdcoll_opts.dumpoptions'"'
              ─────────────────────────────────────────────────────

> ─────────────────────────────────────────────── begin _optlist.dumpopti
```

```
> ons ─────────────────────────────────────────────────────────────────
              – 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.dumpopti
> ons ─────────────────────────────────────────────────────────────────
           = local RMDCOLLOPTLIST `""'
           – local RMDCOLLOPTNAMES `"'`.rmdcoll_opts.dumpnames'"'
              ─────────────────────────────────────────────────────────
> ─────────────────────────────────────────────── begin _optlist.dumpna
> mes ─────────────────────────────────────────────────────────────────
              – 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.dumpna
> mes ─────────────────────────────────────────────────────────────────
           = local RMDCOLLOPTNAMES `""'
           – local OPTLIST3 : subinstr local RMDCOLLOPTLIST "(passthru)" "(st
> ring asis)", all
           – local 0 `", `GL_op'"'
           = local 0 `", "'
           – syntax [, `OPTLIST1' `OPTLIST1s' `OPTLIST2' `OPTLIST3' COLlinear
>  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 = 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.pa

> rse ──
```
       – 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 __00000D
       – 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 "__00000D" != "__00000D" {
         `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.i
> tem ─────────────────────────────────────────────────────────────
                    - version 9.2
                    - args item
                    - ._check_eq_item_name item, `item'
                    = ._check_eq_item_name item, indepvars
                      ───────────────────────────────────────────────

> ─────────────────────────────────────────── begin _eqspec._check_eq_item_n
> ame ─────────────────────────────────────────────────────────────
                    - 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_n
> ame ─────────────────────────────────────────────────────────────
                    - local value `"`.`item''"'
                    = local value `"rule_g rule_itr estimated 0b.stky_wg#0b.pr_ndx
>   0b.stky_wg#1.pr_ndx 1.stky_wg#0b.pr_ndx 1.stky_wg#1.pr_ndx 0b.stky_wg#0b.no
> t_pr_ndx 0b.stky_wg#1o.not_pr_ndx 1o.stky_wg#0b.not_pr_ndx 1o.stky_wg#1o.not
> _pr_ndx"'
                    - sreturn local value `"`value'"'
                    = sreturn local value `"rule_g rule_itr estimated 0b.stky_wg#0
> b.pr_ndx 0b.stky_wg#1.pr_ndx 1.stky_wg#0b.pr_ndx 1.stky_wg#1.pr_ndx 0b.stky_
> wg#0b.not_pr_ndx 0b.stky_wg#1o.not_pr_ndx 1o.stky_wg#0b.not_pr_ndx 1o.stky_w
> g#1o.not_pr_ndx"'
                    - class exit `"`value'"'
                    = class exit `"rule_g rule_itr estimated 0b.stky_wg#0b.pr_ndx
> 0b.stky_wg#1.pr_ndx 1.stky_wg#0b.pr_ndx 1.stky_wg#1.pr_ndx 0b.stky_wg#0b.not
> _pr_ndx 0b.stky_wg#1o.not_pr_ndx 1o.stky_wg#0b.not_pr_ndx 1o.stky_wg#1o.not_
> pr_ndx"'
                      ───────────────────────────────────────────────

> ──────────────────────────────────────────────────── end _eqspec.i
```

```
> tem ─────────────────────────────────────────────────────────────────
               - class exit `"`s(value)'"'
               = class exit `"rule_g rule_itr estimated 0b.stky_wg#0b.pr_ndx 0b
> .stky_wg#1.pr_ndx 1.stky_wg#0b.pr_ndx 1.stky_wg#1.pr_ndx 0b.stky_wg#0b.not_p
> r_ndx 0b.stky_wg#1o.not_pr_ndx 1o.stky_wg#0b.not_pr_ndx 1o.stky_wg#1o.not_pr
> _ndx"'
               ────────────────────────────────────────────────────────
> ─────────────────────────────────────────────────────────────── end _eqlist
> .eq ─────────────────────────────────────────────────────────────────
             = local xvarsi `"rule_g rule_itr estimated 0b.stky_wg#0b.pr_ndx 0b
> .stky_wg#1.pr_ndx 1.stky_wg#0b.pr_ndx 1.stky_wg#1.pr_ndx 0b.stky_wg#0b.not_p
> r_ndx 0b.stky_wg#1o.not_pr_ndx 1o.stky_wg#0b.not_pr_ndx 1o.stky_wg#1o.not_pr
> _ndx"'
               - 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.i
> tem ─────────────────────────────────────────────────────────────────
               - version 9.2
               - args item
               - ._check_eq_item_name item, `item'
               = ._check_eq_item_name item, nocons
               ────────────────────────────────────────────────────────
> ───────────────────────────────────────────────── begin _eqspec._check_eq_item_n
> ame ─────────────────────────────────────────────────────────────────
               - 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_n
> ame ─────────────────────────────────────────────────────────────────────
                – local value `"`.`item''"'
                = local value `"0"'
                – sreturn local value `"`value'"'
                = sreturn local value `"0"'
                – class exit `"`value'"'
                = class exit `"0"'
                ─────────────────────────────────────────
> ──────────────────────────────────────────────────────── end _eqspec.i
> tem ─────────────────────────────────────────────────────────────────────
                – class exit `"`s(value)'"'
                = class exit `"0"'
                ─────────────────────────────────────────
> ──────────────────────────────────────────────────────────── end _eqlist
> .eq ─────────────────────────────────────────────────────────────────────
            = local noconsi `"0"'
            – local dim = `dim' + `:list sizeof xvarsi'
            = local dim =  + 11
            – if "`noconsi'" == "0" {
            = if "0" == "0" {
            – local ++dim
            – }
            – }
            – sreturn local value `"`dim'"'
            = sreturn local value `"12"'
            – class exit `"`s(value)'"'
            = class exit `"12"'
                ─────────────────────────────────────────
> ──────────────────────────────────────────────────────────── end _eqlist.
> dim ─────────────────────────────────────────────────────────────────────
          = global ML_dim = 12
          – 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.i
> tem ────────────────────────────────────────────────────────
                 – version 9.2
                 – args item
                 – ._check_eq_item_name item, `item'
                 = ._check_eq_item_name item, depvars
                 ────────────────────────────────────────────────

> ─────────────────────────────────────── begin _eqspec._check_eq_item_n
> ame ────────────────────────────────────────────────────────
                 – version 9.2
                 – capture syntax name(name=c_item) [, NAME DEPvars INDEPvars I
> F 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' `oth
> er' `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_n
> ame ────────────────────────────────────────────────────────
                 – 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"'
              ────────────────────────────────────────────────────
```
```
              – class exit `"`s(value)'"'
              = class exit `"piq_timing_max"'
              ────────────────────────────────────────────────────
```
```
          = local depvars piq_timing_max
          – local eq `.`eqlist'.eq name `i''
          ────────────────────────────────────────────────────
```
```
              – 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
              ────────────────────────────────────────────────────
```
```
              – version 9.2
              – args item
              – ._check_eq_item_name item, `item'
              = ._check_eq_item_name item, name
              ────────────────────────────────────────────────────
```
```
                – version 9.2
                – capture syntax name(name=c_item) [, NAME DEPvars INDEPvars I
> F 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' `oth
```

```
> er' `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_n
> ame ─────
```
              – 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.i
> tem ─────
```
              – 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.i
> tem ───

```
          — version 9.2
          — args item
          — ._check_eq_item_name item, `item'
          = ._check_eq_item_name item, indepvars
               ─────────────────────────────────────────
```

> ── begin _eqspec._check_eq_item_n
> ame ───────────────────────────────────────

```
            — version 9.2
            — capture syntax name(name=c_item) [, NAME DEPvars INDEPvars I
```
> F 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' `oth
```
> er' `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_n
> ame ───────────────────────────────────────

```
            — local value `"`.`item''"'
            = local value `"rule_g rule_itr estimated 0b.stky_wg#0b.pr_ndx 0
```
> b.stky_wg#1.pr_ndx 1.stky_wg#0b.pr_ndx 1.stky_wg#1.pr_ndx 0b.stky_wg#0b.not_
> pr_ndx 0b.stky_wg#1o.not_pr_ndx 1o.stky_wg#0b.not_pr_ndx 1o.stky_wg#1o.not_p
> r_ndx"'
```
            — sreturn local value `"`value'"'
            = sreturn local value `"rule_g rule_itr estimated 0b.stky_wg#0b.
```
> pr_ndx 0b.stky_wg#1.pr_ndx 1.stky_wg#0b.pr_ndx 1.stky_wg#1.pr_ndx 0b.stky_wg
> #0b.not_pr_ndx 0b.stky_wg#1o.not_pr_ndx 1o.stky_wg#0b.not_pr_ndx 1o.stky_wg#
> 1o.not_pr_ndx"'

```
               – class exit `"`value'"'
               = class exit `"rule_g rule_itr estimated 0b.stky_wg#0b.pr_ndx 0b
> .stky_wg#1.pr_ndx 1.stky_wg#0b.pr_ndx 1.stky_wg#1.pr_ndx 0b.stky_wg#0b.not_p
> r_ndx 0b.stky_wg#1o.not_pr_ndx 1o.stky_wg#0b.not_pr_ndx 1o.stky_wg#1o.not_pr
> _ndx"'
                        ───────────────────────────────────────────
> ─────────────────────────────────────────────────────── end _eqspec.i
> tem ──────
               – class exit `"`s(value)'"'
               = class exit `"rule_g rule_itr estimated 0b.stky_wg#0b.pr_ndx 0b.s
> tky_wg#1.pr_ndx 1.stky_wg#0b.pr_ndx 1.stky_wg#1.pr_ndx 0b.stky_wg#0b.not_pr_
> ndx 0b.stky_wg#1o.not_pr_ndx 1o.stky_wg#0b.not_pr_ndx 1o.stky_wg#1o.not_pr_n
> dx"'
                        ───────────────────────────────────────────
> ─────────────────────────────────────────────────────── end _eqlist
> .eq ──────────────────────────────────────────────────────────────
             = fvexpand rule_g rule_itr estimated 0b.stky_wg#0b.pr_ndx 0b.stky_wg
> #1.pr_ndx 1.stky_wg#0b.pr_ndx 1.stky_wg#1.pr_ndx 0b.stky_wg#0b.not_pr_ndx 0b
> .stky_wg#1o.not_pr_ndx 1o.stky_wg#0b.not_pr_ndx 1o.stky_wg#1o.not_pr_ndx if
> __00000D
             – if "`r(tsops)'" == "true" {
             = if "" == "true" {
               global ML_preserve no
               }
             – local eq_rhs`i' `"`r(varlist)'"'
             = local eq_rhs1 `"rule_g rule_itr estimated 0b.stky_wg#0b.pr_ndx 0b.
> stky_wg#1.pr_ndx 1.stky_wg#0b.pr_ndx 1.stky_wg#1.pr_ndx 0b.stky_wg#0b.not_pr
> _ndx 0b.stky_wg#1o.not_pr_ndx 1o.stky_wg#0b.not_pr_ndx 1o.stky_wg#1o.not_pr_
> ndx"'
             – 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.i
```

```
> tem ────────────────────────────────────────────────────────────
              – version 9.2
              – args item
              – ._check_eq_item_name item, `item'
              = ._check_eq_item_name item, nocons
              ─────────────────────────────────────────────────────

> ───────────────────────────────────── begin _eqspec._check_eq_item_n
> ame ────────────────────────────────────────────────────────────
              – version 9.2
              – capture syntax name(name=c_item) [, NAME DEPvars INDEPvars I
> F 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' `oth
> er' `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_n
> ame ────────────────────────────────────────────────────────────
              – local value `"`.`item''"'
              = local value `"0"'
              – sreturn local value `"`value'"'
              = sreturn local value `"0"'
              – class exit `"`value'"'
              = class exit `"0"'
              ─────────────────────────────────────────────────────

> ────────────────────────────────────────────────────── end _eqspec.i
> tem ────────────────────────────────────────────────────────────
            – 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.i
> tem ─────────────────────────────────────────────────────────
              – version 9.2
              – args item
              – ._check_eq_item_name item, `item'
              = ._check_eq_item_name item, offset
              ──────────────────────────────────────────────
> ───────────────────────────────────────────── begin _eqspec._check_eq_item_n
> ame ─────────────────────────────────────────────────────────
              – version 9.2
              – capture syntax name(name=c_item) [, NAME DEPvars INDEPvars I
> F 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' `oth
> er' `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_n
> ame ─────────────────────────────────────────────────────────
              – local value `"`.`item''"'
              = local value `""'
              – sreturn local value `"`value'"'
              = sreturn local value `""'
```

```
              – class exit `"'`value'"'
              = class exit `""'
              ────────────────────────────────────────────────
> ──────────────────────────────────────────────────────── end _eqspec.i
> tem ──────────────────────────────────────────────────────
              – 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.i
> tem ──────────────────────────────────────────────────────
              – version 9.2
              – args item
              – ._check_eq_item_name item, `item'
              = ._check_eq_item_name item, exposure
              ────────────────────────────────────────────────
> ──────────────────────────────────────────── begin _eqspec._check_eq_item_n
> ame ──────────────────────────────────────────────────────
                – version 9.2
                – capture syntax name(name=c_item) [, NAME DEPvars INDEPvars I
> F 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' `oth
> er' `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_n
>  ame ───────────────────────────────────────────────────────
                    – local value `"`.`item''"'
                    = local value `"0"'
                    – sreturn local value `"`value'"'
                    = sreturn local value `"0"'
                    – class exit `"`value'"'
                    = class exit `"0"'
               ────────────────────────────────────────────────
>  ──────────────────────────────────────────────────── end _eqspec.i
>  tem ───────────────────────────────────────────────────────
                    – 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.i
>  tem ───────────────────────────────────────────────────────
                    – version 9.2
                    – args item
                    – ._check_eq_item_name item, `item'
```

```
                 = ._check_eq_item_name item, freeparm
                 ──────────────────────────────────────────────
> ─────────────────────────────────────── begin _eqspec._check_eq_item_n
> ame ──────────────────────────────────────────────
                 - version 9.2
                 - capture syntax name(name=c_item) [, NAME DEPvars INDEPvars I
> F 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' `oth
> er' `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_n
> ame ──────────────────────────────────────────────
                 - local value `"'.`item''"'
                 = local value `"0"'
                 - sreturn local value `"`value'"'
                 = sreturn local value `"0"'
                 - class exit `"`value'"'
                 = class exit `"0"'
                 ──────────────────────────────────────────────
> ─────────────────────────────────────────── end _eqspec.i
> tem ──────────────────────────────────────────────
                 - 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 = 1/11 {
          - gettoken xvar TMP : TMP
          - local colna `"`colna' `eq':`xvar'"'
          = local colna `" piq_timing_max:rule_g"'
          - }
          - gettoken xvar TMP : TMP
          - local colna `"`colna' `eq':`xvar'"'
          = local colna `" piq_timing_max:rule_g piq_timing_max:rule_itr"'
          - }
          - gettoken xvar TMP : TMP
          - local colna `"`colna' `eq':`xvar'"'
          = local colna `" piq_timing_max:rule_g piq_timing_max:rule_itr piq_t
> iming_max:estimated"'
          - }
          - gettoken xvar TMP : TMP
          - local colna `"`colna' `eq':`xvar'"'
          = local colna `" piq_timing_max:rule_g piq_timing_max:rule_itr piq_t
> iming_max:estimated piq_timing_max:0b.stky_wg#0b.pr_ndx"'
          - }
          - gettoken xvar TMP : TMP
          - local colna `"`colna' `eq':`xvar'"'
          = local colna `" piq_timing_max:rule_g piq_timing_max:rule_itr piq_t
> iming_max:estimated piq_timing_max:0b.stky_wg#0b.pr_ndx piq_timing_max:0b.st
> ky_wg#1.pr_ndx"'
          - }
          - gettoken xvar TMP : TMP
          - local colna `"`colna' `eq':`xvar'"'
          = local colna `" piq_timing_max:rule_g piq_timing_max:rule_itr piq_t
> iming_max:estimated piq_timing_max:0b.stky_wg#0b.pr_ndx piq_timing_max:0b.st
> ky_wg#1.pr_ndx piq_timing_max:1.stky_wg#0b.pr_ndx"'
          - }
          - gettoken xvar TMP : TMP
          - local colna `"`colna' `eq':`xvar'"'
          = local colna `" piq_timing_max:rule_g piq_timing_max:rule_itr piq_t
> iming_max:estimated piq_timing_max:0b.stky_wg#0b.pr_ndx piq_timing_max:0b.st
> ky_wg#1.pr_ndx piq_timing_max:1.stky_wg#0b.pr_ndx piq_timing_max:1.stky_wg#1
> .pr_ndx"'
          - }
          - gettoken xvar TMP : TMP
          - local colna `"`colna' `eq':`xvar'"'
          = local colna `" piq_timing_max:rule_g piq_timing_max:rule_itr piq_t
> iming_max:estimated piq_timing_max:0b.stky_wg#0b.pr_ndx piq_timing_max:0b.st
> ky_wg#1.pr_ndx piq_timing_max:1.stky_wg#0b.pr_ndx piq_timing_max:1.stky_wg#1
> .pr_ndx piq_timing_max:0b.stky_wg#0b.not_pr_ndx"'
```

```
- }
- gettoken xvar TMP : TMP
- local colna `"`colna' `eq':`xvar'"'
= local colna `" piq_timing_max:rule_g piq_timing_max:rule_itr piq_t
> iming_max:estimated piq_timing_max:0b.stky_wg#0b.pr_ndx piq_timing_max:0b.st
> ky_wg#1.pr_ndx piq_timing_max:1.stky_wg#0b.pr_ndx piq_timing_max:1.stky_wg#1
> .pr_ndx piq_timing_max:0b.stky_wg#0b.not_pr_ndx piq_timing_max:0b.stky_wg#1o
> .not_pr_ndx"'
- }
- gettoken xvar TMP : TMP
- local colna `"`colna' `eq':`xvar'"'
= local colna `" piq_timing_max:rule_g piq_timing_max:rule_itr piq_t
> iming_max:estimated piq_timing_max:0b.stky_wg#0b.pr_ndx piq_timing_max:0b.st
> ky_wg#1.pr_ndx piq_timing_max:1.stky_wg#0b.pr_ndx piq_timing_max:1.stky_wg#1
> .pr_ndx piq_timing_max:0b.stky_wg#0b.not_pr_ndx piq_timing_max:0b.stky_wg#1o
> .not_pr_ndx piq_timing_max:1o.stky_wg#0b.not_pr_ndx"'
- }
- gettoken xvar TMP : TMP
- local colna `"`colna' `eq':`xvar'"'
= local colna `" piq_timing_max:rule_g piq_timing_max:rule_itr piq_t
> iming_max:estimated piq_timing_max:0b.stky_wg#0b.pr_ndx piq_timing_max:0b.st
> ky_wg#1.pr_ndx piq_timing_max:1.stky_wg#0b.pr_ndx piq_timing_max:1.stky_wg#1
> .pr_ndx piq_timing_max:0b.stky_wg#0b.not_pr_ndx piq_timing_max:0b.stky_wg#1o
> .not_pr_ndx piq_timing_max:1o.stky_wg#0b.not_pr_ndx piq_timing_max:1o.stky_w
> g#1o.not_pr_ndx"'
- }
- 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:rule_g piq_timing_max:rule_itr piq_t
> iming_max:estimated piq_timing_max:0b.stky_wg#0b.pr_ndx piq_timing_max:0b.st
> ky_wg#1.pr_ndx piq_timing_max:1.stky_wg#0b.pr_ndx piq_timing_max:1.stky_wg#1
> .pr_ndx piq_timing_max:0b.stky_wg#0b.not_pr_ndx piq_timing_max:0b.stky_wg#1o
```

```
> .not_pr_ndx piq_timing_max:1o.stky_wg#0b.not_pr_ndx piq_timing_max:1o.stky_w
> g#1o.not_pr_ndx 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 & 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 8 {
        - tempname b0
        - local dim : list sizeof colna
        - matrix `b0' = J(1,`dim',0)
        = matrix __00000F = J(1,12,0)
        - matrix colna `b0' = `colna'
        = matrix colna __00000F =  piq_timing_max:rule_g piq_timing_max:rule
> _itr piq_timing_max:estimated piq_timing_max:0b.stky_wg#0b.pr_ndx piq_timing
> _max:0b.stky_wg#1.pr_ndx piq_timing_max:1.stky_wg#0b.pr_ndx piq_timing_max:1
> .stky_wg#1.pr_ndx piq_timing_max:0b.stky_wg#0b.not_pr_ndx piq_timing_max:0b.
> stky_wg#1o.not_pr_ndx piq_timing_max:1o.stky_wg#0b.not_pr_ndx piq_timing_max
> :1o.stky_wg#1o.not_pr_ndx piq_timing_max:_cons
        - `vv' _mkvec `b0', from(`init') update first error("initial vector"
> )
        = version 18.5: _mkvec __00000F, from(__00000B) update first error("
> initial vector")
             _____
> ————————————————————————————————————————————————————— begin _mk
> vec ————————————————————————————————————————————————————————————
        - local vv : display "version " string(_caller()) ":"
        - version 6
        - gettoken matout 0 : 0, parse(", ")
        - if "`matout'"=="" | "`matout'"=="," {
        = if "__00000F"=="" | "__00000F"=="," {
          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 __00000F
        - if _rc {
          di in red "matrix `matout' not found"
          exit 111
          }
        - if rowsof(matrix(`matout')) != 1 {
        = if rowsof(matrix(__00000F)) != 1 {
          di in red "`matout' matrix to be updated must be " "a row vector
```

```
> "
                exit 503
                }
      —  local matin `matout'
      =  local matin __00000F
      —  }
      —  if `"`error'"'!="" {
      =  if `"initial vector"'!="" {
      —  local error `"`error': "'
      =  local error `"initial vector: "'
      —  }
      —  tempname mat
      —  if `"`from'"'!="" {
      =  if `"__00000B"'!="" {
      —  From `from'
      =  From __00000B
            ────────────────────────────────────────────────
>  ─────────────────────────────────────────────── begin _mkvec.F
> rom ───────────────────────────────────────────────────────────
      —  gettoken from 0 : 0, parse(",") bind
      —  sret clear
      —  sret local from `from'
      =  sret local from __00000B
      —  if `"`0'"'!="" {
      =  if `""'!="" {
         syntax [, COPY SKIP ]
         }
      —  sret local copy `copy'
      =  sret local copy
      —  sret local skip `skip'
      =  sret local skip
            ────────────────────────────────────────────────
>  ─────────────────────────────────────────────────── end _mkvec.F
> rom ───────────────────────────────────────────────────────────
      —  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 18.5: BuildMat __00000G `"initial vector: "' "" __00000B
            ─────────────────────────────────────────────────────────
  > ───────────────────────────────────────────────── begin _mkvec.Build
  > Mat ────────────────────────────────────────────────────────────────
              - local vv : display "version " string(_caller()) ":"
              - version 6
              - args matall error skip
              - macro shift 3
              - tokenize `"`*'"', parse(" =")
              = tokenize `"__00000B"', parse(" =")
              - tempname matadd
              - local i 1
              - while "``i''"!="" {
              = while "__00000B"!="" {
              - 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 __00000H __00000B `"initial vector: "'
                ─────────────────────────────────────────────────────
  > ─────────────────────────────────────────────────── begin _mkvec.Chk
  > Mat ────────────────────────────────────────────────────────────────
              - args matout matin error
              - capture di matrix(`matin'[1,1])
              = capture di matrix(__00000B[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(__00000B)!=1 & colsof(__00000B)!=1) {
              di in red "`matin' " matrix(rowsof(`matin')) " x " matrix(co
> lsof(`matin')) " is not a vector"
              exit 503
              }
            — if matrix(rowsof(`matin')) == 1 {
            = if matrix(rowsof(__00000B)) == 1 {
            — mat `matout' = `matin'
            = mat __00000H = __00000B
            — }
            — else mat `matout' = `matin''
            = else mat __00000H = __00000B'
            ────────────────────────────────────────────────────
> ──────────────────────────────────────────── end _mkvec.Chk
> Mat ─────────────────────────────────────────────────────────
            — local i = `i' + 1
            = local i = 1 + 1
            — }
            — mat `matall' = nullmat(`matall') , `matadd'
            = mat __00000G = nullmat(__00000G) , __00000H
            — }
            — 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.Build
> Mat ─────────────────────────────────────────────────────────
            — if `"`colname'"'!="" {
            = if `"piq_timing_max:rule_g piq_timing_max:rule_itr piq_timing_ma
> x:estimated piq_timing_max:0b.stky_wg#0b.pr_ndx piq_timing_max:0b.stky_wg#1.
> pr_ndx piq_timing_max:1.stky_wg#0b.pr_ndx piq_timing_max:1.stky_wg#1.pr_ndx
> piq_timing_max:0b.stky_wg#0b.not_pr_ndx piq_timing_max:0b.stky_wg#1o.not_pr_
> ndx piq_timing_max:1o.stky_wg#0b.not_pr_ndx piq_timing_max:1o.stky_wg#1o.not
> _pr_ndx piq_timing_max:_cons"'!="" {
```

```
                 - `vv' ChkNames `mat' "`matin'" `"`colname'"' `"`error'"' "`skip'"
>  "`first'"
                 = version 18.5: ChkNames __00000G "__00000F" `"piq_timing_max:rule
> _g piq_timing_max:rule_itr piq_timing_max:estimated piq_timing_max:0b.stky_w
> g#0b.pr_ndx piq_timing_max:0b.stky_wg#1.pr_ndx piq_timing_max:1.stky_wg#0b.p
> r_ndx piq_timing_max:1.stky_wg#1.pr_ndx piq_timing_max:0b.stky_wg#0b.not_pr_
> ndx piq_timing_max:0b.stky_wg#1o.not_pr_ndx piq_timing_max:1o.stky_wg#0b.not
> _pr_ndx piq_timing_max:1o.stky_wg#1o.not_pr_ndx piq_timing_max:_cons"' `"ini
> tial vector: "' "" "first"

                      ─────────────────────────────────────────────────────────
> ───────────────────────────────────────────────── begin _mkvec.ChkNa
> mes ──────────────────────────────────────────────────────────────────
                 - local vv : display "version " string(_caller()) ":"
                 - version 6
                 - args mat matin names error skip first
                 - local dim = colsof(matrix(`mat'))
                 = local dim = colsof(matrix(__00000G))
                 - if "`first'"!="" {
                 = if "first"!="" {
                 - gettoken name : names
                 - local eq1 = bsubstr(`"`name'"',1,index(`"`name'"',":"))
                 = local eq1 = bsubstr(`"piq_timing_max:rule_g"',1,index(`"piq_ti
> ming_max:rule_g"',":"))
                 - }
                 - tempname new fill x
                 - local k : list sizeof names
                 - if "`matin'"!="" {
                 = if "__00000F"!="" {
                 - mat `new' = `matin'
                 = mat __00000H = __00000F
                 - }
                 - else {
                   mat `new' = J(1,`k',0)
                   `vv' mat colnames `new' = `names'
                   }
                 - mat `fill' = J(1,`k',0)
                 = mat __00000I = J(1,12,0)
                 - local i 1
                 - while `i' <= `dim' {
                 = while 1 <= 12 {
                 - mat `x' = `mat'[1,`i'..`i']
                 = mat __00000J = __00000G[1,1..1]
                 - local eq : coleq `x'
                 = local eq : coleq __00000J
                 - local name : colname `x'
                 = local name : colname __00000J
```

```
-   if "`eq'" == "/" {
=   if "_" == "/" {
      local spec "/`name'"
      }
-   else {
-   local spec "`eq':`name'"
=   local spec "_:rule_g"
-   if (usubstr("`eq'",1,1) != "/") {
=   if (usubstr("_",1,1) != "/") {
-   local sspec "/`eq':`name'"
=   local sspec "/_:rule_g"
-   }
-   }
-   local oname
-   local ospec
-   capture _msparse `name', noomit
=   capture _msparse rule_g, noomit
-   if c(rc) == 0 {
-   if r(omit) {
      local oname `"`r(stripe)'"'
      local ospec "`eq':`oname'"
      }
-   }
-   `vv' local j = colnumb(`new',`"`spec'"')
=   version 18.5: local j = colnumb(__00000H,`"_:rule_g"')
-   if `j' == . & "`oname'" != "" {
=   if 1 == . & "" != "" {
      `vv' local j = colnumb(`new',`"`ospec'"')
      }
-   if `j' == . & "`sspec'" != "" {
=   if 1 == . & "/_:rule_g" != "" {
      `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 __00000I[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':`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 __00000I[1,1] = 1
         - mat `new'[1,`j'] = `mat'[1,`i']
         = mat __00000H[1,1] = __00000G[1,1]
         - }
         - else if "`skip'"=="" {
         = else if ""=="" {
                if "`eq'"=="_" {
                local spec : copy local name
                }
                di in red `"`error'extra parameter "' `"`spec' found"' _n "spe
> cify skip option if necessary"
                exit 111
                }
         - local i = `i' + 1
         = local i = 1 + 1
         - }
         - while `i' <= `dim' {
         = while 2 <= 12 {
         - mat `x' = `mat'[1,`i'..`i']
         = mat __00000J = __00000G[1,2..2]
         - local eq : coleq `x'
         = local eq : coleq __00000J
         - local name : colname `x'
         = local name : colname __00000J
         - if "`eq'" == "/" {
         = if "_" == "/" {
                local spec "/`name'"
                }
         - else {
         - local spec "`eq':`name'"
         = local spec "_:rule_itr"
         - if (usubstr("`eq'",1,1) != "/") {
         = if (usubstr("_",1,1) != "/") {
         - local sspec "/`eq':`name'"
```

```
                        = local sspec "/_:rule_itr"
                        - }
                        - }
                        - local oname
                        - local ospec
                        - capture _msparse `name', noomit
                        = capture _msparse rule_itr, noomit
                        - if c(rc) == 0 {
                        - if r(omit) {
                          local oname `"`r(stripe)'"'
                          local ospec "`eq':`oname'"
                          }
                        - }
                        - `vv' local j = colnumb(`new',`"`spec'"')
                        = version 18.5: local j = colnumb(__00000H,`"_:rule_itr"')
                        - if `j' == . & "`oname'" != "" {
                        = if 2 == . & "" != "" {
                          `vv' local j = colnumb(`new',`"`ospec'"')
                          }
                        - if `j' == . & "`sspec'" != "" {
                        = if 2 == . & "/_:rule_itr" != "" {
                          `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 __00000I[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':`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 __00000I[1,2] = 1
                - mat `new'[1,`j'] = `mat'[1,`i']
                = mat __00000H[1,2] = __00000G[1,2]
                - }
                - else if "`skip'"=="" {
                = else if ""=="" {
                  if "`eq'"=="_" {
                  local spec : copy local name
                  }
                  di in red `"`error'extra parameter "' `"`spec' found"' _n "spe
> cify skip option if necessary"
                  exit 111
                  }
                - local i = `i' + 1
                = local i = 2 + 1
                - }
                - while `i' <= `dim' {
                = while 3 <= 12 {
                - mat `x' = `mat'[1,`i'..`i']
                = mat __00000J = __00000G[1,3..3]
                - local eq : coleq `x'
                = local eq : coleq __00000J
                - local name : colname `x'
                = local name : colname __00000J
                - 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 18.5: local j = colnumb(__00000H,`"_: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 __00000I[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':`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 __00000I[1,3] = 1
 -  mat `new'[1,`j'] = `mat'[1,`i']
 =  mat __00000H[1,3] = __00000G[1,3]
 -  }
 -  else if "`skip'"=="" {
 =  else if ""=="" {
                    if "`eq'"=="_" {
                    local spec : copy local name
```

```
                      }
                      di in red `"'`error'extra parameter "' `"'`spec' found"' _n "spe
> cify skip option if necessary"
                      exit 111
                      }
                - local i = `i' + 1
                = local i = 3 + 1
                - }
                - while `i' <= `dim' {
                = while 4 <= 12 {
                - mat `x' = `mat'[1,`i'..`i']
                = mat __00000J = __00000G[1,4..4]
                - local eq : coleq `x'
                = local eq : coleq __00000J
                - local name : colname `x'
                = local name : colname __00000J
                - if "`eq'" == "/" {
                = if "_" == "/" {
                  local spec "/`name'"
                  }
                - else {
                - local spec "`eq':`name'"
                = local spec "_:0b.stky_wg#0b.pr_ndx"
                - if (usubstr("`eq'",1,1) != "/") {
                = if (usubstr("_",1,1) != "/") {
                - local sspec "/`eq':`name'"
                = local sspec "/_:0b.stky_wg#0b.pr_ndx"
                - }
                - }
                - local oname
                - local ospec
                - capture _msparse `name', noomit
                = capture _msparse 0b.stky_wg#0b.pr_ndx, noomit
                - if c(rc) == 0 {
                - if r(omit) {
                - local oname `"`r(stripe)'"'
                = local oname `"0.stky_wg#0.pr_ndx"'
                - local ospec "`eq':`oname'"
                = local ospec "_:0.stky_wg#0.pr_ndx"
                - }
                - }
                - `vv' local j = colnumb(`new',`"`spec'"')
                = version 18.5: local j = colnumb(__00000H,`"_:0b.stky_wg#0b.pr_
> ndx"')
                - if `j' == . & "`oname'" != "" {
                = if 4 == . & "0.stky_wg#0.pr_ndx" != "" {
```

```
                `vv' local j = colnumb(`new',`"`ospec'"')
                }
        - if `j' == . & "`sspec'" != "" {
        = if 4 == . & "/_:0b.stky_wg#0b.pr_ndx" != "" {
                `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 __00000I[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':`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 __00000I[1,4] = 1
        - mat `new'[1,`j'] = `mat'[1,`i']
        = mat __00000H[1,4] = __00000G[1,4]
        - }
        - else if "`skip'"=="" {
        = else if ""=="" {
                if "`eq'"=="_" {
                local spec : copy local name
                }
                di in red `"`error'extra parameter "' `"`spec' found"' _n "spe
> cify skip option if necessary"
                exit 111
                }
        - local i = `i' + 1
        = local i = 4 + 1
```

```
- }
- while `i' <= `dim' {
= while 5 <= 12 {
- mat `x' = `mat'[1,`i'..`i']
= mat __00000J = __00000G[1,5..5]
- local eq : coleq `x'
= local eq : coleq __00000J
- local name : colname `x'
= local name : colname __00000J
- if "`eq'" == "/" {
= if "_" == "/" {
  local spec "/`name'"
  }
- else {
- local spec "`eq':`name'"
= local spec "_:0b.stky_wg#1.pr_ndx"
- if (usubstr("`eq'",1,1) != "/") {
= if (usubstr("_",1,1) != "/") {
- local sspec "/`eq':`name'"
= local sspec "/_:0b.stky_wg#1.pr_ndx"
- }
- }
- local oname
- local ospec
- capture _msparse `name', noomit
= capture _msparse 0b.stky_wg#1.pr_ndx, noomit
- if c(rc) == 0 {
- if r(omit) {
  local oname `"`r(stripe)'"'
  local ospec "`eq':`oname'"
  }
- }
- `vv' local j = colnumb(`new',`"`spec'"')
= version 18.5: local j = colnumb(__00000H,`"_:0b.stky_wg#1.pr_n
> dx"')
- if `j' == . & "`oname'" != "" {
= if 5 == . & "" != "" {
  `vv' local j = colnumb(`new',`"`ospec'"')
  }
- if `j' == . & "`sspec'" != "" {
= if 5 == . & "/_:0b.stky_wg#1.pr_ndx" != "" {
  `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 __00000I[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':`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 __00000I[1,5] = 1
            - mat `new'[1,`j'] = `mat'[1,`i']
            = mat __00000H[1,5] = __00000G[1,5]
            - }
            - else if "`skip'"=="" {
            = else if ""=="" {
              if "`eq'"=="_" {
              local spec : copy local name
              }
              di in red `"`error'extra parameter "' `"`spec' found"' _n "spe
> cify skip option if necessary"
              exit 111
              }
            - local i = `i' + 1
            = local i = 5 + 1
            - }
            - while `i' <= `dim' {
            = while 6 <= 12 {
            - mat `x' = `mat'[1,`i'..`i']
            = mat __00000J = __00000G[1,6..6]
            - local eq : coleq `x'
            = local eq : coleq __00000J
            - local name : colname `x'
            = local name : colname __00000J
```

```
-  if "`eq'" == "/" {
=  if "_" == "/" {
   local spec "/`name'"
   }
-  else {
-  local spec "`eq':`name'"
=  local spec "_:1.stky_wg#0b.pr_ndx"
-  if (usubstr("`eq'",1,1) != "/") {
=  if (usubstr("_",1,1) != "/") {
-  local sspec "/`eq':`name'"
=  local sspec "/_:1.stky_wg#0b.pr_ndx"
-  }
-  }
-  local oname
-  local ospec
-  capture _msparse `name', noomit
=  capture _msparse 1.stky_wg#0b.pr_ndx, noomit
-  if c(rc) == 0 {
-  if r(omit) {
   local oname `"`r(stripe)'"'
   local ospec "`eq':`oname'"
   }
-  }
-  `vv' local j = colnumb(`new',`"`spec'"')
=  version 18.5: local j = colnumb(__00000H,`"_:1.stky_wg#0b.pr_n
> dx"')
-  if `j' == . & "`oname'" != "" {
=  if 6 == . & "" != "" {
   `vv' local j = colnumb(`new',`"`ospec'"')
   }
-  if `j' == . & "`sspec'" != "" {
=  if 6 == . & "/_:1.stky_wg#0b.pr_ndx" != "" {
   `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 __00000I[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':`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 __00000I[1,6] = 1
              - mat `new'[1,`j'] = `mat'[1,`i']
              = mat __00000H[1,6] = __00000G[1,6]
              - }
              - else if "`skip'"=="" {
              = else if ""=="" {
                if "`eq'"=="_" {
                local spec : copy local name
                }
                    di in red `"`error'extra parameter "' `"`spec' found"' _n "spe
> cify skip option if necessary"
                    exit 111
                    }
              - local i = `i' + 1
              = local i = 6 + 1
              - }
              - while `i' <= `dim' {
              = while 7 <= 12 {
              - mat `x' = `mat'[1,`i'..`i']
              = mat __00000J = __00000G[1,7..7]
              - local eq : coleq `x'
              = local eq : coleq __00000J
              - local name : colname `x'
              = local name : colname __00000J
              - if "`eq'" == "/" {
              = if "_" == "/" {
                local spec "/`name'"
                }
              - else {
              - local spec "`eq':`name'"
              = local spec "_:1.stky_wg#1.pr_ndx"
              - if (usubstr("`eq'",1,1) != "/") {
              = if (usubstr("_",1,1) != "/") {
```

```
                - local sspec "/`eq':`name'"
                = local sspec "/_:1.stky_wg#1.pr_ndx"
                - }
                - }
                - local oname
                - local ospec
                - capture _msparse `name', noomit
                = capture _msparse 1.stky_wg#1.pr_ndx, noomit
                - if c(rc) == 0 {
                - if r(omit) {
                  local oname `"`r(stripe)'"'
                  local ospec "`eq':`oname'"
                  }
                - }
                - `vv' local j = colnumb(`new',`"`spec'"')
                = version 18.5: local j = colnumb(__00000H,`"_:1.stky_wg#1.pr_nd
> x"')

                - if `j' == . & "`oname'" != "" {
                = if 7 == . & "" != "" {
                  `vv' local j = colnumb(`new',`"`ospec'"')
                  }
                - if `j' == . & "`sspec'" != "" {
                = if 7 == . & "/_:1.stky_wg#1.pr_ndx" != "" {
                  `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 __00000I[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':`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 __00000I[1,7] = 1
          - mat `new'[1,`j'] = `mat'[1,`i']
          = mat __00000H[1,7] = __00000G[1,7]
          - }
          - else if "`skip'"=="" {
          = else if ""=="" {
            if "`eq'"=="_" {
            local spec : copy local name
            }
            di in red `"`error'extra parameter "' `"`spec' found"' _n "spe
> cify skip option if necessary"
            exit 111
            }
          - local i = `i' + 1
          = local i = 7 + 1
          - }
          - while `i' <= `dim' {
          = while 8 <= 12 {
          - mat `x' = `mat'[1,`i'..`i']
          = mat __00000J = __00000G[1,8..8]
          - local eq : coleq `x'
          = local eq : coleq __00000J
          - local name : colname `x'
          = local name : colname __00000J
          - if "`eq'" == "/" {
          = if "_" == "/" {
            local spec "/`name'"
            }
          - else {
          - local spec "`eq':`name'"
          = local spec "_:0b.stky_wg#0b.not_pr_ndx"
          - if (usubstr("`eq'",1,1) != "/") {
          = if (usubstr("_",1,1) != "/") {
          - local sspec "/`eq':`name'"
          = local sspec "/_:0b.stky_wg#0b.not_pr_ndx"
          - }
          - }
          - local oname
          - local ospec
          - capture _msparse `name', noomit
          = capture _msparse 0b.stky_wg#0b.not_pr_ndx, noomit
          - if c(rc) == 0 {
```

```
- if r(omit) {
- local oname `"`r(stripe)'"'
= local oname `"0.stky_wg#0.not_pr_ndx"'
- local ospec "`eq':`oname'"
= local ospec "_:0.stky_wg#0.not_pr_ndx"
- }
- }
- `vv' local j = colnumb(`new',`"`spec'"')
= version 18.5: local j = colnumb(__00000H,`"_:0b.stky_wg#0b.not
> _pr_ndx"')

- if `j' == . & "`oname'" != "" {
= if 8 == . & "0.stky_wg#0.not_pr_ndx" != "" {
  `vv' local j = colnumb(`new',`"`ospec'"')
  }
- if `j' == . & "`sspec'" != "" {
= if 8 == . & "/_:0b.stky_wg#0b.not_pr_ndx" != "" {
  `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 __00000I[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':`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 __00000I[1,8] = 1
- mat `new'[1,`j'] = `mat'[1,`i']
= mat __00000H[1,8] = __00000G[1,8]
```

```
                    - }
                    - else if "`skip'"=="" {
                    = else if ""=="" {
                      if "`eq'"=="_" {
                      local spec : copy local name
                      }
                      di in red `"'`error'extra parameter "' `"'`spec' found"' _n "spe
> cify skip option if necessary"
                      exit 111
                      }
                    - local i = `i' + 1
                    = local i = 8 + 1
                    - }
                    - while `i' <= `dim' {
                    = while 9 <= 12 {
                    - mat `x' = `mat'[1,`i'..`i']
                    = mat __00000J = __00000G[1,9..9]
                    - local eq : coleq `x'
                    = local eq : coleq __00000J
                    - local name : colname `x'
                    = local name : colname __00000J
                    - if "`eq'" == "/" {
                    = if "_" == "/" {
                      local spec "/`name'"
                      }
                    - else {
                    - local spec "`eq':`name'"
                    = local spec "_:0b.stky_wg#1o.not_pr_ndx"
                    - if (usubstr("`eq'",1,1) != "/") {
                    = if (usubstr("_",1,1) != "/") {
                    - local sspec "/`eq':`name'"
                    = local sspec "/_:0b.stky_wg#1o.not_pr_ndx"
                    - }
                    - }
                    - local oname
                    - local ospec
                    - capture _msparse `name', noomit
                    = capture _msparse 0b.stky_wg#1o.not_pr_ndx, noomit
                    - if c(rc) == 0 {
                    - if r(omit) {
                    - local oname `"'`r(stripe)'"'
                    = local oname `"0.stky_wg#1.not_pr_ndx"'
                    - local ospec "`eq':`oname'"
                    = local ospec "_:0.stky_wg#1.not_pr_ndx"
                    - }
                    - }
```

```
              - `vv' local j = colnumb(`new',`"`spec'"')
              = version 18.5: local j = colnumb(__00000H,`"_:0b.stky_wg#1o.not
> _pr_ndx"')
              - if `j' == . & "`oname'" != "" {
              = if 9 == . & "0.stky_wg#1.not_pr_ndx" != "" {
                `vv' local j = colnumb(`new',`"`ospec'"')
                }
              - if `j' == . & "`sspec'" != "" {
              = if 9 == . & "/_:0b.stky_wg#1o.not_pr_ndx" != "" {
                `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 __00000I[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':`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 __00000I[1,9] = 1
              - mat `new'[1,`j'] = `mat'[1,`i']
              = mat __00000H[1,9] = __00000G[1,9]
              - }
              - else if "`skip'"=="" {
              = else if ""=="" {
                if "`eq'"=="_" {
                local spec : copy local name
                }
                di in red `"`error'extra parameter "' `"`spec' found"' _n "spe
```

```
> cify skip option if necessary"
                exit 111
                }
        - local i = `i' + 1
        = local i = 9 + 1
        - }
        - while `i' <= `dim' {
        = while 10 <= 12 {
        - mat `x' = `mat'[1,`i'..`i']
        = mat __00000J = __00000G[1,10..10]
        - local eq : coleq `x'
        = local eq : coleq __00000J
        - local name : colname `x'
        = local name : colname __00000J
        - if "`eq'" == "/" {
        = if "_" == "/" {
          local spec "/`name'"
          }
        - else {
        - local spec "`eq':`name'"
        = local spec "_:1o.stky_wg#0b.not_pr_ndx"
        - if (usubstr("`eq'",1,1) != "/") {
        = if (usubstr("_",1,1) != "/") {
        - local sspec "/`eq':`name'"
        = local sspec "/_:1o.stky_wg#0b.not_pr_ndx"
        - }
        - }
        - local oname
        - local ospec
        - capture _msparse `name', noomit
        = capture _msparse 1o.stky_wg#0b.not_pr_ndx, noomit
        - if c(rc) == 0 {
        - if r(omit) {
        - local oname `"`r(stripe)'"'
        = local oname `"1.stky_wg#0.not_pr_ndx"'
        - local ospec "`eq':`oname'"
        = local ospec "_:1.stky_wg#0.not_pr_ndx"
        - }
        - }
        - `vv' local j = colnumb(`new',`"`spec'"')
        = version 18.5: local j = colnumb(__00000H,`"_:1o.stky_wg#0b.not
> _pr_ndx"')
        - if `j' == . & "`oname'" != "" {
        = if 10 == . & "1.stky_wg#0.not_pr_ndx" != "" {
          `vv' local j = colnumb(`new',`"`ospec'"')
          }
```

```
- if `j' == . & "`sspec'" != "" {
= if 10 == . & "/_:1o.stky_wg#0b.not_pr_ndx" != "" {
  `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 __00000I[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':`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 __00000I[1,10] = 1
- mat `new'[1,`j'] = `mat'[1,`i']
= mat __00000H[1,10] = __00000G[1,10]
- }
- else if "`skip'"=="" {
= else if ""=="" {
  if "`eq'"=="_" {
  local spec : copy local name
  }
  di in red `"`error'extra parameter "' `"`spec' found"' _n "spe
> cify skip option if necessary"
  exit 111
  }
- local i = `i' + 1
= local i = 10 + 1
- }
- while `i' <= `dim' {
```

```
              = while 11 <= 12 {
              - mat `x' = `mat'[1,`i'..`i']
              = mat __00000J = __00000G[1,11..11]
              - local eq : coleq `x'
              = local eq : coleq __00000J
              - local name : colname `x'
              = local name : colname __00000J
              - if "`eq'" == "/" {
              = if "_" == "/" {
                local spec "/`name'"
                }
              - else {
              - local spec "`eq':`name'"
              = local spec "_:1o.stky_wg#1o.not_pr_ndx"
              - if (usubstr("`eq'",1,1) != "/") {
              = if (usubstr("_",1,1) != "/") {
              - local sspec "/`eq':`name'"
              = local sspec "/_:1o.stky_wg#1o.not_pr_ndx"
              - }
              - }
              - local oname
              - local ospec
              - capture _msparse `name', noomit
              = capture _msparse 1o.stky_wg#1o.not_pr_ndx, noomit
              - if c(rc) == 0 {
              - if r(omit) {
              - local oname `"`r(stripe)'"'
              = local oname `"1.stky_wg#1.not_pr_ndx"'
              - local ospec "`eq':`oname'"
              = local ospec "_:1.stky_wg#1.not_pr_ndx"
              - }
              - }
              - `vv' local j = colnumb(`new',`"`spec'"')
              = version 18.5: local j = colnumb(__00000H,`"_:1o.stky_wg#1o.not
>  _pr_ndx"')
              - if `j' == . & "`oname'" != "" {
              = if 11 == . & "1.stky_wg#1.not_pr_ndx" != "" {
                `vv' local j = colnumb(`new',`"`ospec'"')
                }
              - if `j' == . & "`sspec'" != "" {
              = if 11 == . & "/_:1o.stky_wg#1o.not_pr_ndx" != "" {
                `vv' local j = colnumb(`new',`"`sspec'"')
                }
              - if `j'==. & `"`eq'"'=="_" & `"`eq1'"'!="" {
              = if 11==. & `"_"'=="_" & `"piq_timing_max:"'!="" {
                `vv' local j = colnumb(`new',`"`eq1'`name'"')
```

```
                  if `j' == . & "`oname'" != "" {
                  `vv' local j = colnumb(`new',`"`eq1'`oname'"')
                  }
                  }
          - if `j'!=. {
          = if 11!=. {
          - if `fill'[1,`j'] {
          = if __00000I[1,11] {
            _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':`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 __00000I[1,11] = 1
          - mat `new'[1,`j'] = `mat'[1,`i']
          = mat __00000H[1,11] = __00000G[1,11]
          - }
          - else if "`skip'"=="" {
          = else if ""=="" {
            if "`eq'"=="_" {
            local spec : copy local name
            }
            di in red `"`error'extra parameter "' `"`spec' found"' _n "spe
> cify skip option if necessary"
            exit 111
            }
          - local i = `i' + 1
          = local i = 11 + 1
          - }
          - while `i' <= `dim' {
          = while 12 <= 12 {
          - mat `x' = `mat'[1,`i'..`i']
          = mat __00000J = __00000G[1,12..12]
          - local eq : coleq `x'
          = local eq : coleq __00000J
          - local name : colname `x'
          = local name : colname __00000J
```

```
- 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 18.5: local j = colnumb(__00000H,`"_:_cons"')
- if `j' == . & "`oname'" != "" {
= if 12 == . & "" != "" {
  `vv' local j = colnumb(`new',`"`ospec'"')
  }
- if `j' == . & "`sspec'" != "" {
= if 12 == . & "/_:_cons" != "" {
  `vv' local j = colnumb(`new',`"`sspec'"')
  }
- if `j'==. & `"`eq'"'=="_" & `"`eq1'"'!="" {
= if 12==. & `"_"'=="_" & `"piq_timing_max:"'!="" {
  `vv' local j = colnumb(`new',`"`eq1'`name'"')
  if `j' == . & "`oname'" != "" {
  `vv' local j = colnumb(`new',`"`eq1'`oname'"')
  }
  }
- if `j'!=. {
= if 12!=. {
- if `fill'[1,`j'] {
= if __00000I[1,12] {
  _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':`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 __00000I[1,12] = 1
              - mat `new'[1,`j'] = `mat'[1,`i']
              = mat __00000H[1,12] = __00000G[1,12]
              - }
              - else if "`skip'"=="" {
              = else if ""=="" {
                if "`eq'"=="_" {
                local spec : copy local name
                }
                di in red `"`error'extra parameter "' `"`spec' found"' _n "spe
> cify skip option if necessary"
                   exit 111
                   }
              - local i = `i' + 1
              = local i = 12 + 1
              - }
              - while `i' <= `dim' {
              = while 13 <= 12 {
                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':`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 "spe
> cify skip option if necessary"
exit 111
}
local i = `i' + 1
}
```

```
                    – mat `fill' = `fill'*`fill''
                    = mat __00000I = __00000I*__00000I'
                    – sret clear
                    – sret local k_fill = `fill'[1,1]
                    = sret local k_fill = __00000I[1,1]
                    – mat `mat' = `new'
                    = mat __00000G = __00000H
                   ────────────────────────────────────────────────
 > ──────────────────────────────────────────────── end _mkvec.ChkNa
 > mes ──────────────────────────────────────────────────
                 – local fill `s(k_fill)'
                 = local fill 12
                 – }
                 – }
                 – }
                 – 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(__00000G))
                 – if "`fill'"!="" {
                 = if "12"!="" {
                 – sret local k_fill `fill'
                 = sret local k_fill 12
                 – }
                 – else sret local k_fill = colsof(matrix(`mat'))
                 = else sret local k_fill = colsof(matrix(__00000G))
                 – matrix rename `mat' `matout', replace
                 = matrix rename __00000G __00000F, replace
```

```
                 ────────────────────────────────────────────────
> ─────────────────────────────────────────────────────── end _mk
> vec ──────────────────────────────────────────────────────────
            - }
            - tempname bomit
            - matrix `bomit' = J(1,`:list sizeof colna',0)
            = matrix __00000G = J(1,12,0)
            - matrix colna `bomit' = `colna'
            = matrix colna __00000G =  piq_timing_max:rule_g piq_timing_max:rule
> _itr piq_timing_max:estimated piq_timing_max:0b.stky_wg#0b.pr_ndx piq_timing
> _max:0b.stky_wg#1.pr_ndx piq_timing_max:1.stky_wg#0b.pr_ndx piq_timing_max:1
> .stky_wg#1.pr_ndx piq_timing_max:0b.stky_wg#0b.not_pr_ndx piq_timing_max:0b.
> stky_wg#1o.not_pr_ndx piq_timing_max:1o.stky_wg#0b.not_pr_ndx piq_timing_max
> :1o.stky_wg#1o.not_pr_ndx piq_timing_max:_cons
            - _ms_omit_info `bomit'
            = _ms_omit_info __00000G
            - if r(k_omit) | `:length local constraints' {
            = if r(k_omit) | 0 {
            - nobreak {
            - capture noisily break {
            - _b_post0 `colna'
            = _b_post0  piq_timing_max:rule_g piq_timing_max:rule_itr piq_timing
> _max:estimated piq_timing_max:0b.stky_wg#0b.pr_ndx piq_timing_max:0b.stky_wg
> #1.pr_ndx piq_timing_max:1.stky_wg#0b.pr_ndx piq_timing_max:1.stky_wg#1.pr_n
> dx piq_timing_max:0b.stky_wg#0b.not_pr_ndx piq_timing_max:0b.stky_wg#1o.not_
> pr_ndx piq_timing_max:1o.stky_wg#0b.not_pr_ndx piq_timing_max:1o.stky_wg#1o.
> not_pr_ndx piq_timing_max:_cons

                 ────────────────────────────────────────────────
> ─────────────────────────────────────────────────────── begin _b_po
> st0 ──────────────────────────────────────────────────────────
            - version 11
            - tempname b V
            - local dim : list sizeof 0
            - matrix `b' = J( 1,`dim',0)
            = matrix __00000H = J( 1,12,0)
            - matrix `V' = J(`dim',`dim',0)
            = matrix __00000I = J(12,12,0)
            - matrix colnames `b' = `0'
            = matrix colnames __00000H = piq_timing_max:rule_g piq_timing_max:
> rule_itr piq_timing_max:estimated piq_timing_max:0b.stky_wg#0b.pr_ndx piq_ti
> ming_max:0b.stky_wg#1.pr_ndx piq_timing_max:1.stky_wg#0b.pr_ndx piq_timing_m
> ax:1.stky_wg#1.pr_ndx piq_timing_max:0b.stky_wg#0b.not_pr_ndx piq_timing_max
> :0b.stky_wg#1o.not_pr_ndx piq_timing_max:1o.stky_wg#0b.not_pr_ndx piq_timing
> _max:1o.stky_wg#1o.not_pr_ndx piq_timing_max:_cons
            - matrix colnames `V' = `0'
            = matrix colnames __00000I = piq_timing_max:rule_g piq_timing_max:
```

```
> rule_itr piq_timing_max:estimated piq_timing_max:0b.stky_wg#0b.pr_ndx piq_ti
> ming_max:0b.stky_wg#1.pr_ndx piq_timing_max:1.stky_wg#0b.pr_ndx piq_timing_m
> ax:1.stky_wg#1.pr_ndx piq_timing_max:0b.stky_wg#0b.not_pr_ndx piq_timing_max
> :0b.stky_wg#1o.not_pr_ndx piq_timing_max:1o.stky_wg#0b.not_pr_ndx piq_timing
> _max:1o.stky_wg#1o.not_pr_ndx piq_timing_max:_cons
          - matrix rownames `V' = `0'
          = matrix rownames __00000I = piq_timing_max:rule_g piq_timing_max:
> rule_itr piq_timing_max:estimated piq_timing_max:0b.stky_wg#0b.pr_ndx piq_ti
> ming_max:0b.stky_wg#1.pr_ndx piq_timing_max:1.stky_wg#0b.pr_ndx piq_timing_m
> ax:1.stky_wg#1.pr_ndx piq_timing_max:0b.stky_wg#0b.not_pr_ndx piq_timing_max
> :0b.stky_wg#1o.not_pr_ndx piq_timing_max:1o.stky_wg#0b.not_pr_ndx piq_timing
> _max:1o.stky_wg#1o.not_pr_ndx piq_timing_max:_cons
          - ereturn post `b' `V'
          = ereturn post __00000H __00000I
          ──────────────────────────────────────────────────────
> ──────────────────────────────────────────────────────────── end _b_po
> st0 ──────────────────────────────────────────────────────
          - local clist : subinstr local constraints "," " ", all
          - `vv' makecns `clist', `cnsnotes'
          = version 18.5: makecns ,
          ──────────────────────────────────────────────────────
> ──────────────────────────────────────────────────────────── begin make
> cns ──────────────────────────────────────────────────────
          - if _caller() < 11 {
            MakeCns `0'
            exit
            }
          - _makecns `0'
          = _makecns ,
          ──────────────────────────────────────────────────────
> ──────────────────────────────────────────────────────────── end make
> cns ──────────────────────────────────────────────────────
          - local constraints `"`r(clist)'"'
          = local constraints `""'
          - local k_autoCns = e(k_autoCns)
          - tempname C
          - capture matrix `C' = e(Cns)
          = capture matrix __00000H = 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 : , ro
> bust
                      ───────────────────────────────────────────────────
>  ─────────────────────────────────────────────────────── begin _vce_pa
> rse ───────────────────────────────────────────────────────
          – version 10
          – _on_colon_parse `0'
          = _on_colon_parse , argoptlist(CLuster) optlist(OIM OPG Robust) ol
> d : , robust
                        ─────────────────────────────────────────────────
>  ─────────────────────────────────────────────────── begin _on_colon_pa
> rse ───────────────────────────────────────────────────────
              – 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) quote
> s
                – 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) quote
> s
                 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 R
> obust) old "'
               - sreturn local after `"`after'"'
               = sreturn local after `" , robust"'
                 ─────────────────────────────────────────────────────────
> ───────────────────────────────────────────────── end _on_colon_pa
> rse ─────
               - 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(n
> amelist) PWallowed(namelist) OLD_is_ok NOARGOPT_is_ok ]
               - local touse `varlist'
               = local touse
               - tempname o a
               - .`o' = ._optlist.new
```

```
              = .__00000I = ._optlist.new
              - local optlist : list uniq optlist
              - foreach name of local optlist {
              - .`o'.addopt `name'
              = .__00000I.addopt OIM
                      ─────────────────────────────────────────────

> ──────────────────────────────────────────────  begin _optlist.add
> opt ──────────────────────────────────────────────────────────────
              - 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.add
> opt ──────────────────────────────────────────────────────────────
              - }
              - .`o'.addopt `name'
              = .__00000I.addopt OPG
                      ─────────────────────────────────────────────

> ──────────────────────────────────────────────  begin _optlist.add
> opt ──────────────────────────────────────────────────────────────
              - 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.add
> opt ──────────────────────────────────────────────────────────────
              - }
              - .`o'.addopt `name'
```

```
              = .__00000I.addopt Robust
                     ────────────────────────────────────────────────

>  ─────────────────────────────────────────────────────  begin _optlist.add
>  opt  ─────────────────────────────────────────────────────────────────
              − 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.add
>  opt  ─────────────────────────────────────────────────────────────────
              − }
              − .`a' = ._optlist.new
              = .__00000J = ._optlist.new
              − local argoptlist : list uniq argoptlist
              − foreach name of local argoptlist {
              − .`a'.addopt `name'
              = .__00000J.addopt CLuster
                     ────────────────────────────────────────────────

>  ─────────────────────────────────────────────────────  begin _optlist.add
>  opt  ─────────────────────────────────────────────────────────────────
              − 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.add
>  opt  ─────────────────────────────────────────────────────────────────
              − }
              − local OPTNAMES `"'`.`o'.dumpnames'"'
```

```
> ───────────────────────────────────────────────────
> ─────────────────────────────────────────────── begin _optlist.dumpna
> mes ─────────────────────────────────────────────────────────
              – 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.dumpna
> mes ─────────────────────────────────────────────────────────
           = local OPTNAMES `"oim opg robust"'
           – local ARGOPTNAMES `"`.`a'.dumpnames'"'
              ───────────────────────────────────────────────
> ─────────────────────────────────────────────── begin _optlist.dumpna
> mes ─────────────────────────────────────────────────────────
              – 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.dumpna
> mes ─────────────────────────────────────────────────────────
           = 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(varname)
>  ]
              - 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 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_pa
> rse ─────────────────────────────────────────────────────
  -   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 "__00000D" != "__00000D" {
               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 `evaltype
> '"
```

```
      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 __00000D
  - 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 __00000D
  - 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.ParseUse
> min ───
```
            – capture syntax [, LEN(integer 0), MIN1(numlist min=2 max=2 missi
> ngokay) NOMIN MIN]
            – if (_rc) {
                syntax [, LEN(integer 0) MIN1(string) NOMIN MIN]
                }
            – if `"`min1'"' != "" & `"`nomin'"' != "" {
            = if `""' != "" & `""' != "" {
                di as err "options {bf:min()} and {bf:nomin} are mutually exclus
> ive"

                exit 198
                }
            – if `"`min'"' != "" & `"`nomin'"' != "" {
            = if `""' != "" & `""' != "" {
                di as err "options {bf:min} and {bf:nomin} are mutually exclusiv
> e"

                exit 198
                }
            – if (`"`min1'"' != "") {
            = if (`""' != "") {
                if (_rc) {
                capture confirm matrix `min1'
                if (_rc) {
                di as err "option {bf:min()} requires that either two numbers or
>  a 1X2 matrix be specified"
```

```
                    exit 198
                    }
                    }
                    local deriv `min1'
                    }
          - else if (`"`min'"' != "") {
          = else if (`""' != "") {
                    if (`len' > length(`"`min'"')) {
                    di as err "option {bf:min()} requires that either two numbers or
>  a 1X2 matrix be specified"
                    exit 198
                    }
                    local deriv 1
                    }
          - else {
          - if (`len' > 0) {
          = if (0 > 0) {
                    if ("`nomin'" == "") {
                    di as err "option {bf:min()} requires that either two numbers or
>  a 1X2 matrix be specified"
                    exit 198
                    }
                    else if (`len' > length(`"`nomin'"')) {
                    di as err "options {bf:min()} and {bf:nomin} are mutually exclus
> ive"
                    exit 198
                    }
                    else {
                    local deriv 0
                    }
                    }
          - else {
          - local deriv 0
          - }
          - }
          - sreturn local deriv `deriv'
          = sreturn local deriv 0
                    ─────────────────────────────────────────────────────────
>  ──────────────────────────────────────────────── end mopt.ParseUse
>  min ───────────────────────────────────────────────────────────
          - local deriv = s(deriv)
          - if `:length local gnwmatrix' {
          = if 0 {
                    confirm matrix `gnwmatrix'
                    }
          - `vv' mata: Mopt_model()
```

```
            = version 18.5: mata: Mopt_model()
           ─────────────────────────────────────────────────────
>  ─────────────────────────────────────────────── begin mopt_check_prog
>  ram ──────────────────────────────────────────────────────────
            - version 10
            - args name
            - capture confirm name `name'
            = capture confirm name glim_lf
            - if c(rc) {
              di as err "unrecognized command:   `name' invalid command name"
              exit 199
              }
            - capture which `name'
            = capture which glim_lf
            - if !c(rc) {
            - exit

           ─────────────────────────────────────────────────────
>  ─────────────────────────────────────────────────── end mopt_check_prog
>  ram ──────────────────────────────────────────────────────────
          - global ML_stat model
          - if !`interactive' {
          = if !0 {
          - `vv' MaxMin `maxmin', nooutput `score' `options' moptobj(`moptobj'
>  )
          = version 18.5: MaxMin maximize, nooutput  nolog search(off) iter(30
>  0) moptobj()
           ─────────────────────────────────────────────────────
>  ───────────────────────────────────────────────────── begin mopt.Max
>  Min ──────────────────────────────────────────────────────────
            - local vv : di "version " string(_caller()) ":"
            - version 12
            - ChkMacros
           ─────────────────────────────────────────────────────
>  ───────────────────────────────────────────────────── begin mopt.ChkMac
>  ros ──────────────────────────────────────────────────────────
            - 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 __00000D __00000D
            - if c(rc) {
              di as err "Since issuing the -ml model- statement, you have do
>  ne something to drop" _n "temporary variables ml added to your data.  You mu
>  st start again."
```

```
                   Clear
                   exit 111
                   }
```

> ── end mopt.ChkMac

> ros ───
```
              - syntax name(name=maxmin) [, NEGH TOLerance(numlist max=1 >=0) LT
```
> OLerance(numlist max=1 >=0) NONRTOLerance NRTOLerance(numlist max=1 >=0) QTO
> Lerance(numlist max=1 >=0) GTOLerance(numlist max=1 >=0) ITERate(numlist max
> =1 >=0) NOTCONCAVE(numlist max=1 >=0) ndami DIFficult HALFSTEPonly DOOPT SEA
> rch(name) Repeat(passthru) Bounds(string) SCore(string) noWARNing noCLEAR NO
> LOg LOg DOTs SHOWTOLerance SHOWNRtolerance SHOWSTEP TRace COEFDIffs GRADient
> 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_exclus

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

> ── end opts_exclus

> ive ───
```
              - 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, nolog
             ─────────────────────────────────────────────────────────────

> ──────────────────────────────────────────────────── begin _parse_iter
> log ─────────────────────────────────────────────────────────────
           - version 16
           - syntax [, NOLOG LOG]
           - if "`log'`nolog'" != "" {
           = if "nolog" != "" {
           - opts_exclusive "`log' `nolog'"
           = opts_exclusive " nolog"
             ─────────────────────────────────────────────────────────────

> ──────────────────────────────────────────────────── begin opts_exclus
> ive ─────────────────────────────────────────────────────────────
           - version 8.2
           - args opts optname errcode optslab
           - local opts `opts'
           = local opts  nolog
           - local n 0
           - while `"`opts'"' != "" {
           = while `"nolog"' != "" {
           - 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_exclus
> ive ——

```
             - }
             - else if "`c(iterlog)'" == "on" {
             = else if "on" == "on" {
               local log log
               }
             - else {
               local nolog nolog
               }
             - sreturn local log `log'
             = sreturn local log
             - sreturn local nolog `nolog'
             = sreturn local nolog nolog
             _____
```

> ——— end _parse_iter
> log ——

```
           - local log "`s(nolog)'"
           = local log "nolog"
           - local tropts `log' `dots' `showtolerance' `showstep' `trace' `co
> efdiffs'
           = local tropts nolog
           - if "`tropts'" != "nolog" {
           = if "nolog" != "nolog" {
             local tropts `tropts' `gradient' `hessian'
             if "`skipline'" == "" {
             if "`iterate'" != "0" | `:length local tropts' {
             di
             }
             }
             }
           - else {
           - local gradient
           - local hessian
           - local nolog nolog
           - }
```

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```
            – if "`search'" != "off" & "`iterate'" != "0" {
          = if "off" != "off" & "300" != "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 18.5: mata: Mopt_maxmin()
```

```
> ──────────────────────────────────────────────── begin glim
> _lf ──────────────────────────────────────────────────
            – version 6
            – args todo b lnf g H score
            – local VV : di "version " string(_caller()) ":"
            – tempvar eta mu dmu v
            – mleval `eta' = `b'
            = mleval __00000X = __00000R
            – qui $SGLM_L 1 `eta' `mu'
            = qui glim_l03 1 __00000X __00000Y
```

```
> ──────────────────────────────────────────────── begin glim_
> l03 ──────────────────────────────────────────────────
            – version 7
            – args todo eta mu return
            – if `todo' == –1 {
            = if 1 == –1 {
            global SGLM_lt "Log"
            if "$SGLM_m" == "1" {
            global SGLM_lf "ln(u)"
            }
            else global SGLM_lf "ln(u/$SGLM_m)"
            exit
            }
```

```
              – if `todo' == 0 {
              = if 1 == 0 {
                gen double `eta' = ln(`mu'/$SGLM_m)
                exit
                }
              – if `todo' == 1 {
              = if 1 == 1 {
              – gen double `mu' = $SGLM_m*exp(`eta')
              = gen double __00000Y = 1*exp(__00000X)
              – exit
              ─────────────────────────────────────────────────
```
```
              – qui $SGLM_mu `mu'
              = qui glim_mu 0 . __00000Y
              ─────────────────────────────────────────────────
```
```
              – version 7
              – args min max mu
              – tempname eps
              – scalar `eps' = 1e–8
              = scalar __000011 = 1e–8
              – replace `mu' = `min'+`eps' if `mu'<=`min'+`eps'
              = replace __00000Y = 0+__000011 if __00000Y<=0+__000011
              – replace `mu' = `max'–`eps' if `mu'>=`max'–`eps'
              = replace __00000Y = .–__000011 if __00000Y>=.–__000011
              ─────────────────────────────────────────────────
```
```
              – qui $SGLM_L 2 `eta' `mu' `dmu'
              = qui glim_l03 2 __00000X __00000Y __00000Z
              ─────────────────────────────────────────────────
```
```
              – version 7
              – args todo eta mu return
              – if `todo' == –1 {
              = if 2 == –1 {
                global SGLM_lt "Log"
                if "$SGLM_m" == "1" {
                global SGLM_lf "ln(u)"
                }
                else global SGLM_lf "ln(u/$SGLM_m)"
                exit
                }
```

```
                       - if `todo' == 0 {
                       = if 2 == 0 {
                         gen double `eta' = ln(`mu'/$SGLM_m)
                         exit
                         }
                       - if `todo' == 1 {
                       = if 2 == 1 {
                         gen double `mu' = $SGLM_m*exp(`eta')
                         exit
                         }
                       - if `todo' == 2 {
                       = if 2 == 2 {
                       - gen double `return' = `mu'
                       = gen double __00000Z = __00000Y
                       - exit
                                    ─────────────────────────────────────
```
```
                       - qui $SGLM_V 1 `eta' `mu' `v'
                       = qui glim_v6 1 __00000X __00000Y __000010
                                    ─────────────────────────────────────
```
```
                       - version 7
                       - args todo eta mu return
                       - if `todo' == -1 {
                       = if 1 == -1 {
                         local y "$SGLM_y"
                         local m "$SGLM_m"
                         local touse "`eta'"
                         capture assert `y'>=0 if `touse'
                         if _rc {
                         di as err `"dependent variable `y' has negative values"'
                         exit 499
                         }
                         capture assert `y'==int(`y') if `touse'
                         if _rc {
                         di as txt `"note: `y' has noninteger values"'
                         }
                         global SGLM_vt "Neg. Binomial"
                         local SGLM_a = round($SGLM_a,0.0001)
                         global SGLM_vf "u+(`SGLM_a')u^2"
                         global SGLM_mu "glim_mu 0 ."
                         exit
                         }
                       - if `todo' == 0 {
```

```
                        = if 1 == 0 {
                          gen double `eta' = -ln1p($SGLM_a/`mu')
                          exit
                          }
                        - if `todo' == 1 {
                        = if 1 == 1 {
                        - gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
                        = gen double __000010 = __00000Y+__00000Y*__00000Y*1
                        - exit
                     _____
```
```
> ──────────────────────────────────────────────────────────── end glim
> _v6 ─────────────────────────────────────────────────────────────────
```
```
                        - if "$ML_off" == "" {
                        = if "" == "" {
                        - global ML_off 0
                        - }
                        - tempname phi
                        - if "$SGLM_ph" == "" { global SGLM_ph = 1 }
                        = if ".2621335866981906" == "" { global SGLM_ph = 1 }
                        - scalar `phi' = $SGLM_ph
                        = scalar __000011 = .2621335866981906
                        - if $SGLM_s1 { scalar `phi' = $SGLM_s1 }
                        = if 1 { scalar __000011 = 1 }
                        - tempvar lli
                        - qui `VV' $SGLM_V 5 `eta' `mu' `lli'
                        = qui version 18.5: glim_v6 5 __00000X __00000Y __000012
                     _____
```
```
> ──────────────────────────────────────────────────────────── begin glim
> _v6 ─────────────────────────────────────────────────────────────────
```
```
                        - version 7
                        - args todo eta mu return
                        - if `todo' == -1 {
                        = if 5 == -1 {
                          local y "$SGLM_y"
                          local m "$SGLM_m"
                          local touse "`eta'"
                          capture assert `y'>=0 if `touse'
                          if _rc {
                          di as err `"dependent variable `y' has negative values"'
                          exit 499
                          }
                          capture assert `y'==int(`y') if `touse'
                          if _rc {
                          di as txt `"note: `y' has noninteger values"'
                          }
                          global SGLM_vt "Neg. Binomial"
```

```
                  local SGLM_a = round($SGLM_a,0.0001)
                  global SGLM_vf "u+(`SGLM_a')u^2"
                  global SGLM_mu "glim_mu 0 ."
                  exit
                  }
            - if `todo' == 0 {
            = if 5 == 0 {
                  gen double `eta' = -ln1p($SGLM_a/`mu')
                  exit
                  }
            - if `todo' == 1 {
            = if 5 == 1 {
                  gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
                  exit
                  }
            - if `todo' == 2 {
            = if 5 == 2 {
                  gen double `return' = 1 + 2*`mu'*$SGLM_a
                  exit
                  }
            - if `todo' == 3 {
            = if 5 == 3 {
                  local y "$SGLM_y"
                  if "`y'" == "" {
                  local y "`e(depvar)'"
                  }
                  gen double `return' = cond(`y'==0, 2*ln1p(`mu'*$SGLM_a)/$SGL
> M_a, 2*(`y'*ln(`y'/`mu') - (1+`y'*$SGLM_a)/$SGLM_a * ln((1+`y'*$SGLM_a)/(1+`
> mu'*$SGLM_a))))
                  exit
                  }
            - if `todo' == 4 {
            = if 5 == 4 {
                  local y "$SGLM_y"
                  local k "$SGLM_a"
                  if "`y'" == "" {
                  local y "`e(depvar)'"
                  }
                  gen double `return' = ((_hyp2f1(-`k'*`y') - _hyp2f1(-`k'*`mu
> ')) + 3/2*(`y'^(2/3) -`mu'^(2/3)))/((`mu'+`k'*`mu'^2)^(1/6))
                  exit
                  }
            - if `todo' == 5 {
            = if 5 == 5 {
            - local y "$SGLM_y"
            = local y "piq_timing_max"
```

```
                        - if "`y'" == "" {
                        = if "piq_timing_max" == "" {
                          local y "`e(depvar)'"
                          }
                        - tempname sig2
                        - if $SGLM_s1 {
                        = if 1 {
                        - scalar `sig2' = $SGLM_s1
                        = scalar __000013 = 1
                        - }
                        - else {
                          if _caller() >= 11 {
                          scalar `sig2' = $SGLM_ph*(($ML_N-$ML_kCns)/$ML_N)
                          }
                          else {
                          scalar `sig2' = $SGLM_ph*(($ML_N-$ML_k)/$ML_N)
                          }
                          }
                        - local m = 1/$SGLM_a
                        = local m = 1/1
                        - local lnalpha = ln(`m')
                        = local lnalpha = ln(1)
                        - gen double `return' = `sig2'*(lngamma(`m'+`y')-lngamma(`y'+1
> ) - lngamma(`m') - `m'*ln1p(`mu'/`m') + `y'*ln(`mu'/(`mu'+`m')))
                        = gen double __000012 = __000013*(lngamma(1+piq_timing_max)-ln
> gamma(piq_timing_max+1) - lngamma(1) - 1*ln1p(__00000Y/1) + piq_timing_max*l
> n(__00000Y/(__00000Y+1)))
                        - exit
                        ─────────────────────────────────────────────────────────────
> ─────────────────────────────────────────────────────────────── end glim
> _v6 ───────────────────────────────────────────────────────────
                        - mlsum `lnf' = `lli'
                        = mlsum __00000S = __000012
                        - if `todo' == 0 | `lnf'==. { exit }
                        = if 2 == 0 | __00000S==. { exit }
                        - qui replace `score' = ($ML_y1 - `mu')/(`phi'*`v')*`dmu' if $ML
> _samp
                        = qui replace __00000V = (piq_timing_max - __00000Y)/(__000011*_
> _000010)*__00000Z if __00000D
                        - $ML_ec mlvecsum `lnf' `g' = `score'
                        = * mlvecsum __00000S __00000T = __00000V
                        - if `todo' == 1 | `lnf'==. { exit }
                        = if 2 == 1 | __00000S==. { exit }
                        - tempvar tt
                        - qui gen double `tt' = sum($ML_w*($ML_y1-`mu')*($ML_y1-`mu')/`v
> ')
```

```
                = qui gen double __000013 = sum(__00000D*(piq_timing_max-__00000
> Y)*(piq_timing_max-__00000Y)/__000010)
                - if _caller() >= 11 {
                - global SGLM_ph = `tt'[_N]/($ML_N-$ML_kCns)
                = global SGLM_ph = __000013[_N]/(217-7)
                - }
                - else {
                  global SGLM_ph = `tt'[_N]/($ML_N-$ML_k)
                  }
                - qui $SGLM_A
                = qui
                - tempvar t1
                - qui gen double `t1' = `dmu'*`dmu'/`v' if $ML_samp
                = qui gen double __000014 = __00000Z*__00000Z/__000010 if __0000
> 0D
                - if "$SGLM_f" == "" {
                = if "-1" == "" {
                  global SGLM_f = -1
                  }
                - if $SGLM_f >= $ML_ic {
                = if -1 >= 0 {
                  mlmatsum `lnf' `H' = (`t1')/`phi'
                  exit
                  }
                - tempvar dv d2mu
                - qui $SGLM_V 2 `eta' `mu' `dv'
                = qui glim_v6 2 __00000X __00000Y __000015
                ────────────────────────────────────────────
> ──────────────────────────────────────────────────── begin glim
> _v6 ──────────────────────────────────────────────
                - version 7
                - args todo eta mu return
                - if `todo' == -1 {
                = if 2 == -1 {
                  local y "$SGLM_y"
                  local m "$SGLM_m"
                  local touse "`eta'"
                  capture assert `y'>=0 if `touse'
                  if _rc {
                  di as err `"dependent variable `y' has negative values"'
                  exit 499
                  }
                  capture assert `y'==int(`y') if `touse'
                  if _rc {
                  di as txt `"note: `y' has noninteger values"'
                  }
```

```
                  global SGLM_vt "Neg. Binomial"
                  local SGLM_a = round($SGLM_a,0.0001)
                  global SGLM_vf "u+(`SGLM_a')u^2"
                  global SGLM_mu "glim_mu 0 ."
                  exit
                  }
            - if `todo' == 0 {
            = if 2 == 0 {
                  gen double `eta' = -ln1p($SGLM_a/`mu')
                  exit
                  }
            - if `todo' == 1 {
            = if 2 == 1 {
                  gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
                  exit
                  }
            - if `todo' == 2 {
            = if 2 == 2 {
            - gen double `return' = 1 + 2*`mu'*$SGLM_a
            = gen double __000015 = 1 + 2*__00000Y*1
            - exit
```

> ─── end glim
> _v6 ───

```
            - qui $SGLM_L 3 `eta' `mu' `d2mu'
            = qui glim_l03 3 __00000X __00000Y __000016
```

> ─── begin glim_
> l03 ───

```
            - version 7
            - args todo eta mu return
            - if `todo' == -1 {
            = if 3 == -1 {
              global SGLM_lt "Log"
              if "$SGLM_m" == "1" {
              global SGLM_lf "ln(u)"
              }
              else global SGLM_lf "ln(u/$SGLM_m)"
              exit
              }
            - if `todo' == 0 {
            = if 3 == 0 {
              gen double `eta' = ln(`mu'/$SGLM_m)
              exit
              }
            - if `todo' == 1 {
```

```
                        = if 3 == 1 {
                          gen double `mu' = $SGLM_m*exp(`eta')
                          exit
                          }
                        - if `todo' == 2 {
                        = if 3 == 2 {
                          gen double `return' = `mu'
                          exit
                          }
                        - if `todo' == 3 {
                        = if 3 == 3 {
                        - gen double `return' = `mu'
                        = gen double __000016 = __00000Y
                        - exit
```

```
                        - tempvar t2 t3
                        - qui gen double `t2' = `t1'/`v'*`dv' if $ML_samp
                        = qui gen double __000017 = __000014/__000010*__000015 if __0000
```
```
                        - qui gen double `t3' = `d2mu'/`v' if $ML_samp
                        = qui gen double __000018 = __000016/__000010 if __00000D
                        - mlmatsum `lnf' `H' = (`t1'-(`mu'-$ML_y1)*(`t2'-`t3'))/`phi'
                        = mlmatsum __00000S __00000U = (__000014-(__00000Y-piq_timing_ma
```

> ── end glim
> _lf ──

> ── begin glim
> _lf ──

```
                        - version 6
                        - args todo b lnf g H score
                        - local VV : di "version " string(_caller()) ":"
                        - tempvar eta mu dmu v
                        - mleval `eta' = `b'
                        = mleval __00000X = __00000R
                        - qui $SGLM_L 1 `eta' `mu'
                        = qui glim_l03 1 __00000X __00000Y
```

```
                        - version 7
                        - args todo eta mu return
                        - if `todo' == -1 {
```

```
             = if 1 == -1 {
               global SGLM_lt "Log"
               if "$SGLM_m" == "1" {
               global SGLM_lf "ln(u)"
               }
               else global SGLM_lf "ln(u/$SGLM_m)"
               exit
               }
             - if `todo' == 0 {
             = if 1 == 0 {
               gen double `eta' = ln(`mu'/$SGLM_m)
               exit
               }
             - if `todo' == 1 {
             = if 1 == 1 {
             - gen double `mu' = $SGLM_m*exp(`eta')
             = gen double __00000Y = 1*exp(__00000X)
             - exit
```
> ─── end glim_
> l03 ──
```
             - qui $SGLM_mu `mu'
             = qui glim_mu 0 . __00000Y
```
> ─── begin glim
> _mu ───
```
             - version 7
             - args min max mu
             - tempname eps
             - scalar `eps' = 1e-8
             = scalar __000011 = 1e-8
             - replace `mu' = `min'+`eps' if `mu'<=`min'+`eps'
             = replace __00000Y = 0+__000011 if __00000Y<=0+__000011
             - replace `mu' = `max'-`eps' if `mu'>=`max'-`eps'
             = replace __00000Y = .-__000011 if __00000Y>=.-__000011
```
> ─── end glim
> _mu ───
```
             - qui $SGLM_L 2 `eta' `mu' `dmu'
             = qui glim_l03 2 __00000X __00000Y __00000Z
```
> ─── begin glim_
> l03 ───
```
             - version 7
             - args todo eta mu return
             - if `todo' == -1 {
```

```
                  = if 2 == −1 {
                    global SGLM_lt "Log"
                    if "$SGLM_m" == "1" {
                    global SGLM_lf "ln(u)"
                    }
                    else global SGLM_lf "ln(u/$SGLM_m)"
                    exit
                    }
                  − if `todo' == 0 {
                  = if 2 == 0 {
                    gen double `eta' = ln(`mu'/$SGLM_m)
                    exit
                    }
                  − if `todo' == 1 {
                  = if 2 == 1 {
                    gen double `mu' = $SGLM_m*exp(`eta')
                    exit
                    }
                  − if `todo' == 2 {
                  = if 2 == 2 {
                  − gen double `return' = `mu'
                  = gen double __00000Z = __00000Y
                  − exit
                  ──────────────────────────────────────────────────
```

> ── end glim_
> l03 ───

```
                  − qui $SGLM_V 1 `eta' `mu' `v'
                  = qui glim_v6 1 __00000X __00000Y __000010
                  ──────────────────────────────────────────────────
```

> ── begin glim
> _v6 ───

```
                  − version 7
                  − args todo eta mu return
                  − if `todo' == −1 {
                  = if 1 == −1 {
                    local y "$SGLM_y"
                    local m "$SGLM_m"
                    local touse "`eta'"
                    capture assert `y'>=0 if `touse'
                    if _rc {
                    di as err `"dependent variable `y' has negative values"'
                    exit 499
                    }
                    capture assert `y'==int(`y') if `touse'
                    if _rc {
                    di as txt `"note: `y' has noninteger values"'
```

```
                  }
                  global SGLM_vt "Neg. Binomial"
                  local SGLM_a = round($SGLM_a,0.0001)
                  global SGLM_vf "u+(`SGLM_a')u^2"
                  global SGLM_mu "glim_mu 0 ."
                  exit
                  }
           – if `todo' == 0 {
           = if 1 == 0 {
                  gen double `eta' = –ln1p($SGLM_a/`mu')
                  exit
                  }
           – if `todo' == 1 {
           = if 1 == 1 {
           – gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
           = gen double __000010 = __00000Y+__00000Y*__00000Y*1
           – exit
           ───────────────────────────────────────────────────────
```
> ─── end glim

> _v6 ──

```
           – if "$ML_off" == "" {
           = if "0" == "" {
                  global ML_off 0
                  }
           – tempname phi
           – if "$SGLM_ph" == "" { global SGLM_ph = 1 }
           = if "1.103319124238896" == "" { global SGLM_ph = 1 }
           – scalar `phi' = $SGLM_ph
           = scalar __000011 = 1.103319124238896
           – if $SGLM_s1 { scalar `phi' = $SGLM_s1 }
           = if 1 { scalar __000011 = 1 }
           – tempvar lli
           – qui `VV' $SGLM_V 5 `eta' `mu' `lli'
           = qui version 18.5: glim_v6 5 __00000X __00000Y __000012
           ───────────────────────────────────────────────────────
```

> ─── begin glim

> _v6 ──

```
           – version 7
           – args todo eta mu return
           – if `todo' == –1 {
           = if 5 == –1 {
                  local y "$SGLM_y"
                  local m "$SGLM_m"
                  local touse "`eta'"
                  capture assert `y'>=0 if `touse'
                  if _rc {
```

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```
                      di as err `"dependent variable `y' has negative values"'
                      exit 499
                      }
                      capture assert `y'==int(`y') if `touse'
                      if _rc {
                      di as txt `"note: `y' has noninteger values"'
                      }
                      global SGLM_vt "Neg. Binomial"
                      local SGLM_a = round($SGLM_a,0.0001)
                      global SGLM_vf "u+(`SGLM_a')u^2"
                      global SGLM_mu "glim_mu 0 ."
                      exit
                      }
              ─ if `todo' == 0 {
              = if 5 == 0 {
                      gen double `eta' = -ln1p($SGLM_a/`mu')
                      exit
                      }
              ─ if `todo' == 1 {
              = if 5 == 1 {
                      gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
                      exit
                      }
              ─ if `todo' == 2 {
              = if 5 == 2 {
                      gen double `return' = 1 + 2*`mu'*$SGLM_a
                      exit
                      }
              ─ if `todo' == 3 {
              = if 5 == 3 {
                      local y "$SGLM_y"
                      if "`y'" == "" {
                      local y "`e(depvar)'"
                      }
                      gen double `return' = cond(`y'==0, 2*ln1p(`mu'*$SGLM_a)/$SGL
> M_a, 2*(`y'*ln(`y'/`mu') - (1+`y'*$SGLM_a)/$SGLM_a * ln((1+`y'*$SGLM_a)/(1+`
> mu'*$SGLM_a))))
                      exit
                      }
              ─ if `todo' == 4 {
              = if 5 == 4 {
                      local y "$SGLM_y"
                      local k "$SGLM_a"
                      if "`y'" == "" {
                      local y "`e(depvar)'"
                      }
```

```
                    gen double `return' = ((_hyp2f1(-`k'*`y') - _hyp2f1(-`k'*`mu
> ')) + 3/2*(`y'^(2/3) -`mu'^(2/3)))/((`mu'+`k'*`mu'^2)^(1/6))
                    exit
                    }
              - if `todo' == 5 {
              = if 5 == 5 {
              - local y "$SGLM_y"
              = local y "piq_timing_max"
              - if "`y'" == "" {
              = if "piq_timing_max" == "" {
                local y "`e(depvar)'"
                }
              - tempname sig2
              - if $SGLM_s1 {
              = if 1 {
              - scalar `sig2' = $SGLM_s1
              = scalar __000013 = 1
              - }
              - else {
                if _caller() >= 11 {
                scalar `sig2' = $SGLM_ph*(($ML_N-$ML_kCns)/$ML_N)
                }
                else {
                scalar `sig2' = $SGLM_ph*(($ML_N-$ML_k)/$ML_N)
                }
                }
              - local m = 1/$SGLM_a
              = local m = 1/1
              - local lnalpha = ln(`m')
              = local lnalpha = ln(1)
              - gen double `return' = `sig2'*(lngamma(`m'+`y')-lngamma(`y'+1
> ) - lngamma(`m') - `m'*ln1p(`mu'/`m') + `y'*ln(`mu'/(`mu'+`m')))
              = gen double __000012 = __000013*(lngamma(1+piq_timing_max)-ln
> gamma(piq_timing_max+1) - lngamma(1) - 1*ln1p(__00000Y/1) + piq_timing_max*l
> n(__00000Y/(__00000Y+1)))
                - exit
                ───────────────────────────────────────────────────────────

> ──────────────────────────────────────────────────────────── end glim
> _v6 ────────────────────────────────────────────────────────────────
              - mlsum `lnf' = `lli'
              = mlsum __00000S = __000012
              - if `todo' == 0 | `lnf'==. { exit }
              = if 0 == 0 | __00000S==. { exit }
                ───────────────────────────────────────────────────────────

> ──────────────────────────────────────────────────────────── end glim
> _lf ─────────────────────────────────────────────────────────────────
```

```
> ───────────────────────────────────────────────── begin glim
> _lf ─────────────────────────────────────────────────────
            – version 6
            – args todo b lnf g H score
            – local VV : di "version " string(_caller()) ":"
            – tempvar eta mu dmu v
            – mleval `eta' = `b'
            = mleval __00000X = __00000R
            – qui $SGLM_L 1 `eta' `mu'
            = qui glim_l03 1 __00000X __00000Y

> ───────────────────────────────────────────────── begin glim_
> l03 ─────────────────────────────────────────────────────
            – version 7
            – args todo eta mu return
            – if `todo' == –1 {
            = if 1 == –1 {
              global SGLM_lt "Log"
              if "$SGLM_m" == "1" {
              global SGLM_lf "ln(u)"
              }
              else global SGLM_lf "ln(u/$SGLM_m)"
              exit
              }
            – if `todo' == 0 {
            = if 1 == 0 {
              gen double `eta' = ln(`mu'/$SGLM_m)
              exit
              }
            – if `todo' == 1 {
            = if 1 == 1 {
            – gen double `mu' = $SGLM_m*exp(`eta')
            = gen double __00000Y = 1*exp(__00000X)
            – exit

> ───────────────────────────────────────────────── end glim_
> l03 ─────────────────────────────────────────────────────
            – qui $SGLM_mu `mu'
            = qui glim_mu 0 . __00000Y

> ───────────────────────────────────────────────── begin glim
> _mu ─────────────────────────────────────────────────────
            – version 7
            – args min max mu
            – tempname eps
```

```
              – scalar `eps' = 1e–8
              = scalar __000011 = 1e–8
              – replace `mu' = `min'+`eps' if `mu'<=`min'+`eps'
              = replace __00000Y = 0+__000011 if __00000Y<=0+__000011
              – replace `mu' = `max'–`eps' if `mu'>=`max'–`eps'
              = replace __00000Y = .–__000011 if __00000Y>=.–__000011
              ─────────────────────────────────────────────────────────
```

> ─── end glim
> _mu ──

```
              – qui $SGLM_L 2 `eta' `mu' `dmu'
              = qui glim_l03 2 __00000X __00000Y __00000Z
              ─────────────────────────────────────────────────────────
```

> ─── begin glim_
> l03 ──

```
              – version 7
              – args todo eta mu return
              – if `todo' == –1 {
              = if 2 == –1 {
                global SGLM_lt "Log"
                if "$SGLM_m" == "1" {
                global SGLM_lf "ln(u)"
                }
                else global SGLM_lf "ln(u/$SGLM_m)"
                exit
                }
              – if `todo' == 0 {
              = if 2 == 0 {
                gen double `eta' = ln(`mu'/$SGLM_m)
                exit
                }
              – if `todo' == 1 {
              = if 2 == 1 {
                gen double `mu' = $SGLM_m*exp(`eta')
                exit
                }
              – if `todo' == 2 {
              = if 2 == 2 {
              – gen double `return' = `mu'
              = gen double __00000Z = __00000Y
              – exit
              ─────────────────────────────────────────────────────────
```

> ─── end glim_
> l03 ──

```
              – qui $SGLM_V 1 `eta' `mu' `v'
              = qui glim_v6 1 __00000X __00000Y __000010
              ─────────────────────────────────────────────────────────
```

```
> ─────────────────────────────────────────────────────────────────── begin glim
> _v6 ──────────────────────────────────────────────────────────────────────────
                   ─ version 7
                   ─ args todo eta mu return
                   ─ if `todo' == −1 {
                   = if 1 == −1 {
                     local y "$SGLM_y"
                     local m "$SGLM_m"
                     local touse "`eta'"
                     capture assert `y'>=0 if `touse'
                     if _rc {
                     di as err `"dependent variable `y' has negative values"'
                     exit 499
                     }
                     capture assert `y'==int(`y') if `touse'
                     if _rc {
                     di as txt `"note: `y' has noninteger values"'
                     }
                     global SGLM_vt "Neg. Binomial"
                     local SGLM_a = round($SGLM_a,0.0001)
                     global SGLM_vf "u+(`SGLM_a')u^2"
                     global SGLM_mu "glim_mu 0 ."
                     exit
                     }
                   ─ if `todo' == 0 {
                   = if 1 == 0 {
                     gen double `eta' = −ln1p($SGLM_a/`mu')
                     exit
                     }
                   ─ if `todo' == 1 {
                   = if 1 == 1 {
                   ─ gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
                   = gen double __000010 = __00000Y+__00000Y*__00000Y*1
                   ─ exit
                   ─────────────────────────────────────────────────────────────

> ─────────────────────────────────────────────────────────────────────── end glim
> _v6 ──────────────────────────────────────────────────────────────────────────
                   ─ if "$ML_off" == "" {
                   = if "0" == "" {
                     global ML_off 0
                     }
                   ─ tempname phi
                   ─ if "$SGLM_ph" == "" { global SGLM_ph = 1 }
                   = if "1.103319124238896" == "" { global SGLM_ph = 1 }
                   ─ scalar `phi' = $SGLM_ph
                   = scalar __000011 = 1.103319124238896
```

```
               - if $SGLM_s1 { scalar `phi' = $SGLM_s1 }
               = if 1 { scalar __000011 = 1 }
               - tempvar lli
               - qui `VV' $SGLM_V 5 `eta' `mu' `lli'
               = qui version 18.5: glim_v6 5 __00000X __00000Y __000012
             ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━
```
> ── begin glim
> _v6 ───
```
               - version 7
               - args todo eta mu return
               - if `todo' == -1 {
               = if 5 == -1 {
                 local y "$SGLM_y"
                 local m "$SGLM_m"
                 local touse "`eta'"
                 capture assert `y'>=0 if `touse'
                 if _rc {
                 di as err `"dependent variable `y' has negative values"'
                 exit 499
                 }
                 capture assert `y'==int(`y') if `touse'
                 if _rc {
                 di as txt `"note: `y' has noninteger values"'
                 }
                 global SGLM_vt "Neg. Binomial"
                 local SGLM_a = round($SGLM_a,0.0001)
                 global SGLM_vf "u+(`SGLM_a')u^2"
                 global SGLM_mu "glim_mu 0 ."
                 exit
                 }
               - if `todo' == 0 {
               = if 5 == 0 {
                 gen double `eta' = -ln1p($SGLM_a/`mu')
                 exit
                 }
               - if `todo' == 1 {
               = if 5 == 1 {
                 gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
                 exit
                 }
               - if `todo' == 2 {
               = if 5 == 2 {
                 gen double `return' = 1 + 2*`mu'*$SGLM_a
                 exit
                 }
               - if `todo' == 3 {
```

```
= if 5 == 3 {
  local y "$SGLM_y"
  if "`y'" == "" {
  local y "`e(depvar)'"
  }
  gen double `return' = cond(`y'==0, 2*ln1p(`mu'*$SGLM_a)/$SGL
> M_a, 2*(`y'*ln(`y'/`mu') - (1+`y'*$SGLM_a)/$SGLM_a * ln((1+`y'*$SGLM_a)/(1+`
> mu'*$SGLM_a))))
  exit
  }
- if `todo' == 4 {
= if 5 == 4 {
  local y "$SGLM_y"
  local k "$SGLM_a"
  if "`y'" == "" {
  local y "`e(depvar)'"
  }
  gen double `return' = ((_hyp2f1(-`k'*`y') - _hyp2f1(-`k'*`mu
> ')) + 3/2*(`y'^(2/3) -`mu'^(2/3)))/((`mu'+`k'*`mu'^2)^(1/6))
  exit
  }
- if `todo' == 5 {
= if 5 == 5 {
- local y "$SGLM_y"
= local y "piq_timing_max"
- if "`y'" == "" {
= if "piq_timing_max" == "" {
  local y "`e(depvar)'"
  }
- tempname sig2
- if $SGLM_s1 {
= if 1 {
- scalar `sig2' = $SGLM_s1
= scalar __000013 = 1
- }
- else {
  if _caller() >= 11 {
  scalar `sig2' = $SGLM_ph*(($ML_N-$ML_kCns)/$ML_N)
  }
  else {
  scalar `sig2' = $SGLM_ph*(($ML_N-$ML_k)/$ML_N)
  }
  }
- local m = 1/$SGLM_a
= local m = 1/1
- local lnalpha = ln(`m')
```

```
              = local lnalpha = ln(1)
              - gen double `return' = `sig2'*(lngamma(`m'+`y')-lngamma(`y'+1
> ) - lngamma(`m') - `m'*ln1p(`mu'/`m') + `y'*ln(`mu'/(`mu'+`m')))
              = gen double __000012 = __000013*(lngamma(1+piq_timing_max)-ln
> gamma(piq_timing_max+1) - lngamma(1) - 1*ln1p(__00000Y/1) + piq_timing_max*l
> n(__00000Y/(__00000Y+1)))
              - exit
              _____
```

```
              - mlsum `lnf' = `lli'
              = mlsum __00000S = __000012
              - if `todo' == 0 | `lnf'==. { exit }
              = if 0 == 0 | __00000S==. { exit }
              _____
```

```
              - version 6
              - args todo b lnf g H score
              - local VV : di "version " string(_caller()) ":"
              - tempvar eta mu dmu v
              - mleval `eta' = `b'
              = mleval __00000X = __00000R
              - qui $SGLM_L 1 `eta' `mu'
              = qui glim_l03 1 __00000X __00000Y
              _____
```

```
              - version 7
              - args todo eta mu return
              - if `todo' == -1 {
              = if 1 == -1 {
                global SGLM_lt "Log"
                if "$SGLM_m" == "1" {
                global SGLM_lf "ln(u)"
                }
                else global SGLM_lf "ln(u/$SGLM_m)"
                exit
                }
              - if `todo' == 0 {
              = if 1 == 0 {
                gen double `eta' = ln(`mu'/$SGLM_m)
                exit
```

```
              }
            − if `todo' == 1 {
            = if 1 == 1 {
            − gen double `mu' = $SGLM_m*exp(`eta')
            = gen double __00000Y = 1*exp(__00000X)
            − exit
              ─────────────────────────────────────────────────────
```
```
            − qui $SGLM_mu `mu'
            = qui glim_mu 0 . __00000Y
              ─────────────────────────────────────────────────────
```
```
            − version 7
            − args min max mu
            − tempname eps
            − scalar `eps' = 1e−8
            = scalar __000011 = 1e−8
            − replace `mu' = `min'+`eps' if `mu'<=`min'+`eps'
            = replace __00000Y = 0+__000011 if __00000Y<=0+__000011
            − replace `mu' = `max'−`eps' if `mu'>=`max'−`eps'
            = replace __00000Y = .−__000011 if __00000Y>=.−__000011
              ─────────────────────────────────────────────────────
```
```
            − qui $SGLM_L 2 `eta' `mu' `dmu'
            = qui glim_l03 2 __00000X __00000Y __00000Z
              ─────────────────────────────────────────────────────
```
```
            − version 7
            − args todo eta mu return
            − if `todo' == −1 {
            = if 2 == −1 {
              global SGLM_lt "Log"
              if "$SGLM_m" == "1" {
              global SGLM_lf "ln(u)"
              }
              else global SGLM_lf "ln(u/$SGLM_m)"
              exit
              }
            − if `todo' == 0 {
            = if 2 == 0 {
              gen double `eta' = ln(`mu'/$SGLM_m)
              exit
```

```
                        }
              – if `todo' == 1 {
              = if 2 == 1 {
                gen double `mu' = $SGLM_m*exp(`eta')
                exit
                }
              – if `todo' == 2 {
              = if 2 == 2 {
              – gen double `return' = `mu'
              = gen double __00000Z = __00000Y
              – exit
                ─────────────────────────────────────────────
```

```
              – qui $SGLM_V 1 `eta' `mu' `v'
              = qui glim_v6 1 __00000X __00000Y __000010
                ─────────────────────────────────────────────
```

```
              – version 7
              – args todo eta mu return
              – if `todo' == −1 {
              = if 1 == −1 {
                local y "$SGLM_y"
                local m "$SGLM_m"
                local touse "`eta'"
                capture assert `y'>=0 if `touse'
                if _rc {
                di as err `"dependent variable `y' has negative values"'
                exit 499
                }
                capture assert `y'==int(`y') if `touse'
                if _rc {
                di as txt `"note: `y' has noninteger values"'
                }
                global SGLM_vt "Neg. Binomial"
                local SGLM_a = round($SGLM_a,0.0001)
                global SGLM_vf "u+(`SGLM_a')u^2"
                global SGLM_mu "glim_mu 0 ."
                exit
                }
              – if `todo' == 0 {
              = if 1 == 0 {
                gen double `eta' = −ln1p($SGLM_a/`mu')
                exit
                }
```

```
                    - if `todo' == 1 {
                    = if 1 == 1 {
                    - gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
                    = gen double __000010 = __00000Y+__00000Y*__00000Y*1
                    - exit
                     ─────────────────────────────────────────────────
>  ─────────────────────────────────────────────────── end glim
>  _v6 ─────────────────────────────────────────────────────
                    - if "$ML_off" == "" {
                    = if "0" == "" {
                      global ML_off 0
                      }
                    - tempname phi
                    - if "$SGLM_ph" == "" { global SGLM_ph = 1 }
                    = if "1.103319124238896" == "" { global SGLM_ph = 1 }
                    - scalar `phi' = $SGLM_ph
                    = scalar __000011 = 1.103319124238896
                    - if $SGLM_s1 { scalar `phi' = $SGLM_s1 }
                    = if 1 { scalar __000011 = 1 }
                    - tempvar lli
                    - qui `VV' $SGLM_V 5 `eta' `mu' `lli'
                    = qui version 18.5: glim_v6 5 __00000X __00000Y __000012
                     ─────────────────────────────────────────────────
>  ─────────────────────────────────────────────────── begin glim
>  _v6 ─────────────────────────────────────────────────────
                    - version 7
                    - args todo eta mu return
                    - if `todo' == -1 {
                    = if 5 == -1 {
                      local y "$SGLM_y"
                      local m "$SGLM_m"
                      local touse "`eta'"
                      capture assert `y'>=0 if `touse'
                      if _rc {
                      di as err `"dependent variable `y' has negative values"'
                      exit 499
                      }
                      capture assert `y'==int(`y') if `touse'
                      if _rc {
                      di as txt `"note: `y' has noninteger values"'
                      }
                      global SGLM_vt "Neg. Binomial"
                      local SGLM_a = round($SGLM_a,0.0001)
                      global SGLM_vf "u+(`SGLM_a')u^2"
                      global SGLM_mu "glim_mu 0 ."
                      exit
```

```
                   }
               — if `todo' == 0 {
               = if 5 == 0 {
                 gen double `eta' = -ln1p($SGLM_a/`mu')
                 exit
                 }
               — if `todo' == 1 {
               = if 5 == 1 {
                 gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
                 exit
                 }
               — if `todo' == 2 {
               = if 5 == 2 {
                 gen double `return' = 1 + 2*`mu'*$SGLM_a
                 exit
                 }
               — if `todo' == 3 {
               = if 5 == 3 {
                 local y "$SGLM_y"
                 if "`y'" == "" {
                 local y "`e(depvar)'"
                 }
                 gen double `return' = cond(`y'==0, 2*ln1p(`mu'*$SGLM_a)/$SGL
> M_a, 2*(`y'*ln(`y'/`mu') - (1+`y'*$SGLM_a)/$SGLM_a * ln((1+`y'*$SGLM_a)/(1+`
> mu'*$SGLM_a))))
                 exit
                 }
               — if `todo' == 4 {
               = if 5 == 4 {
                 local y "$SGLM_y"
                 local k "$SGLM_a"
                 if "`y'" == "" {
                 local y "`e(depvar)'"
                 }
                 gen double `return' = ((_hyp2f1(-`k'*`y') - _hyp2f1(-`k'*`mu
> ')) + 3/2*(`y'^(2/3) -`mu'^(2/3)))/((`mu'+`k'*`mu'^2)^(1/6))
                 exit
                 }
               — if `todo' == 5 {
               = if 5 == 5 {
               — local y "$SGLM_y"
               = local y "piq_timing_max"
               — if "`y'" == "" {
               = if "piq_timing_max" == "" {
                 local y "`e(depvar)'"
                 }
```

```
              - tempname sig2
              - if $SGLM_s1 {
              = if 1 {
              - scalar `sig2' = $SGLM_s1
              = scalar __000013 = 1
              - }
              - else {
                if _caller() >= 11 {
                scalar `sig2' = $SGLM_ph*(($ML_N-$ML_kCns)/$ML_N)
                }
                else {
                scalar `sig2' = $SGLM_ph*(($ML_N-$ML_k)/$ML_N)
                }
                }
              - local m = 1/$SGLM_a
              = local m = 1/1
              - local lnalpha = ln(`m')
              = local lnalpha = ln(1)
              - gen double `return' = `sig2'*(lngamma(`m'+`y')-lngamma(`y'+1
> ) - lngamma(`m') - `m'*ln1p(`mu'/`m') + `y'*ln(`mu'/(`mu'+`m')))
              = gen double __000012 = __000013*(lngamma(1+piq_timing_max)-ln
> gamma(piq_timing_max+1) - lngamma(1) - 1*ln1p(__00000Y/1) + piq_timing_max*l
> n(__00000Y/(__00000Y+1)))
              - exit
              ─────────────────────────────────────────────────────────
> ──────────────────────────────────────────────────────── end glim
> _v6 ───────────────────────────────────────────────────
              - mlsum `lnf' = `lli'
              = mlsum __00000S = __000012
              - if `todo' == 0 | `lnf'==. { exit }
              = if 0 == 0 | __00000S==. { exit }
              ─────────────────────────────────────────────────────────
> ──────────────────────────────────────────────────────── end glim
> _lf ───────────────────────────────────────────────────
              ─────────────────────────────────────────────────────────
> ──────────────────────────────────────────────────────── begin glim
> _lf ───────────────────────────────────────────────────
              - version 6
              - args todo b lnf g H score
              - local VV : di "version " string(_caller()) ":"
              - tempvar eta mu dmu v
              - mleval `eta' = `b'
              = mleval __00000X = __00000R
              - qui $SGLM_L 1 `eta' `mu'
              = qui glim_l03 1 __00000X __00000Y
              ─────────────────────────────────────────────────────────
```

```
> ──────────────────────────────────────────────────────────── begin glim_
> l03 ─────────────────────────────────────────────────────────────────────
                − version 7
                − args todo eta mu return
                − if `todo' == −1 {
                = if 1 == −1 {
                  global SGLM_lt "Log"
                  if "$SGLM_m" == "1" {
                  global SGLM_lf "ln(u)"
                  }
                  else global SGLM_lf "ln(u/$SGLM_m)"
                  exit
                  }
                − if `todo' == 0 {
                = if 1 == 0 {
                  gen double `eta' = ln(`mu'/$SGLM_m)
                  exit
                  }
                − if `todo' == 1 {
                = if 1 == 1 {
                − gen double `mu' = $SGLM_m*exp(`eta')
                = gen double __00000Y = 1*exp(__00000X)
                − exit
                ─────────────────────────────────────────────────

> ──────────────────────────────────────────────────────────── end glim_
> l03 ─────────────────────────────────────────────────────────────────────
                − qui $SGLM_mu `mu'
                = qui glim_mu 0 . __00000Y
                ─────────────────────────────────────────────────

> ──────────────────────────────────────────────────────────── begin glim
> _mu ─────────────────────────────────────────────────────────────────────
                − version 7
                − args min max mu
                − tempname eps
                − scalar `eps' = 1e−8
                = scalar __000011 = 1e−8
                − replace `mu' = `min'+`eps' if `mu'<=`min'+`eps'
                = replace __00000Y = 0+__000011 if __00000Y<=0+__000011
                − replace `mu' = `max'−`eps' if `mu'>=`max'−`eps'
                = replace __00000Y = .−__000011 if __00000Y>=.−__000011
                ─────────────────────────────────────────────────

> ──────────────────────────────────────────────────────────── end glim
> _mu ─────────────────────────────────────────────────────────────────────
                − qui $SGLM_L 2 `eta' `mu' `dmu'
                = qui glim_l03 2 __00000X __00000Y __00000Z
                ─────────────────────────────────────────────────
```

```
               − version 7
               − args todo eta mu return
               − if `todo' == −1 {
               = if 2 == −1 {
                 global SGLM_lt "Log"
                 if "$SGLM_m" == "1" {
                 global SGLM_lf "ln(u)"
                 }
                 else global SGLM_lf "ln(u/$SGLM_m)"
                 exit
                 }
               − if `todo' == 0 {
               = if 2 == 0 {
                 gen double `eta' = ln(`mu'/$SGLM_m)
                 exit
                 }
               − if `todo' == 1 {
               = if 2 == 1 {
                 gen double `mu' = $SGLM_m*exp(`eta')
                 exit
                 }
               − if `todo' == 2 {
               = if 2 == 2 {
               − gen double `return' = `mu'
               = gen double __00000Z = __00000Y
               − exit
                 ────────────────────────────────────────────────
```

```
               − qui $SGLM_V 1 `eta' `mu' `v'
               = qui glim_v6 1 __00000X __00000Y __000010
                 ────────────────────────────────────────────────
```

```
               − version 7
               − args todo eta mu return
               − if `todo' == −1 {
               = if 1 == −1 {
                 local y "$SGLM_y"
                 local m "$SGLM_m"
                 local touse "`eta'"
                 capture assert `y'>=0 if `touse'
                 if _rc {
                 di as err `"dependent variable `y' has negative values"'
```

```
                    exit 499
                    }
                    capture assert `y'==int(`y') if `touse'
                    if _rc {
                    di as txt `"note: `y' has noninteger values"'
                    }
                    global SGLM_vt "Neg. Binomial"
                    local SGLM_a = round($SGLM_a,0.0001)
                    global SGLM_vf "u+(`SGLM_a')u^2"
                    global SGLM_mu "glim_mu 0 ."
                    exit
                    }
          - if `todo' == 0 {
          = if 1 == 0 {
                    gen double `eta' = -ln1p($SGLM_a/`mu')
                    exit
                    }
          - if `todo' == 1 {
          = if 1 == 1 {
          - gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
          = gen double __000010 = __00000Y+__00000Y*__00000Y*1
          - exit
          ─────────────────────────────────────────────────
```

```
> ──────────────────────────────────────────────────── end glim
> _v6 ──────────────────────────────────────────────────
          - if "$ML_off" == "" {
          = if "0" == "" {
                    global ML_off 0
                    }
          - tempname phi
          - if "$SGLM_ph" == "" { global SGLM_ph = 1 }
          = if "1.103319124238896" == "" { global SGLM_ph = 1 }
          - scalar `phi' = $SGLM_ph
          = scalar __000011 = 1.103319124238896
          - if $SGLM_s1 { scalar `phi' = $SGLM_s1 }
          = if 1 { scalar __000011 = 1 }
          - tempvar lli
          - qui `VV' $SGLM_V 5 `eta' `mu' `lli'
          = qui version 18.5: glim_v6 5 __00000X __00000Y __000012
          ─────────────────────────────────────────────────
```

```
> ──────────────────────────────────────────────────── begin glim
> _v6 ──────────────────────────────────────────────────
          - version 7
          - args todo eta mu return
          - if `todo' == -1 {
          = if 5 == -1 {
```

```
                    local y "$SGLM_y"
                    local m "$SGLM_m"
                    local touse "`eta'"
                    capture assert `y'>=0 if `touse'
                    if _rc {
                    di as err `"dependent variable `y' has negative values"'
                    exit 499
                    }
                    capture assert `y'==int(`y') if `touse'
                    if _rc {
                    di as txt `"note: `y' has noninteger values"'
                    }
                    global SGLM_vt "Neg. Binomial"
                    local SGLM_a = round($SGLM_a,0.0001)
                    global SGLM_vf "u+(`SGLM_a')u^2"
                    global SGLM_mu "glim_mu 0 ."
                    exit
                    }
               - if `todo' == 0 {
               = if 5 == 0 {
                    gen double `eta' = -ln1p($SGLM_a/`mu')
                    exit
                    }
               - if `todo' == 1 {
               = if 5 == 1 {
                    gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
                    exit
                    }
               - if `todo' == 2 {
               = if 5 == 2 {
                    gen double `return' = 1 + 2*`mu'*$SGLM_a
                    exit
                    }
               - if `todo' == 3 {
               = if 5 == 3 {
                    local y "$SGLM_y"
                    if "`y'" == "" {
                    local y "`e(depvar)'"
                    }
                    gen double `return' = cond(`y'==0, 2*ln1p(`mu'*$SGLM_a)/$SGL
> M_a, 2*(`y'*ln(`y'/`mu') - (1+`y'*$SGLM_a)/$SGLM_a * ln((1+`y'*$SGLM_a)/(1+`
> mu'*$SGLM_a))))
                    exit
                    }
               - if `todo' == 4 {
               = if 5 == 4 {
```

```
                local y "$SGLM_y"
                local k "$SGLM_a"
                if "`y'" == "" {
                local y "`e(depvar)'"
                }
                gen double `return' = ((_hyp2f1(-`k'*`y') - _hyp2f1(-`k'*`mu
>  ')) + 3/2*(`y'^(2/3) -`mu'^(2/3)))/((`mu'+`k'*`mu'^2)^(1/6))
                exit
                }
            - if `todo' == 5 {
            = if 5 == 5 {
            - local y "$SGLM_y"
            = local y "piq_timing_max"
            - if "`y'" == "" {
            = if "piq_timing_max" == "" {
                local y "`e(depvar)'"
                }
            - tempname sig2
            - if $SGLM_s1 {
            = if 1 {
            - scalar `sig2' = $SGLM_s1
            = scalar __000013 = 1
            - }
            - else {
                if _caller() >= 11 {
                scalar `sig2' = $SGLM_ph*(($ML_N-$ML_kCns)/$ML_N)
                }
                else {
                scalar `sig2' = $SGLM_ph*(($ML_N-$ML_k)/$ML_N)
                }
                }
            - local m = 1/$SGLM_a
            = local m = 1/1
            - local lnalpha = ln(`m')
            = local lnalpha = ln(1)
            - gen double `return' = `sig2'*(lngamma(`m'+`y')-lngamma(`y'+1
>  ) - lngamma(`m') - `m'*ln1p(`mu'/`m') + `y'*ln(`mu'/(`mu'+`m')))
            = gen double __000012 = __000013*(lngamma(1+piq_timing_max)-ln
> gamma(piq_timing_max+1) - lngamma(1) - 1*ln1p(__00000Y/1) + piq_timing_max*l
> n(__00000Y/(__00000Y+1)))
            - exit
            _____
>  ──────────────────────────────────────────────── end glim
>  _v6 ────────────────────────────────────────────────────────
            - mlsum `lnf' = `lli'
            = mlsum __00000S = __000012
```

```
              - if `todo' == 0 | `lnf'==. { exit }
              = if 2 == 0 | __00000S==. { exit }
              - qui replace `score' = ($ML_y1 - `mu')/(`phi'*`v')*`dmu' if $ML
> _samp
              = qui replace __00000V = (piq_timing_max - __00000Y)/(__000011*_
> _000010)*__00000Z if __00000D
              - $ML_ec mlvecsum `lnf' `g' = `score'
              = * mlvecsum __00000S __00000T = __00000V
              - if `todo' == 1 | `lnf'==. { exit }
              = if 2 == 1 | __00000S==. { exit }
              - tempvar tt
              - qui gen double `tt' = sum($ML_w*($ML_y1-`mu')*($ML_y1-`mu')/`v
> ')
              = qui gen double __000013 = sum(__00000D*(piq_timing_max-__00000
> Y)*(piq_timing_max-__00000Y)/__000010)
              - if _caller() >= 11 {
              - global SGLM_ph = `tt'[_N]/($ML_N-$ML_kCns)
              = global SGLM_ph = __000013[_N]/(217-7)
              - }
              - else {
                global SGLM_ph = `tt'[_N]/($ML_N-$ML_k)
                }
              - qui $SGLM_A
              = qui
              - tempvar t1
              - qui gen double `t1' = `dmu'*`dmu'/`v' if $ML_samp
              = qui gen double __000014 = __00000Z*__00000Z/__000010 if __0000
> 0D
              - if "$SGLM_f" == "" {
              = if "-1" == "" {
                global SGLM_f = -1
                }
              - if $SGLM_f >= $ML_ic {
              = if -1 >= 1 {
                mlmatsum `lnf' `H' = (`t1')/`phi'
                exit
                }
              - tempvar dv d2mu
              - qui $SGLM_V 2 `eta' `mu' `dv'
              = qui glim_v6 2 __00000X __00000Y __000015
              ─────────────────────────────────────────────────────────────
> ───────────────────────────────────────────────────────── begin glim
> _v6 ──────────────────────────────────────────────────────
              - version 7
              - args todo eta mu return
              - if `todo' == -1 {
```

```
= if 2 == −1 {
  local y "$SGLM_y"
  local m "$SGLM_m"
  local touse "`eta'"
  capture assert `y'>=0 if `touse'
  if _rc {
  di as err `"dependent variable `y' has negative values"'
  exit 499
  }
  capture assert `y'==int(`y') if `touse'
  if _rc {
  di as txt `"note: `y' has noninteger values"'
  }
  global SGLM_vt "Neg. Binomial"
  local SGLM_a = round($SGLM_a,0.0001)
  global SGLM_vf "u+(`SGLM_a')u^2"
  global SGLM_mu "glim_mu 0 ."
  exit
  }
− if `todo' == 0 {
= if 2 == 0 {
  gen double `eta' = −ln1p($SGLM_a/`mu')
  exit
  }
− if `todo' == 1 {
= if 2 == 1 {
  gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
  exit
  }
− if `todo' == 2 {
= if 2 == 2 {
− gen double `return' = 1 + 2*`mu'*$SGLM_a
= gen double __000015 = 1 + 2*__00000Y*1
− exit
```

```
> ──────────────────────────────────────────────────────────────── end glim
> _v6 ───────────────────────────────────────────────────────────────────
          − qui $SGLM_L 3 `eta' `mu' `d2mu'
          = qui glim_l03 3 __00000X __00000Y __000016
```

```
> ──────────────────────────────────────────────────────────── begin glim_
> l03 ───────────────────────────────────────────────────────────────────
          − version 7
          − args todo eta mu return
          − if `todo' == −1 {
          = if 3 == −1 {
```

```
                        global SGLM_lt "Log"
                        if "$SGLM_m" == "1" {
                        global SGLM_lf "ln(u)"
                        }
                        else global SGLM_lf "ln(u/$SGLM_m)"
                        exit
                        }
                  − if `todo' == 0 {
                  = if 3 == 0 {
                        gen double `eta' = ln(`mu'/$SGLM_m)
                        exit
                        }
                  − if `todo' == 1 {
                  = if 3 == 1 {
                        gen double `mu' = $SGLM_m*exp(`eta')
                        exit
                        }
                  − if `todo' == 2 {
                  = if 3 == 2 {
                        gen double `return' = `mu'
                        exit
                        }
                  − if `todo' == 3 {
                  = if 3 == 3 {
                  − gen double `return' = `mu'
                  = gen double __000016 = __00000Y
                  − exit
                  ───────────────────────────────────────────────────
> ──────────────────────────────────────────────────────────── end glim_
> l03 ─────────────────────────────────────────────────────────────────
                  − tempvar t2 t3
                  − qui gen double `t2' = `t1'/`v'*`dv' if $ML_samp
                  = qui gen double __000017 = __000014/__000010*__000015 if __0000
> 0D
                  − qui gen double `t3' = `d2mu'/`v' if $ML_samp
                  = qui gen double __000018 = __000016/__000010 if __00000D
                  − mlmatsum `lnf' `H' = (`t1'−(`mu'−$ML_y1)*(`t2'−`t3'))/`phi'
                  = mlmatsum __00000S __00000U = (__000014−(__00000Y−piq_timing_ma
> x)*(__000017−__000018))/__000011
                  ───────────────────────────────────────────────────
> ──────────────────────────────────────────────────────────── end glim
> _lf ─────────────────────────────────────────────────────────────────
                  ───────────────────────────────────────────────────
> ──────────────────────────────────────────────────────────── begin glim
> _lf ─────────────────────────────────────────────────────────────────
                  − version 6
```

```
                  - args todo b lnf g H score
                  - local VV : di "version " string(_caller()) ":"
                  - tempvar eta mu dmu v
                  - mleval `eta' = `b'
                  = mleval __00000X = __00000R
                  - qui $SGLM_L 1 `eta' `mu'
                  = qui glim_l03 1 __00000X __00000Y
                  ─────────────────────────────────────────
> ──────────────────────────────────────────────────────── begin glim_
> l03 ─────────────────────────────────────────────────────
                  - version 7
                  - args todo eta mu return
                  - if `todo' == -1 {
                  = if 1 == -1 {
                    global SGLM_lt "Log"
                    if "$SGLM_m" == "1" {
                    global SGLM_lf "ln(u)"
                    }
                    else global SGLM_lf "ln(u/$SGLM_m)"
                    exit
                    }
                  - if `todo' == 0 {
                  = if 1 == 0 {
                    gen double `eta' = ln(`mu'/$SGLM_m)
                    exit
                    }
                  - if `todo' == 1 {
                  = if 1 == 1 {
                  - gen double `mu' = $SGLM_m*exp(`eta')
                  = gen double __00000Y = 1*exp(__00000X)
                  - exit
                  ─────────────────────────────────────────
> ──────────────────────────────────────────────────────── end glim_
> l03 ─────────────────────────────────────────────────────
                  - qui $SGLM_mu `mu'
                  = qui glim_mu 0 . __00000Y
                  ─────────────────────────────────────────
> ──────────────────────────────────────────────────────── begin glim
> _mu ─────────────────────────────────────────────────────
                  - version 7
                  - args min max mu
                  - tempname eps
                  - scalar `eps' = 1e-8
                  = scalar __000011 = 1e-8
                  - replace `mu' = `min'+`eps' if `mu'<=`min'+`eps'
                  = replace __00000Y = 0+__000011 if __00000Y<=0+__000011
```

```
                   – replace `mu' = `max'-`eps' if `mu'>=`max'-`eps'
                   = replace __00000Y = .-__000011 if __00000Y>=.-__000011
                   ──────────────────────────────────────────────────────
>  ────────────────────────────────────────────────────────────── end glim
>  _mu ───────────────────────────────────────────────────────────────────
                   – qui $SGLM_L 2 `eta' `mu' `dmu'
                   = qui glim_l03 2 __00000X __00000Y __00000Z
                   ──────────────────────────────────────────────────────
>  ─────────────────────────────────────────────────────── begin glim_
>  l03 ───────────────────────────────────────────────────────────────────
                   – version 7
                   – args todo eta mu return
                   – if `todo' == -1 {
                   = if 2 == -1 {
                     global SGLM_lt "Log"
                     if "$SGLM_m" == "1" {
                     global SGLM_lf "ln(u)"
                     }
                     else global SGLM_lf "ln(u/$SGLM_m)"
                     exit
                     }
                   – if `todo' == 0 {
                   = if 2 == 0 {
                     gen double `eta' = ln(`mu'/$SGLM_m)
                     exit
                     }
                   – if `todo' == 1 {
                   = if 2 == 1 {
                     gen double `mu' = $SGLM_m*exp(`eta')
                     exit
                     }
                   – if `todo' == 2 {
                   = if 2 == 2 {
                   – gen double `return' = `mu'
                   = gen double __00000Z = __00000Y
                   – exit
                   ──────────────────────────────────────────────────────
>  ───────────────────────────────────────────────────────── end glim_
>  l03 ───────────────────────────────────────────────────────────────────
                   – qui $SGLM_V 1 `eta' `mu' `v'
                   = qui glim_v6 1 __00000X __00000Y __000010
                   ──────────────────────────────────────────────────────
>  ──────────────────────────────────────────────────────── begin glim
>  _v6 ───────────────────────────────────────────────────────────────────
                   – version 7
                   – args todo eta mu return
```

```
              - if `todo' == -1 {
              = if 1 == -1 {
                local y "$SGLM_y"
                local m "$SGLM_m"
                local touse "`eta'"
                capture assert `y'>=0 if `touse'
                if _rc {
                di as err `"dependent variable `y' has negative values"'
                exit 499
                }
                capture assert `y'==int(`y') if `touse'
                if _rc {
                di as txt `"note: `y' has noninteger values"'
                }
                global SGLM_vt "Neg. Binomial"
                local SGLM_a = round($SGLM_a,0.0001)
                global SGLM_vf "u+(`SGLM_a')u^2"
                global SGLM_mu "glim_mu 0 ."
                exit
                }
              - if `todo' == 0 {
              = if 1 == 0 {
                gen double `eta' = -ln1p($SGLM_a/`mu')
                exit
                }
              - if `todo' == 1 {
              = if 1 == 1 {
              - gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
              = gen double __000010 = __00000Y+__00000Y*__00000Y*1
              - exit
              _____

  > _____ end glim
  > _v6 _____
              - if "$ML_off" == "" {
              = if "0" == "" {
                global ML_off 0
                }
              - tempname phi
              - if "$SGLM_ph" == "" { global SGLM_ph = 1 }
              = if ".6640894745976983" == "" { global SGLM_ph = 1 }
              - scalar `phi' = $SGLM_ph
              = scalar __000011 = .6640894745976983
              - if $SGLM_s1 { scalar `phi' = $SGLM_s1 }
              = if 1 { scalar __000011 = 1 }
              - tempvar lli
              - qui `VV' $SGLM_V 5 `eta' `mu' `lli'
```

```
                       = qui version 18.5: glim_v6 5 __00000X __00000Y __000012
                       ─────────────────────────────────────────────────────────────
  > ─────────────────────────────────────────────────────── begin glim
  > _v6 ──────────────────────────────────────────────────────────────
                       – version 7
                       – args todo eta mu return
                       – if `todo' == –1 {
                       = if 5 == –1 {
                         local y "$SGLM_y"
                         local m "$SGLM_m"
                         local touse "`eta'"
                         capture assert `y'>=0 if `touse'
                         if _rc {
                         di as err `"dependent variable `y' has negative values"'
                         exit 499
                         }
                         capture assert `y'==int(`y') if `touse'
                         if _rc {
                         di as txt `"note: `y' has noninteger values"'
                         }
                         global SGLM_vt "Neg. Binomial"
                         local SGLM_a = round($SGLM_a,0.0001)
                         global SGLM_vf "u+(`SGLM_a')u^2"
                         global SGLM_mu "glim_mu 0 ."
                         exit
                         }
                       – if `todo' == 0 {
                       = if 5 == 0 {
                         gen double `eta' = –ln1p($SGLM_a/`mu')
                         exit
                         }
                       – if `todo' == 1 {
                       = if 5 == 1 {
                         gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
                         exit
                         }
                       – if `todo' == 2 {
                       = if 5 == 2 {
                         gen double `return' = 1 + 2*`mu'*$SGLM_a
                         exit
                         }
                       – if `todo' == 3 {
                       = if 5 == 3 {
                         local y "$SGLM_y"
                         if "`y'" == "" {
                         local y "`e(depvar)'"
```

```
                          }
                          gen double `return' = cond(`y'==0, 2*ln1p(`mu'*$SGLM_a)/$SGL
> M_a, 2*(`y'*ln(`y'/`mu') − (1+`y'*$SGLM_a)/$SGLM_a * ln((1+`y'*$SGLM_a)/(1+`
> mu'*$SGLM_a))))
                          exit
                          }
                   − if `todo' == 4 {
                   = if 5 == 4 {
                     local y "$SGLM_y"
                     local k "$SGLM_a"
                     if "`y'" == "" {
                     local y "`e(depvar)'"
                     }
                     gen double `return' = ((_hyp2f1(−`k'*`y') − _hyp2f1(−`k'*`mu
> ')) + 3/2*(`y'^(2/3) −`mu'^(2/3)))/((`mu'+`k'*`mu'^2)^(1/6))
                     exit
                     }
                   − if `todo' == 5 {
                   = if 5 == 5 {
                   − local y "$SGLM_y"
                   = local y "piq_timing_max"
                   − if "`y'" == "" {
                   = if "piq_timing_max" == "" {
                     local y "`e(depvar)'"
                     }
                   − tempname sig2
                   − if $SGLM_s1 {
                   = if 1 {
                   − scalar `sig2' = $SGLM_s1
                   = scalar __000013 = 1
                   − }
                   − else {
                     if _caller() >= 11 {
                     scalar `sig2' = $SGLM_ph*(($ML_N−$ML_kCns)/$ML_N)
                     }
                     else {
                     scalar `sig2' = $SGLM_ph*(($ML_N−$ML_k)/$ML_N)
                     }
                     }
                   − local m = 1/$SGLM_a
                   = local m = 1/1
                   − local lnalpha = ln(`m')
                   = local lnalpha = ln(1)
                   − gen double `return' = `sig2'*(lngamma(`m'+`y')−lngamma(`y'+1
> ) − lngamma(`m') − `m'*ln1p(`mu'/`m') + `y'*ln(`mu'/(`mu'+`m')))
                   = gen double __000012 = __000013*(lngamma(1+piq_timing_max)−ln
```

```
> gamma(piq_timing_max+1) – lngamma(1) – 1*ln1p(__00000Y/1) + piq_timing_max*l
> n(__00000Y/(__00000Y+1)))
                        – exit
                        ─────────────────────────────────────────────────

> ──────────────────────────────────────────────────────────── end glim
> _v6 ─────────────────────────────────────────────────────────────
                – mlsum `lnf' = `lli'
                = mlsum __00000S = __000012
                – if `todo' == 0 | `lnf'==. { exit }
                = if 0 == 0 | __00000S==. { exit }
                        ─────────────────────────────────────────────────

> ──────────────────────────────────────────────────────────── end glim
> _lf ─────────────────────────────────────────────────────────────
                        ─────────────────────────────────────────────────

> ──────────────────────────────────────────────────────────── begin glim
> _lf ─────────────────────────────────────────────────────────────
                – version 6
                – args todo b lnf g H score
                – local VV : di "version " string(_caller()) ":"
                – tempvar eta mu dmu v
                – mleval `eta' = `b'
                = mleval __00000X = __00000R
                – qui $SGLM_L 1 `eta' `mu'
                = qui glim_l03 1 __00000X __00000Y
                        ─────────────────────────────────────────────────

> ──────────────────────────────────────────────────────────── begin glim_
> l03 ─────────────────────────────────────────────────────────────
                – version 7
                – args todo eta mu return
                – if `todo' == –1 {
                = if 1 == –1 {
                  global SGLM_lt "Log"
                  if "$SGLM_m" == "1" {
                  global SGLM_lf "ln(u)"
                  }
                  else global SGLM_lf "ln(u/$SGLM_m)"
                  exit
                  }
                – if `todo' == 0 {
                = if 1 == 0 {
                  gen double `eta' = ln(`mu'/$SGLM_m)
                  exit
                  }
                – if `todo' == 1 {
                = if 1 == 1 {
                – gen double `mu' = $SGLM_m*exp(`eta')
```

```
                    = gen double __00000Y = 1*exp(__00000X)
                    − exit
                  ───────────────────────────────────────────────
   > ──────────────────────────────────────────────────────── end glim_
   > l03 ──────────────────────────────────────────────────────────
                    − qui $SGLM_mu `mu'
                    = qui glim_mu 0 . __00000Y
                  ───────────────────────────────────────────────
   > ──────────────────────────────────────────────────────── begin glim
   > _mu ──────────────────────────────────────────────────────────
                    − version 7
                    − args min max mu
                    − tempname eps
                    − scalar `eps' = 1e−8
                    = scalar __000011 = 1e−8
                    − replace `mu' = `min'+`eps' if `mu'<=`min'+`eps'
                    = replace __00000Y = 0+__000011 if __00000Y<=0+__000011
                    − replace `mu' = `max'-`eps' if `mu'>=`max'-`eps'
                    = replace __00000Y = .−__000011 if __00000Y>=.−__000011
                  ───────────────────────────────────────────────
   > ──────────────────────────────────────────────────────── end glim
   > _mu ──────────────────────────────────────────────────────────
                    − qui $SGLM_L 2 `eta' `mu' `dmu'
                    = qui glim_l03 2 __00000X __00000Y __00000Z
                  ───────────────────────────────────────────────
   > ──────────────────────────────────────────────────────── begin glim_
   > l03 ──────────────────────────────────────────────────────────
                    − version 7
                    − args todo eta mu return
                    − if `todo' == −1 {
                    = if 2 == −1 {
                      global SGLM_lt "Log"
                      if "$SGLM_m" == "1" {
                      global SGLM_lf "ln(u)"
                      }
                      else global SGLM_lf "ln(u/$SGLM_m)"
                      exit
                      }
                    − if `todo' == 0 {
                    = if 2 == 0 {
                      gen double `eta' = ln(`mu'/$SGLM_m)
                      exit
                      }
                    − if `todo' == 1 {
                    = if 2 == 1 {
                      gen double `mu' = $SGLM_m*exp(`eta')
```

```
                        exit
                        }
                 - if `todo' == 2 {
                 = if 2 == 2 {
                 - gen double `return' = `mu'
                 = gen double __00000Z = __00000Y
                 - exit
                 ─────────────────────────────────────────────────────
 > ─────────────────────────────────────────────────────── end glim_
 > l03 ───────────────────────────────────────────────────────────
                 - qui $SGLM_V 1 `eta' `mu' `v'
                 = qui glim_v6 1 __00000X __00000Y __000010
                 ─────────────────────────────────────────────────────
 > ─────────────────────────────────────────────────────── begin glim
 > _v6 ───────────────────────────────────────────────────────────
                 - version 7
                 - args todo eta mu return
                 - if `todo' == -1 {
                 = if 1 == -1 {
                    local y "$SGLM_y"
                    local m "$SGLM_m"
                    local touse "`eta'"
                    capture assert `y'>=0 if `touse'
                    if _rc {
                    di as err `"dependent variable `y' has negative values"'
                    exit 499
                    }
                    capture assert `y'==int(`y') if `touse'
                    if _rc {
                    di as txt `"note: `y' has noninteger values"'
                    }
                    global SGLM_vt "Neg. Binomial"
                    local SGLM_a = round($SGLM_a,0.0001)
                    global SGLM_vf "u+(`SGLM_a')u^2"
                    global SGLM_mu "glim_mu 0 ."
                    exit
                    }
                 - if `todo' == 0 {
                 = if 1 == 0 {
                    gen double `eta' = -ln1p($SGLM_a/`mu')
                    exit
                    }
                 - if `todo' == 1 {
                 = if 1 == 1 {
                 - gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
                 = gen double __000010 = __00000Y+__00000Y*__00000Y*1
```

```
                    – exit
                    ─────────────────────────────────────────────────────
>  ──────────────────────────────────────────────────────────── end glim
>  _v6 ─────────────────────────────────────────────────────────────────
                    – if "$ML_off" == "" {
                    = if "0" == "" {
                      global ML_off 0
                      }
                    – tempname phi
                    – if "$SGLM_ph" == "" { global SGLM_ph = 1 }
                    = if ".6640894745976983" == "" { global SGLM_ph = 1 }
                    – scalar `phi' = $SGLM_ph
                    = scalar __000011 = .6640894745976983
                    – if $SGLM_s1 { scalar `phi' = $SGLM_s1 }
                    = if 1 { scalar __000011 = 1 }
                    – tempvar lli
                    – qui `VV' $SGLM_V 5 `eta' `mu' `lli'
                    = qui version 18.5: glim_v6 5 __00000X __00000Y __000012
                      ───────────────────────────────────────────────────
>  ───────────────────────────────────────────────────────────── begin glim
>  _v6 ─────────────────────────────────────────────────────────────────
                    – version 7
                    – args todo eta mu return
                    – if `todo' == –1 {
                    = if 5 == –1 {
                      local y "$SGLM_y"
                      local m "$SGLM_m"
                      local touse "`eta'"
                      capture assert `y'>=0 if `touse'
                      if _rc {
                      di as err `"dependent variable `y' has negative values"'
                      exit 499
                      }
                      capture assert `y'==int(`y') if `touse'
                      if _rc {
                      di as txt `"note: `y' has noninteger values"'
                      }
                      global SGLM_vt "Neg. Binomial"
                      local SGLM_a = round($SGLM_a,0.0001)
                      global SGLM_vf "u+(`SGLM_a')u^2"
                      global SGLM_mu "glim_mu 0 ."
                      exit
                      }
                    – if `todo' == 0 {
                    = if 5 == 0 {
                      gen double `eta' = –ln1p($SGLM_a/`mu')
```

```
                     exit
                     }
       - if `todo' == 1 {
       = if 5 == 1 {
         gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
         exit
         }
       - if `todo' == 2 {
       = if 5 == 2 {
         gen double `return' = 1 + 2*`mu'*$SGLM_a
         exit
         }
       - if `todo' == 3 {
       = if 5 == 3 {
         local y "$SGLM_y"
         if "`y'" == "" {
         local y "`e(depvar)'"
         }
         gen double `return' = cond(`y'==0, 2*ln1p(`mu'*$SGLM_a)/$SGL
> M_a, 2*(`y'*ln(`y'/`mu') - (1+`y'*$SGLM_a)/$SGLM_a * ln((1+`y'*$SGLM_a)/(1+`
> mu'*$SGLM_a))))
                     exit
                     }
       - if `todo' == 4 {
       = if 5 == 4 {
         local y "$SGLM_y"
         local k "$SGLM_a"
         if "`y'" == "" {
         local y "`e(depvar)'"
         }
         gen double `return' = ((_hyp2f1(-`k'*`y') - _hyp2f1(-`k'*`mu
> ')) + 3/2*(`y'^(2/3) -`mu'^(2/3)))/((`mu'+`k'*`mu'^2)^(1/6))
                     exit
                     }
       - if `todo' == 5 {
       = if 5 == 5 {
       - local y "$SGLM_y"
       = local y "piq_timing_max"
       - if "`y'" == "" {
       = if "piq_timing_max" == "" {
         local y "`e(depvar)'"
         }
       - tempname sig2
       - if $SGLM_s1 {
       = if 1 {
       - scalar `sig2' = $SGLM_s1
```

```
              = scalar __000013 = 1
              - }
              - else {
                if _caller() >= 11 {
                scalar `sig2' = $SGLM_ph*(($ML_N-$ML_kCns)/$ML_N)
                }
                else {
                scalar `sig2' = $SGLM_ph*(($ML_N-$ML_k)/$ML_N)
                }
                }
              - local m = 1/$SGLM_a
              = local m = 1/1
              - local lnalpha = ln(`m')
              = local lnalpha = ln(1)
              - gen double `return' = `sig2'*(lngamma(`m'+`y')-lngamma(`y'+1
> ) - lngamma(`m') - `m'*ln1p(`mu'/`m') + `y'*ln(`mu'/(`mu'+`m')))
              = gen double __000012 = __000013*(lngamma(1+piq_timing_max)-ln
> gamma(piq_timing_max+1) - lngamma(1) - 1*ln1p(__00000Y/1) + piq_timing_max*l
> n(__00000Y/(__00000Y+1)))
              - exit
              ─────────────────────────────────────────────────
```

```
> ──────────────────────────────────────────────────────── end glim
> _v6 ────────────────────────────────────────────────────────────
              - mlsum `lnf' = `lli'
              = mlsum __00000S = __000012
              - if `todo' == 0 | `lnf'==. { exit }
              = if 0 == 0 | __00000S==. { exit }
              ─────────────────────────────────────────────────
```

```
> ──────────────────────────────────────────────────────── end glim
> _lf ──────────────────────────────────────────────────────────
              ─────────────────────────────────────────────────
```

```
> ──────────────────────────────────────────────────────── begin glim
> _lf ──────────────────────────────────────────────────────────
              - version 6
              - args todo b lnf g H score
              - local VV : di "version " string(_caller()) ":"
              - tempvar eta mu dmu v
              - mleval `eta' = `b'
              = mleval __00000X = __00000R
              - qui $SGLM_L 1 `eta' `mu'
              = qui glim_l03 1 __00000X __00000Y
              ─────────────────────────────────────────────────
```

```
> ──────────────────────────────────────────────────────── begin glim_
> l03 ──────────────────────────────────────────────────────────
              - version 7
              - args todo eta mu return
```

```
                  – if `todo' == –1 {
                  = if 1 == –1 {
                    global SGLM_lt "Log"
                    if "$SGLM_m" == "1" {
                    global SGLM_lf "ln(u)"
                    }
                    else global SGLM_lf "ln(u/$SGLM_m)"
                    exit
                    }
                  – if `todo' == 0 {
                  = if 1 == 0 {
                    gen double `eta' = ln(`mu'/$SGLM_m)
                    exit
                    }
                  – if `todo' == 1 {
                  = if 1 == 1 {
                  – gen double `mu' = $SGLM_m*exp(`eta')
                  = gen double __00000Y = 1*exp(__00000X)
                  – exit
     ─────────────────────────────────────────────────────────────
 > ────────────────────────────────────────────────────────── end glim_
 > l03 ──────────────────────────────────────────────────────────────
                  – qui $SGLM_mu `mu'
                  = qui glim_mu 0 . __00000Y
     ─────────────────────────────────────────────────────────────
 > ──────────────────────────────────────────────────────── begin glim
 > _mu ──────────────────────────────────────────────────────────────
                  – version 7
                  – args min max mu
                  – tempname eps
                  – scalar `eps' = 1e–8
                  = scalar __000011 = 1e–8
                  – replace `mu' = `min'+`eps' if `mu'<=`min'+`eps'
                  = replace __00000Y = 0+__000011 if __00000Y<=0+__000011
                  – replace `mu' = `max'–`eps' if `mu'>=`max'–`eps'
                  = replace __00000Y = .–__000011 if __00000Y>=.–__000011
     ─────────────────────────────────────────────────────────────
 > ────────────────────────────────────────────────────────── end glim
 > _mu ──────────────────────────────────────────────────────────────
                  – qui $SGLM_L 2 `eta' `mu' `dmu'
                  = qui glim_l03 2 __00000X __00000Y __00000Z
     ─────────────────────────────────────────────────────────────
 > ──────────────────────────────────────────────────────── begin glim_
 > l03 ──────────────────────────────────────────────────────────────
                  – version 7
                  – args todo eta mu return
```

```
                  – if `todo' == –1 {
                  = if 2 == –1 {
                    global SGLM_lt "Log"
                    if "$SGLM_m" == "1" {
                    global SGLM_lf "ln(u)"
                    }
                    else global SGLM_lf "ln(u/$SGLM_m)"
                    exit
                    }
                  – if `todo' == 0 {
                  = if 2 == 0 {
                    gen double `eta' = ln(`mu'/$SGLM_m)
                    exit
                    }
                  – if `todo' == 1 {
                  = if 2 == 1 {
                    gen double `mu' = $SGLM_m*exp(`eta')
                    exit
                    }
                  – if `todo' == 2 {
                  = if 2 == 2 {
                  – gen double `return' = `mu'
                  = gen double __00000Z = __00000Y
                  – exit
                    ────────────────────────────────────────────
```

> ─── end glim_

> l03 ───

```
                  – qui $SGLM_V 1 `eta' `mu' `v'
                  = qui glim_v6 1 __00000X __00000Y __000010
                    ────────────────────────────────────────────
```

> ─── begin glim

> _v6 ───

```
                  – version 7
                  – args todo eta mu return
                  – if `todo' == –1 {
                  = if 1 == –1 {
                    local y "$SGLM_y"
                    local m "$SGLM_m"
                    local touse "`eta'"
                    capture assert `y'>=0 if `touse'
                    if _rc {
                    di as err `"dependent variable `y' has negative values"'
                    exit 499
                    }
                    capture assert `y'==int(`y') if `touse'
                    if _rc {
```

```
                    di as txt `"note: `y' has noninteger values"'
                    }
                    global SGLM_vt "Neg. Binomial"
                    local SGLM_a = round($SGLM_a,0.0001)
                    global SGLM_vf "u+(`SGLM_a')u^2"
                    global SGLM_mu "glim_mu 0 ."
                    exit
                    }
                 - if `todo' == 0 {
                 = if 1 == 0 {
                    gen double `eta' = -ln1p($SGLM_a/`mu')
                    exit
                    }
                 - if `todo' == 1 {
                 = if 1 == 1 {
                 - gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
                 = gen double __000010 = __00000Y+__00000Y*__00000Y*1
                 - exit
                 ─────────────────────────────────────────────────────
```

```
                 - if "$ML_off" == "" {
                 = if "0" == "" {
                    global ML_off 0
                    }
                 - tempname phi
                 - if "$SGLM_ph" == "" { global SGLM_ph = 1 }
                 = if ".6640894745976983" == "" { global SGLM_ph = 1 }
                 - scalar `phi' = $SGLM_ph
                 = scalar __000011 = .6640894745976983
                 - if $SGLM_s1 { scalar `phi' = $SGLM_s1 }
                 = if 1 { scalar __000011 = 1 }
                 - tempvar lli
                 - qui `VV' $SGLM_V 5 `eta' `mu' `lli'
                 = qui version 18.5: glim_v6 5 __00000X __00000Y __000012
                 ─────────────────────────────────────────────────────
```

```
                 - version 7
                 - args todo eta mu return
                 - if `todo' == -1 {
                 = if 5 == -1 {
                    local y "$SGLM_y"
                    local m "$SGLM_m"
                    local touse "`eta'"
                    capture assert `y'>=0 if `touse'
```

```
                  if _rc {
                  di as err `"dependent variable `y' has negative values"'
                  exit 499
                  }
                  capture assert `y'==int(`y') if `touse'
                  if _rc {
                  di as txt `"note: `y' has noninteger values"'
                  }
                  global SGLM_vt "Neg. Binomial"
                  local SGLM_a = round($SGLM_a,0.0001)
                  global SGLM_vf "u+(`SGLM_a')u^2"
                  global SGLM_mu "glim_mu 0 ."
                  exit
                  }
          -       if `todo' == 0 {
          =       if 5 == 0 {
                  gen double `eta' = -ln1p($SGLM_a/`mu')
                  exit
                  }
          -       if `todo' == 1 {
          =       if 5 == 1 {
                  gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
                  exit
                  }
          -       if `todo' == 2 {
          =       if 5 == 2 {
                  gen double `return' = 1 + 2*`mu'*$SGLM_a
                  exit
                  }
          -       if `todo' == 3 {
          =       if 5 == 3 {
                  local y "$SGLM_y"
                  if "`y'" == "" {
                  local y "`e(depvar)'"
                  }
                  gen double `return' = cond(`y'==0, 2*ln1p(`mu'*$SGLM_a)/$SGL
>   M_a, 2*(`y'*ln(`y'/`mu') - (1+`y'*$SGLM_a)/$SGLM_a * ln((1+`y'*$SGLM_a)/(1+`
>   mu'*$SGLM_a))))
                  exit
                  }
          -       if `todo' == 4 {
          =       if 5 == 4 {
                  local y "$SGLM_y"
                  local k "$SGLM_a"
                  if "`y'" == "" {
                  local y "`e(depvar)'"
```

```
                }
                gen double `return' = ((_hyp2f1(-`k'*`y') - _hyp2f1(-`k'*`mu
> ')) + 3/2*(`y'^(2/3) -`mu'^(2/3)))/((`mu'+`k'*`mu'^2)^(1/6))
                exit
                }
            - if `todo' == 5 {
            = if 5 == 5 {
            - local y "$SGLM_y"
            = local y "piq_timing_max"
            - if "`y'" == "" {
            = if "piq_timing_max" == "" {
              local y "`e(depvar)'"
              }
            - tempname sig2
            - if $SGLM_s1 {
            = if 1 {
            - scalar `sig2' = $SGLM_s1
            = scalar __000013 = 1
            - }
            - else {
              if _caller() >= 11 {
              scalar `sig2' = $SGLM_ph*(($ML_N-$ML_kCns)/$ML_N)
              }
              else {
              scalar `sig2' = $SGLM_ph*(($ML_N-$ML_k)/$ML_N)
              }
              }
            - local m = 1/$SGLM_a
            = local m = 1/1
            - local lnalpha = ln(`m')
            = local lnalpha = ln(1)
            - gen double `return' = `sig2'*(lngamma(`m'+`y')-lngamma(`y'+1
> ) - lngamma(`m') - `m'*ln1p(`mu'/`m') + `y'*ln(`mu'/(`mu'+`m')))
            = gen double __000012 = __000013*(lngamma(1+piq_timing_max)-ln
> gamma(piq_timing_max+1) - lngamma(1) - 1*ln1p(__00000Y/1) + piq_timing_max*l
> n(__00000Y/(__00000Y+1)))
            - exit
            ─────────────────────────────────────────────────────────
> ──────────────────────────────────────────────────────── end glim
> _v6 ──────────────────────────────────────────────────────────
            - mlsum `lnf' = `lli'
            = mlsum __00000S = __000012
            - if `todo' == 0 | `lnf'==. { exit }
            = if 2 == 0 | __00000S==. { exit }
            - qui replace `score' = ($ML_y1 - `mu')/(`phi'*`v')*`dmu' if $ML
> _samp
```

```
              = qui replace __00000V = (piq_timing_max - __00000Y)/(__000011*_
> _000010)*__00000Z if __00000D
              - $ML_ec mlvecsum `lnf' `g' = `score'
              = * mlvecsum __00000S __00000T = __00000V
              - if `todo' == 1 | `lnf'==. { exit }
              = if 2 == 1 | __00000S==. { exit }
              - tempvar tt
              - qui gen double `tt' = sum($ML_w*($ML_y1-`mu')*($ML_y1-`mu')/`v
> ')
              = qui gen double __000013 = sum(__00000D*(piq_timing_max-__00000
> Y)*(piq_timing_max-__00000Y)/__000010)
              - if _caller() >= 11 {
              - global SGLM_ph = `tt'[_N]/($ML_N-$ML_kCns)
              = global SGLM_ph = __000013[_N]/(217-7)
              - }
              - else {
                global SGLM_ph = `tt'[_N]/($ML_N-$ML_k)
                }
              - qui $SGLM_A
              = qui
              - tempvar t1
              - qui gen double `t1' = `dmu'*`dmu'/`v' if $ML_samp
              = qui gen double __000014 = __00000Z*__00000Z/__000010 if __0000
> 0D
              - if "$SGLM_f" == "" {
              = if "-1" == "" {
                global SGLM_f = -1
                }
              - if $SGLM_f >= $ML_ic {
              = if -1 >= 2 {
                mlmatsum `lnf' `H' = (`t1')/`phi'
                exit
                }
              - tempvar dv d2mu
              - qui $SGLM_V 2 `eta' `mu' `dv'
              = qui glim_v6 2 __00000X __00000Y __000015
              ──────────────────────────────────────────────────────────────
> ─────────────────────────────────────────────────────────────── begin glim
> _v6 ───────────────────────────────────────────────────────────
              - version 7
              - args todo eta mu return
              - if `todo' == -1 {
              = if 2 == -1 {
                local y "$SGLM_y"
                local m "$SGLM_m"
                local touse "`eta'"
```

```
                    capture assert `y'>=0 if `touse'
                    if _rc {
                    di as err `"dependent variable `y' has negative values"'
                    exit 499
                    }
                    capture assert `y'==int(`y') if `touse'
                    if _rc {
                    di as txt `"note: `y' has noninteger values"'
                    }
                    global SGLM_vt "Neg. Binomial"
                    local SGLM_a = round($SGLM_a,0.0001)
                    global SGLM_vf "u+(`SGLM_a')u^2"
                    global SGLM_mu "glim_mu 0 ."
                    exit
                    }
              – if `todo' == 0 {
              = if 2 == 0 {
                    gen double `eta' = –ln1p($SGLM_a/`mu')
                    exit
                    }
              – if `todo' == 1 {
              = if 2 == 1 {
                    gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
                    exit
                    }
              – if `todo' == 2 {
              = if 2 == 2 {
              – gen double `return' = 1 + 2*`mu'*$SGLM_a
              = gen double __000015 = 1 + 2*__00000Y*1
              – exit
                    ────────────────────────────────────────────────────
```

> ── end glim

> _v6 ──

```
              – qui $SGLM_L 3 `eta' `mu' `d2mu'
              = qui glim_l03 3 __00000X __00000Y __000016
                    ────────────────────────────────────────────────────
```

> ── begin glim_

> l03 ──

```
              – version 7
              – args todo eta mu return
              – if `todo' == –1 {
              = if 3 == –1 {
                    global SGLM_lt "Log"
                    if "$SGLM_m" == "1" {
                    global SGLM_lf "ln(u)"
                    }
```

```
                  else global SGLM_lf "ln(u/$SGLM_m)"
                  exit
                  }
        - if `todo' == 0 {
        = if 3 == 0 {
                  gen double `eta' = ln(`mu'/$SGLM_m)
                  exit
                  }
        - if `todo' == 1 {
        = if 3 == 1 {
                  gen double `mu' = $SGLM_m*exp(`eta')
                  exit
                  }
        - if `todo' == 2 {
        = if 3 == 2 {
                  gen double `return' = `mu'
                  exit
                  }
        - if `todo' == 3 {
        = if 3 == 3 {
        - gen double `return' = `mu'
        = gen double __000016 = __00000Y
        - exit
```

> ── end glim_
> l03 ──

```
        - tempvar t2 t3
        - qui gen double `t2' = `t1'/`v'*`dv' if $ML_samp
        = qui gen double __000017 = __000014/__000010*__000015 if __0000
```
> 0D
```
        - qui gen double `t3' = `d2mu'/`v' if $ML_samp
        = qui gen double __000018 = __000016/__000010 if __00000D
        - mlmatsum `lnf' `H' = (`t1'-(`mu'-$ML_y1)*(`t2'-`t3'))/`phi'
        = mlmatsum __00000S __00000U = (__000014-(__00000Y-piq_timing_ma
```
> x)*(__000017-__000018))/__000011

> ── end glim
> _lf ──

> ── begin glim
> _lf ──

```
        - version 6
        - args todo b lnf g H score
        - local VV : di "version " string(_caller()) ":"
        - tempvar eta mu dmu v
        - mleval `eta' = `b'
```
```

```
              = mleval __00000X = __00000R
              - qui $SGLM_L 1 `eta' `mu'
              = qui glim_l03 1 __00000X __00000Y
              ────────────────────────────────────────
> ──────────────────────────────────────────────────────────── begin glim_
> l03 ──────────────────────────────────────────────────────────────────
              - version 7
              - args todo eta mu return
              - if `todo' == −1 {
              = if 1 == −1 {
                global SGLM_lt "Log"
                if "$SGLM_m" == "1" {
                global SGLM_lf "ln(u)"
                }
                else global SGLM_lf "ln(u/$SGLM_m)"
                exit
                }
              - if `todo' == 0 {
              = if 1 == 0 {
                gen double `eta' = ln(`mu'/$SGLM_m)
                exit
                }
              - if `todo' == 1 {
              = if 1 == 1 {
              - gen double `mu' = $SGLM_m∗exp(`eta')
              = gen double __00000Y = 1∗exp(__00000X)
              - exit
              ────────────────────────────────────────
> ──────────────────────────────────────────────────────────── end glim_
> l03 ──────────────────────────────────────────────────────────────────
              - qui $SGLM_mu `mu'
              = qui glim_mu 0 . __00000Y
              ────────────────────────────────────────
> ──────────────────────────────────────────────────────────── begin glim
> _mu ──────────────────────────────────────────────────────────────────
              - version 7
              - args min max mu
              - tempname eps
              - scalar `eps' = 1e−8
              = scalar __000011 = 1e−8
              - replace `mu' = `min'+`eps' if `mu'<=`min'+`eps'
              = replace __00000Y = 0+__000011 if __00000Y<=0+__000011
              - replace `mu' = `max'−`eps' if `mu'>=`max'−`eps'
              = replace __00000Y = .−__000011 if __00000Y>=.−__000011
              ────────────────────────────────────────
> ──────────────────────────────────────────────────────────── end glim
```

```
> _mu ─────────────────────────────────────────────────────────────
               – qui $SGLM_L 2 `eta' `mu' `dmu'
               = qui glim_l03 2 __00000X __00000Y __00000Z
               ───────────────────────────────────────────────

> ──────────────────────────────────────────────────────── begin glim_
> l03 ─────────────────────────────────────────────────────────────
               – version 7
               – args todo eta mu return
               – if `todo' == –1 {
               = if 2 == –1 {
                 global SGLM_lt "Log"
                 if "$SGLM_m" == "1" {
                 global SGLM_lf "ln(u)"
                 }
                 else global SGLM_lf "ln(u/$SGLM_m)"
                 exit
                 }
               – if `todo' == 0 {
               = if 2 == 0 {
                 gen double `eta' = ln(`mu'/$SGLM_m)
                 exit
                 }
               – if `todo' == 1 {
               = if 2 == 1 {
                 gen double `mu' = $SGLM_m*exp(`eta')
                 exit
                 }
               – if `todo' == 2 {
               = if 2 == 2 {
               – gen double `return' = `mu'
               = gen double __00000Z = __00000Y
               – exit
               ───────────────────────────────────────────────

> ──────────────────────────────────────────────────────────── end glim_
> l03 ─────────────────────────────────────────────────────────────
               – qui $SGLM_V 1 `eta' `mu' `v'
               = qui glim_v6 1 __00000X __00000Y __000010
               ───────────────────────────────────────────────

> ──────────────────────────────────────────────────────── begin glim
> _v6 ─────────────────────────────────────────────────────────────
               – version 7
               – args todo eta mu return
               – if `todo' == –1 {
               = if 1 == –1 {
                 local y "$SGLM_y"
                 local m "$SGLM_m"
```

```
                  local touse "`eta'"
                  capture assert `y'>=0 if `touse'
                  if _rc {
                  di as err `"dependent variable `y' has negative values"'
                  exit 499
                  }
                  capture assert `y'==int(`y') if `touse'
                  if _rc {
                  di as txt `"note: `y' has noninteger values"'
                  }
                  global SGLM_vt "Neg. Binomial"
                  local SGLM_a = round($SGLM_a,0.0001)
                  global SGLM_vf "u+(`SGLM_a')u^2"
                  global SGLM_mu "glim_mu 0 ."
                  exit
                  }
              − if `todo' == 0 {
              = if 1 == 0 {
                  gen double `eta' = −ln1p($SGLM_a/`mu')
                  exit
                  }
              − if `todo' == 1 {
              = if 1 == 1 {
              − gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
              = gen double __000010 = __00000Y+__00000Y*__00000Y*1
              − exit
                  ─────────────────────────────────────────────
>  ──────────────────────────────────────────────────── end glim ──
>  _v6 ─────────────────────────────────────────────────────────────
              − if "$ML_off" == "" {
              = if "0" == "" {
                  global ML_off 0
                  }
              − tempname phi
              − if "$SGLM_ph" == "" { global SGLM_ph = 1 }
              = if ".6786052053769722" == "" { global SGLM_ph = 1 }
              − scalar `phi' = $SGLM_ph
              = scalar __000011 = .6786052053769722
              − if $SGLM_s1 { scalar `phi' = $SGLM_s1 }
              = if 1 { scalar __000011 = 1 }
              − tempvar lli
              − qui `VV' $SGLM_V 5 `eta' `mu' `lli'
              = qui version 18.5: glim_v6 5 __00000X __00000Y __000012
                  ─────────────────────────────────────────────
>  ──────────────────────────────────────────────────── begin glim ──
>  _v6 ─────────────────────────────────────────────────────────────
```

```
- version 7
- args todo eta mu return
- if `todo' == -1 {
= if 5 == -1 {
  local y "$SGLM_y"
  local m "$SGLM_m"
  local touse "`eta'"
  capture assert `y'>=0 if `touse'
  if _rc {
  di as err `"dependent variable `y' has negative values"'
  exit 499
  }
  capture assert `y'==int(`y') if `touse'
  if _rc {
  di as txt `"note: `y' has noninteger values"'
  }
  global SGLM_vt "Neg. Binomial"
  local SGLM_a = round($SGLM_a,0.0001)
  global SGLM_vf "u+(`SGLM_a')u^2"
  global SGLM_mu "glim_mu 0 ."
  exit
  }
- if `todo' == 0 {
= if 5 == 0 {
  gen double `eta' = -ln1p($SGLM_a/`mu')
  exit
  }
- if `todo' == 1 {
= if 5 == 1 {
  gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
  exit
  }
- if `todo' == 2 {
= if 5 == 2 {
  gen double `return' = 1 + 2*`mu'*$SGLM_a
  exit
  }
- if `todo' == 3 {
= if 5 == 3 {
  local y "$SGLM_y"
  if "`y'" == "" {
  local y "`e(depvar)'"
  }
  gen double `return' = cond(`y'==0, 2*ln1p(`mu'*$SGLM_a)/$SGL
> M_a, 2*(`y'*ln(`y'/`mu') - (1+`y'*$SGLM_a)/$SGLM_a * ln((1+`y'*$SGLM_a)/(1+`
> mu'*$SGLM_a))))
```

```
                exit
                }
        - if `todo' == 4 {
        = if 5 == 4 {
          local y "$SGLM_y"
          local k "$SGLM_a"
          if "`y'" == "" {
          local y "`e(depvar)'"
          }
          gen double `return' = ((_hyp2f1(-`k'*`y') - _hyp2f1(-`k'*`mu
>  ')) + 3/2*(`y'^(2/3) -`mu'^(2/3)))/((`mu'+`k'*`mu'^2)^(1/6))
                exit
                }
        - if `todo' == 5 {
        = if 5 == 5 {
        - local y "$SGLM_y"
        = local y "piq_timing_max"
        - if "`y'" == "" {
        = if "piq_timing_max" == "" {
          local y "`e(depvar)'"
          }
        - tempname sig2
        - if $SGLM_s1 {
        = if 1 {
        - scalar `sig2' = $SGLM_s1
        = scalar __000013 = 1
        - }
        - else {
          if _caller() >= 11 {
          scalar `sig2' = $SGLM_ph*(($ML_N-$ML_kCns)/$ML_N)
          }
          else {
          scalar `sig2' = $SGLM_ph*(($ML_N-$ML_k)/$ML_N)
          }
          }
        - local m = 1/$SGLM_a
        = local m = 1/1
        - local lnalpha = ln(`m')
        = local lnalpha = ln(1)
        - gen double `return' = `sig2'*(lngamma(`m'+`y')-lngamma(`y'+1
>  ) - lngamma(`m') - `m'*ln1p(`mu'/`m') + `y'*ln(`mu'/(`mu'+`m')))
        = gen double __000012 = __000013*(lngamma(1+piq_timing_max)-ln
> gamma(piq_timing_max+1) - lngamma(1) - 1*ln1p(__00000Y/1) + piq_timing_max*l
> n(__00000Y/(__00000Y+1)))
        - exit
  _____
```

```
> ──────────────────────────────────────────────────────── end glim
> _v6 ───────────────────────────────────────────────────────────────
              − mlsum `lnf' = `lli'
              = mlsum __00000S = __000012
              − if `todo' == 0 | `lnf'==. { exit }
              = if 0 == 0 | __00000S==. { exit }
              ─────────────────────────────────────────────────────

> ──────────────────────────────────────────────────────── end glim
> _lf ───────────────────────────────────────────────────────────────

              ─────────────────────────────────────────────────────
> ─────────────────────────────────────────────────────── begin glim
> _lf ───────────────────────────────────────────────────────────────
              − version 6
              − args todo b lnf g H score
              − local VV : di "version " string(_caller()) ":"
              − tempvar eta mu dmu v
              − mleval `eta' = `b'
              = mleval __00000X = __00000R
              − qui $SGLM_L 1 `eta' `mu'
              = qui glim_l03 1 __00000X __00000Y
              ─────────────────────────────────────────────────────

> ─────────────────────────────────────────────────────── begin glim_
> l03 ───────────────────────────────────────────────────────────────
              − version 7
              − args todo eta mu return
              − if `todo' == −1 {
              = if 1 == −1 {
                global SGLM_lt "Log"
                if "$SGLM_m" == "1" {
                global SGLM_lf "ln(u)"
                }
                else global SGLM_lf "ln(u/$SGLM_m)"
                exit
                }
              − if `todo' == 0 {
              = if 1 == 0 {
                gen double `eta' = ln(`mu'/$SGLM_m)
                exit
                }
              − if `todo' == 1 {
              = if 1 == 1 {
              − gen double `mu' = $SGLM_m∗exp(`eta')
              = gen double __00000Y = 1∗exp(__00000X)
              − exit
              ─────────────────────────────────────────────────────

> ──────────────────────────────────────────────────────── end glim_
```

```
> l03 ──────────────────────────────────────────────────────────────
            − qui $SGLM_mu `mu'
            = qui glim_mu 0 . __00000Y
              ────────────────────────────────────────────────────

> ──────────────────────────────────────────────────── begin glim
> _mu ─────────────────────────────────────────────────────────────
            − version 7
            − args min max mu
            − tempname eps
            − scalar `eps' = 1e−8
            = scalar __000011 = 1e−8
            − replace `mu' = `min'+`eps' if `mu'<=`min'+`eps'
            = replace __00000Y = 0+__000011 if __00000Y<=0+__000011
            − replace `mu' = `max'−`eps' if `mu'>=`max'−`eps'
            = replace __00000Y = .−__000011 if __00000Y>=.−__000011
              ────────────────────────────────────────────────────

> ───────────────────────────────────────────────────── end glim
> _mu ─────────────────────────────────────────────────────────────
            − qui $SGLM_L 2 `eta' `mu' `dmu'
            = qui glim_l03 2 __00000X __00000Y __00000Z
              ────────────────────────────────────────────────────

> ──────────────────────────────────────────────────── begin glim_
> l03 ─────────────────────────────────────────────────────────────
            − version 7
            − args todo eta mu return
            − if `todo' == −1 {
            = if 2 == −1 {
              global SGLM_lt "Log"
              if "$SGLM_m" == "1" {
              global SGLM_lf "ln(u)"
              }
              else global SGLM_lf "ln(u/$SGLM_m)"
              exit
              }
            − if `todo' == 0 {
            = if 2 == 0 {
              gen double `eta' = ln(`mu'/$SGLM_m)
              exit
              }
            − if `todo' == 1 {
            = if 2 == 1 {
              gen double `mu' = $SGLM_m*exp(`eta')
              exit
              }
            − if `todo' == 2 {
            = if 2 == 2 {
```

```
              - gen double `return' = `mu'
              = gen double __00000Z = __00000Y
              - exit
            ───────────────────────────────────────────────
```

```
            - qui $SGLM_V 1 `eta' `mu' `v'
            = qui glim_v6 1 __00000X __00000Y __000010
            ───────────────────────────────────────────────
```

```
              - version 7
              - args todo eta mu return
              - if `todo' == -1 {
              = if 1 == -1 {
                local y "$SGLM_y"
                local m "$SGLM_m"
                local touse "`eta'"
                capture assert `y'>=0 if `touse'
                if _rc {
                di as err `"dependent variable `y' has negative values"'
                exit 499
                }
                capture assert `y'==int(`y') if `touse'
                if _rc {
                di as txt `"note: `y' has noninteger values"'
                }
                global SGLM_vt "Neg. Binomial"
                local SGLM_a = round($SGLM_a,0.0001)
                global SGLM_vf "u+(`SGLM_a')u^2"
                global SGLM_mu "glim_mu 0 ."
                exit
                }
              - if `todo' == 0 {
              = if 1 == 0 {
                gen double `eta' = -ln1p($SGLM_a/`mu')
                exit
                }
              - if `todo' == 1 {
              = if 1 == 1 {
              - gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
              = gen double __000010 = __00000Y+__00000Y*__00000Y*1
              - exit
              ───────────────────────────────────────────────
```

```
                      - if "$ML_off" == "" {
                      = if "0" == "" {
                        global ML_off 0
                        }
                      - tempname phi
                      - if "$SGLM_ph" == "" { global SGLM_ph = 1 }
                      = if ".6786052053769722" == "" { global SGLM_ph = 1 }
                      - scalar `phi' = $SGLM_ph
                      = scalar __000011 = .6786052053769722
                      - if $SGLM_s1 { scalar `phi' = $SGLM_s1 }
                      = if 1 { scalar __000011 = 1 }
                      - tempvar lli
                      - qui `VV' $SGLM_V 5 `eta' `mu' `lli'
                      = qui version 18.5: glim_v6 5 __00000X __00000Y __000012
                      ───────────────────────────────────────────────
>  ─────────────────────────────────────────────────────── begin glim
>  _v6 ───────────────────────────────────────────────────────────────
                      - version 7
                      - args todo eta mu return
                      - if `todo' == -1 {
                      = if 5 == -1 {
                        local y "$SGLM_y"
                        local m "$SGLM_m"
                        local touse "`eta'"
                        capture assert `y'>=0 if `touse'
                        if _rc {
                        di as err `"dependent variable `y' has negative values"'
                        exit 499
                        }
                        capture assert `y'==int(`y') if `touse'
                        if _rc {
                        di as txt `"note: `y' has noninteger values"'
                        }
                        global SGLM_vt "Neg. Binomial"
                        local SGLM_a = round($SGLM_a,0.0001)
                        global SGLM_vf "u+(`SGLM_a')u^2"
                        global SGLM_mu "glim_mu 0 ."
                        exit
                        }
                      - if `todo' == 0 {
                      = if 5 == 0 {
                        gen double `eta' = -ln1p($SGLM_a/`mu')
                        exit
                        }
                      - if `todo' == 1 {
                      = if 5 == 1 {
```

```
                       gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
                       exit
                       }
                   — if `todo' == 2 {
                   = if 5 == 2 {
                       gen double `return' = 1 + 2*`mu'*$SGLM_a
                       exit
                       }
                   — if `todo' == 3 {
                   = if 5 == 3 {
                       local y "$SGLM_y"
                       if "`y'" == "" {
                       local y "`e(depvar)'"
                       }
                       gen double `return' = cond(`y'==0, 2*ln1p(`mu'*$SGLM_a)/$SGL
>  M_a, 2*(`y'*ln(`y'/`mu') — (1+`y'*$SGLM_a)/$SGLM_a * ln((1+`y'*$SGLM_a)/(1+`
>  mu'*$SGLM_a))))
                       exit
                       }
                   — if `todo' == 4 {
                   = if 5 == 4 {
                       local y "$SGLM_y"
                       local k "$SGLM_a"
                       if "`y'" == "" {
                       local y "`e(depvar)'"
                       }
                       gen double `return' = ((_hyp2f1(—`k'*`y') — _hyp2f1(—`k'*`mu
>  ')) + 3/2*(`y'^(2/3) —`mu'^(2/3)))/((`mu'+`k'*`mu'^2)^(1/6))
                       exit
                       }
                   — if `todo' == 5 {
                   = if 5 == 5 {
                   — local y "$SGLM_y"
                   = local y "piq_timing_max"
                   — if "`y'" == "" {
                   = if "piq_timing_max" == "" {
                       local y "`e(depvar)'"
                       }
                   — tempname sig2
                   — if $SGLM_s1 {
                   = if 1 {
                   — scalar `sig2' = $SGLM_s1
                   = scalar __000013 = 1
                   — }
                   — else {
                       if _caller() >= 11 {
```

```
                  scalar `sig2' = $SGLM_ph*(($ML_N-$ML_kCns)/$ML_N)
                  }
                  else {
                  scalar `sig2' = $SGLM_ph*(($ML_N-$ML_k)/$ML_N)
                  }
                  }
              - local m = 1/$SGLM_a
              = local m = 1/1
              - local lnalpha = ln(`m')
              = local lnalpha = ln(1)
              - gen double `return' = `sig2'*(lngamma(`m'+`y')-lngamma(`y'+1
>  ) - lngamma(`m') - `m'*ln1p(`mu'/`m') + `y'*ln(`mu'/(`mu'+`m')))
              = gen double __000012 = __000013*(lngamma(1+piq_timing_max)-ln
>  gamma(piq_timing_max+1) - lngamma(1) - 1*ln1p(__00000Y/1) + piq_timing_max*l
>  n(__00000Y/(__00000Y+1)))
              - exit
              ─────────────────────────────────────────────────
```

```
>  ──────────────────────────────────────────────────────── end glim
>  _v6 ────────────────────────────────────────────────────
              - mlsum `lnf' = `lli'
              = mlsum __00000S = __000012
              - if `todo' == 0 | `lnf'==. { exit }
              = if 0 == 0 | __00000S==. { exit }
              ─────────────────────────────────────────────────
```

```
>  ──────────────────────────────────────────────────────── end glim
>  _lf ────────────────────────────────────────────────────
              ─────────────────────────────────────────────────
```

```
>  ──────────────────────────────────────────────────────── begin glim
>  _lf ────────────────────────────────────────────────────
              - version 6
              - args todo b lnf g H score
              - local VV : di "version " string(_caller()) ":"
              - tempvar eta mu dmu v
              - mleval `eta' = `b'
              = mleval __00000X = __00000R
              - qui $SGLM_L 1 `eta' `mu'
              = qui glim_l03 1 __00000X __00000Y
              ─────────────────────────────────────────────────
```

```
>  ──────────────────────────────────────────────────────── begin glim_
>  l03 ────────────────────────────────────────────────────
              - version 7
              - args todo eta mu return
              - if `todo' == -1 {
              = if 1 == -1 {
                  global SGLM_lt "Log"
                  if "$SGLM_m" == "1" {
```

```
                          global SGLM_lf "ln(u)"
                          }
                          else global SGLM_lf "ln(u/$SGLM_m)"
                          exit
                          }
              - if `todo' == 0 {
              = if 1 == 0 {
                          gen double `eta' = ln(`mu'/$SGLM_m)
                          exit
                          }
              - if `todo' == 1 {
              = if 1 == 1 {
              - gen double `mu' = $SGLM_m*exp(`eta')
              = gen double __00000Y = 1*exp(__00000X)
              - exit
                          ─────────────────────────────────────────
```

```
              - qui $SGLM_mu `mu'
              = qui glim_mu 0 . __00000Y
                          ─────────────────────────────────────────
```

```
              - version 7
              - args min max mu
              - tempname eps
              - scalar `eps' = 1e-8
              = scalar __000011 = 1e-8
              - replace `mu' = `min'+`eps' if `mu'<=`min'+`eps'
              = replace __00000Y = 0+__000011 if __00000Y<=0+__000011
              - replace `mu' = `max'-`eps' if `mu'>=`max'-`eps'
              = replace __00000Y = .-__000011 if __00000Y>=.-__000011
                          ─────────────────────────────────────────
```

```
              - qui $SGLM_L 2 `eta' `mu' `dmu'
              = qui glim_l03 2 __00000X __00000Y __00000Z
                          ─────────────────────────────────────────
```

```
              - version 7
              - args todo eta mu return
              - if `todo' == -1 {
              = if 2 == -1 {
                          global SGLM_lt "Log"
                          if "$SGLM_m" == "1" {
```

```
                    global SGLM_lf "ln(u)"
                    }
                    else global SGLM_lf "ln(u/$SGLM_m)"
                    exit
                    }
          - if `todo' == 0 {
          = if 2 == 0 {
                    gen double `eta' = ln(`mu'/$SGLM_m)
                    exit
                    }
          - if `todo' == 1 {
          = if 2 == 1 {
                    gen double `mu' = $SGLM_m*exp(`eta')
                    exit
                    }
          - if `todo' == 2 {
          = if 2 == 2 {
          - gen double `return' = `mu'
          = gen double __00000Z = __00000Y
          - exit
```
> ─── end glim_
> l03 ───
```
          - qui $SGLM_V 1 `eta' `mu' `v'
          = qui glim_v6 1 __00000X __00000Y __000010
```
> ─── begin glim
> _v6 ───
```
          - version 7
          - args todo eta mu return
          - if `todo' == -1 {
          = if 1 == -1 {
                    local y "$SGLM_y"
                    local m "$SGLM_m"
                    local touse "`eta'"
                    capture assert `y'>=0 if `touse'
                    if _rc {
                    di as err `"dependent variable `y' has negative values"'
                    exit 499
                    }
                    capture assert `y'==int(`y') if `touse'
                    if _rc {
                    di as txt `"note: `y' has noninteger values"'
                    }
                    global SGLM_vt "Neg. Binomial"
                    local SGLM_a = round($SGLM_a,0.0001)
```

```
                      global SGLM_vf "u+(`SGLM_a')u^2"
                      global SGLM_mu "glim_mu 0 ."
                      exit
                      }
                - if `todo' == 0 {
                = if 1 == 0 {
                  gen double `eta' = -ln1p($SGLM_a/`mu')
                  exit
                  }
                - if `todo' == 1 {
                = if 1 == 1 {
                - gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
                = gen double __000010 = __00000Y+__00000Y*__00000Y*1
                - exit
                  ──────────────────────────────────────────────────────
```

> ─── end glim
> _v6 ───

```
                - if "$ML_off" == "" {
                = if "0" == "" {
                  global ML_off 0
                  }
                - tempname phi
                - if "$SGLM_ph" == "" { global SGLM_ph = 1 }
                = if ".6786052053769722" == "" { global SGLM_ph = 1 }
                - scalar `phi' = $SGLM_ph
                = scalar __000011 = .6786052053769722
                - if $SGLM_s1 { scalar `phi' = $SGLM_s1 }
                = if 1 { scalar __000011 = 1 }
                - tempvar lli
                - qui `VV' $SGLM_V 5 `eta' `mu' `lli'
                = qui version 18.5: glim_v6 5 __00000X __00000Y __000012
                  ──────────────────────────────────────────────────────
```

> ─── begin glim
> _v6 ───

```
                - version 7
                - args todo eta mu return
                - if `todo' == -1 {
                = if 5 == -1 {
                  local y "$SGLM_y"
                  local m "$SGLM_m"
                  local touse "`eta'"
                  capture assert `y'>=0 if `touse'
                  if _rc {
                  di as err `"dependent variable `y' has negative values"'
                  exit 499
                  }
```

```
                    capture assert `y'==int(`y') if `touse'
                    if _rc {
                    di as txt `"note: `y' has noninteger values"'
                    }
                    global SGLM_vt "Neg. Binomial"
                    local SGLM_a = round($SGLM_a,0.0001)
                    global SGLM_vf "u+(`SGLM_a')u^2"
                    global SGLM_mu "glim_mu 0 ."
                    exit
                    }
            - if `todo' == 0 {
            = if 5 == 0 {
                    gen double `eta' = -ln1p($SGLM_a/`mu')
                    exit
                    }
            - if `todo' == 1 {
            = if 5 == 1 {
                    gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
                    exit
                    }
            - if `todo' == 2 {
            = if 5 == 2 {
                    gen double `return' = 1 + 2*`mu'*$SGLM_a
                    exit
                    }
            - if `todo' == 3 {
            = if 5 == 3 {
                    local y "$SGLM_y"
                    if "`y'" == "" {
                    local y "`e(depvar)'"
                    }
                    gen double `return' = cond(`y'==0, 2*ln1p(`mu'*$SGLM_a)/$SGL
> M_a, 2*(`y'*ln(`y'/`mu') - (1+`y'*$SGLM_a)/$SGLM_a * ln((1+`y'*$SGLM_a)/(1+`
> mu'*$SGLM_a))))
                    exit
                    }
            - if `todo' == 4 {
            = if 5 == 4 {
                    local y "$SGLM_y"
                    local k "$SGLM_a"
                    if "`y'" == "" {
                    local y "`e(depvar)'"
                    }
                    gen double `return' = ((_hyp2f1(-`k'*`y') - _hyp2f1(-`k'*`mu
> ')) + 3/2*(`y'^(2/3) -`mu'^(2/3)))/((`mu'+`k'*`mu'^2)^(1/6))
                    exit
```

```
                         }
                       - if `todo' == 5 {
                       = if 5 == 5 {
                       - local y "$SGLM_y"
                       = local y "piq_timing_max"
                       - if "`y'" == "" {
                       = if "piq_timing_max" == "" {
                         local y "`e(depvar)'"
                         }
                       - tempname sig2
                       - if $SGLM_s1 {
                       = if 1 {
                       - scalar `sig2' = $SGLM_s1
                       = scalar __000013 = 1
                       - }
                       - else {
                         if _caller() >= 11 {
                         scalar `sig2' = $SGLM_ph*(($ML_N-$ML_kCns)/$ML_N)
                         }
                         else {
                         scalar `sig2' = $SGLM_ph*(($ML_N-$ML_k)/$ML_N)
                         }
                         }
                       - local m = 1/$SGLM_a
                       = local m = 1/1
                       - local lnalpha = ln(`m')
                       = local lnalpha = ln(1)
                       - gen double `return' = `sig2'*(lngamma(`m'+`y')-lngamma(`y'+1
> ) - lngamma(`m') - `m'*ln1p(`mu'/`m') + `y'*ln(`mu'/(`mu'+`m')))
                       = gen double __000012 = __000013*(lngamma(1+piq_timing_max)-ln
> gamma(piq_timing_max+1) - lngamma(1) - 1*ln1p(__00000Y/1) + piq_timing_max*l
> n(__00000Y/(__00000Y+1)))
                       - exit
                         ──────────────────────────────────────────────────────────
> ─────────────────────────────────────────────────────────────── end glim
> _v6 ─────────────────────────────────────────────────────────────
                       - mlsum `lnf' = `lli'
                       = mlsum __00000S = __000012
                       - if `todo' == 0 | `lnf'==. { exit }
                       = if 2 == 0 | __00000S==. { exit }
                       - qui replace `score' = ($ML_y1 - `mu')/(`phi'*`v')*`dmu' if $ML
> _samp
                       = qui replace __00000V = (piq_timing_max - __00000Y)/(__000011*_
> _000010)*__00000Z if __00000D
                       - $ML_ec mlvecsum `lnf' `g' = `score'
                       = * mlvecsum __00000S __00000T = __00000V
```

```
              - if `todo' == 1 | `lnf'==. { exit }
              = if 2 == 1 | __00000S==. { exit }
              - tempvar tt
              - qui gen double `tt' = sum($ML_w*($ML_y1-`mu')*($ML_y1-`mu')/`v
> ')
              = qui gen double __000013 = sum(__00000D*(piq_timing_max-__00000
> Y)*(piq_timing_max-__00000Y)/__000010)
              - if _caller() >= 11 {
              - global SGLM_ph = `tt'[_N]/($ML_N-$ML_kCns)
              = global SGLM_ph = __000013[_N]/(217-7)
              - }
              - else {
                global SGLM_ph = `tt'[_N]/($ML_N-$ML_k)
                }
              - qui $SGLM_A
              = qui
              - tempvar t1
              - qui gen double `t1' = `dmu'*`dmu'/`v' if $ML_samp
              = qui gen double __000014 = __00000Z*__00000Z/__000010 if __0000
> 0D
              - if "$SGLM_f" == "" {
              = if "-1" == "" {
                global SGLM_f = -1
                }
              - if $SGLM_f >= $ML_ic {
              = if -1 >= 3 {
                mlmatsum `lnf' `H' = (`t1')/`phi'
                exit
                }
              - tempvar dv d2mu
              - qui $SGLM_V 2 `eta' `mu' `dv'
              = qui glim_v6 2 __00000X __00000Y __000015
              ─────────────────────────────────────────────────────────
>  ───────────────────────────────────────────────────── begin glim
>  _v6 ──────────────────────────────────────────────────────────────
              - version 7
              - args todo eta mu return
              - if `todo' == -1 {
              = if 2 == -1 {
                local y "$SGLM_y"
                local m "$SGLM_m"
                local touse "`eta'"
                capture assert `y'>=0 if `touse'
                if _rc {
                di as err `"dependent variable `y' has negative values"'
                exit 499
```

```
                         }
                         capture assert `y'==int(`y') if `touse'
                         if _rc {
                         di as txt `"note: `y' has noninteger values"'
                         }
                         global SGLM_vt "Neg. Binomial"
                         local SGLM_a = round($SGLM_a,0.0001)
                         global SGLM_vf "u+(`SGLM_a')u^2"
                         global SGLM_mu "glim_mu 0 ."
                         exit
                         }
              - if `todo' == 0 {
              = if 2 == 0 {
                         gen double `eta' = -ln1p($SGLM_a/`mu')
                         exit
                         }
              - if `todo' == 1 {
              = if 2 == 1 {
                         gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
                         exit
                         }
              - if `todo' == 2 {
              = if 2 == 2 {
              - gen double `return' = 1 + 2*`mu'*$SGLM_a
              = gen double __000015 = 1 + 2*__00000Y*1
              - exit
                         ─────────────────────────────────────────────
> ──────────────────────────────────────────────────────────── end glim
> _v6 ─────────────────────────────────────────────────────────────────
              - qui $SGLM_L 3 `eta' `mu' `d2mu'
              = qui glim_l03 3 __00000X __00000Y __000016
                         ─────────────────────────────────────────────
> ──────────────────────────────────────────────────────── begin glim_
> l03 ─────────────────────────────────────────────────────────────────
              - version 7
              - args todo eta mu return
              - if `todo' == -1 {
              = if 3 == -1 {
                         global SGLM_lt "Log"
                         if "$SGLM_m" == "1" {
                         global SGLM_lf "ln(u)"
                         }
                         else global SGLM_lf "ln(u/$SGLM_m)"
                         exit
                         }
              - if `todo' == 0 {
```

```
                        = if 3 == 0 {
                          gen double `eta' = ln(`mu'/$SGLM_m)
                          exit
                          }
                        - if `todo' == 1 {
                        = if 3 == 1 {
                          gen double `mu' = $SGLM_m*exp(`eta')
                          exit
                          }
                        - if `todo' == 2 {
                        = if 3 == 2 {
                          gen double `return' = `mu'
                          exit
                          }
                        - if `todo' == 3 {
                        = if 3 == 3 {
                        - gen double `return' = `mu'
                        = gen double __000016 = __00000Y
                        - exit
                        ───────────────────────────────────────────
> ─────────────────────────────────────────────────────── end glim_
> l03 ──────────────────────────────────────────────────────────────
                        - tempvar t2 t3
                        - qui gen double `t2' = `t1'/`v'*`dv' if $ML_samp
                        = qui gen double __000017 = __000014/__000010*__000015 if __0000
> 0D
                        - qui gen double `t3' = `d2mu'/`v' if $ML_samp
                        = qui gen double __000018 = __000016/__000010 if __00000D
                        - mlmatsum `lnf' `H' = (`t1'-(`mu'-$ML_y1)*(`t2'-`t3'))/`phi'
                        = mlmatsum __00000S __00000U = (__000014-(__00000Y-piq_timing_ma
> x)*(__000017-__000018))/__000011
                        ───────────────────────────────────────────
> ────────────────────────────────────────────────────────── end glim
> _lf ──────────────────────────────────────────────────────────────
                        ───────────────────────────────────────────
> ──────────────────────────────────────────────────────── begin mopt_p
> ost ──────────────────────────────────────────────────────────────
                        - args b V C wgt touse depvar
                        - if `:length local touse' {
                        = if 8 {
                        - tempname esamp
                        - quietly gen byte `esamp' = `touse'
                        = quietly gen byte __000010 = __00000D
                        - }
                        - ereturn post `b' `V' `C' `wgt', esample(`esamp') depname(`depv
> ar') buildfvinfo
```

```
                 = ereturn post __00000X __00000Y __00000Z [], esample(__000010)
>  depname(piq_timing_max) buildfvinfo
                 ─────────────────────────────────────────────────────────────────

>  ──────────────────────────────────────────────────────────── end mopt_p
>  ost ──────────────────────────────────────────────────────────────────
                 – ereturn scalar k_eq_model = abs($ML_waldtest)
                 = ereturn scalar k_eq_model = abs(–1)
                 – 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) – $ML_k0
                   }
                 – if !`:length global ML_ll_0' | inlist(e(vce), "robust", "cluster
>  ", "linearized") {
                 = if !0 | inlist(e(vce), "robust", "cluster", "linearized") {
                 – if "$ML_svy" == "" {
                 = if "" == "" {
                 – _prefix_model_test, minimum
                 ─────────────────────────────────────────────────────────────────

>  ──────────────────────────────────────────────── begin _prefix_model_t
>  est ──────────────────────────────────────────────────────────────────
                 – 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 __000010 = get(Cns)
 — if (c(rc)) local cns
 — if "`cns'" != "" {
 = if "__000010" != "" {
 — local k_autoCns = e(k_autoCns)
 — if missing(`k_autoCns') {
 = if missing(5) {
   local k_autoCns 0
   }
 — if rowsof(`cns') == `k_autoCns' {
 = if rowsof(__000010) == 5 {
 — local cns
 — }
 — }
 — if "`svy'" != "" & "`adjust'`svyadjust'" != "" {
 = if "" != "" & "" != "" {
   local adjust nosvyadjust
   }
 — else local adjust
 — _ms_omit_info e(b), nocons
 — matrix `omit' = r(omit)
 = matrix __000011 = r(omit)
 — capture test `spec', `adjust'
 = capture test  ([#1]),
```

```
> ——————————————————————————————————————————————————————————— begin t
> est ——————————————————————————————————————————————————————————
                – 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.WaldT
> est ─────────────────────────────────────────────────────────────
                   — 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" "' "optio
> n 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 M
> test 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 combine
> d"

                          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 dat
> a"
                      exit 198
                      }
              - local svy_adjust = `is_svy' & "`svyadjust'" == ""
              = local svy_adjust = 0 & "" == ""
              - if `svy_adjust' & missing(`dof') & (missing(e(N_psu)) | mi
> ssing(e(N_strata))) {
              = if 0 & missing(.) & (missing(e(N_psu)) | missing(e(N_strat
> a))) {
                      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.ExpandEx
> pns ──────────────────────────────────────────────────────────
              - args expns common constant
              - gettoken exp expns : expns
```

```
                     – while `"`exp'"' != "" {
                     = while `"[#1]"' != "" {
                     – Expand `"`exp'"' "`common'" "`constant'"
                     = Expand `"[#1]"' "" ""
                     ────────────────────────────────────────────
```
```
                     – args exp common constant
                     – local junk : subinstr local exp "=" "=", count(local n
```
```
                     – if `nch' <= 1 {
                     = if 0 <= 1 {
                     – return local explist `"`"`exp'"'"'
                     = return local explist `"`"[#1]"'"'
                     – return local nexp 1
                     – exit
                     ────────────────────────────────────────────
```
```
                     – 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
                     ────────────────────────────────────────────
```
```
                     – 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 __000012 = r(chi2)
- scalar `df1' = r(df)
= scalar __000013 = r(df)
- scalar `p' = r(p)
= scalar __000014 = r(p)
- scalar `drop' = r(drop)
= scalar __000015 = r(drop)
- }
- local i 1
- while "`r(dropped_`i')'" != "" {
= while "4" != "" {
- local dropped_`i' `r(dropped_`i')'
= local dropped_1 4
- local ++i
- }
- while "`r(dropped_`i')'" != "" {
```

```
=   while "8" != "" {
-   local dropped_`i' `r(dropped_`i')'
=   local dropped_2 8
-   local ++i
-   }
-   while "`r(dropped_`i')'" != "" {
=   while "9" != "" {
-   local dropped_`i' `r(dropped_`i')'
=   local dropped_3 9
-   local ++i
-   }
-   while "`r(dropped_`i')'" != "" {
=   while "10" != "" {
-   local dropped_`i' `r(dropped_`i')'
=   local dropped_4 10
-   local ++i
-   }
-   while "`r(dropped_`i')'" != "" {
=   while "11" != "" {
-   local dropped_`i' `r(dropped_`i')'
=   local dropped_5 11
-   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 "4" != "" {
                    - di as txt "        Constraint `dropped_`i'' dropped"
                    = di as txt "        Constraint 4 dropped"
                    - local ++i
                    - }
                    - while "`dropped_`i''" != "" {
                    = while "8" != "" {
                    - di as txt "        Constraint `dropped_`i'' dropped"
                    = di as txt "        Constraint 8 dropped"
                    - local ++i
                    - }
                    - while "`dropped_`i''" != "" {
                    = while "9" != "" {
                    - di as txt "        Constraint `dropped_`i'' dropped"
                    = di as txt "        Constraint 9 dropped"
                    - local ++i
                    - }
                    - while "`dropped_`i''" != "" {
                    = while "10" != "" {
                    - di as txt "        Constraint `dropped_`i'' dropped"
                    = di as txt "        Constraint 10 dropped"
                    - local ++i
                    - }
                    - while "`dropped_`i''" != "" {
                    = while "11" != "" {
                    - di as txt "        Constraint `dropped_`i'' dropped"
                    = di as txt "        Constraint 11 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 __000013 ") =" as res %8.
          > 2f __000012
                    - di as txt _col(10) "Prob > chi2 =  " as res %8.4f `p'
                    = di as txt _col(10) "Prob > chi2 =  " as res %8.4f __000014
```

```
-  }
-  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:`d
> ip'}"

   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 ``testtype'
> ' _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 = __000014
-  return scalar df = `df1'
=  return scalar df = __000013
-  if "`testtype'" == "F" {
=  if "chi2" == "F" {
   return scalar F = `F'
   return scalar df_r = `df2'
```

```
      }
- else return scalar chi2 = `chi2'
= else return scalar chi2 = __000012
- return scalar drop = `drop'
= return scalar drop = __000015
- local i 1
- while "`dropped_`i''" != "" {
= while "4" != "" {
- return scalar dropped_`i' = `dropped_`i''
= return scalar dropped_1 = 4
- local ++i
- }
- while "`dropped_`i''" != "" {
= while "8" != "" {
- return scalar dropped_`i' = `dropped_`i''
= return scalar dropped_2 = 8
- local ++i
- }
- while "`dropped_`i''" != "" {
= while "9" != "" {
- return scalar dropped_`i' = `dropped_`i''
= return scalar dropped_3 = 9
- local ++i
- }
- while "`dropped_`i''" != "" {
= while "10" != "" {
- return scalar dropped_`i' = `dropped_`i''
= return scalar dropped_4 = 10
- local ++i
- }
- while "`dropped_`i''" != "" {
= while "11" != "" {
- return scalar dropped_`i' = `dropped_`i''
= return scalar dropped_5 = 11
- 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.WaldT
> est ───────────────────────────────────────────────────────────
              − return add
        ─────────────────────────────────────────────────────────────
>                                                                          end t
> est ───────────────────────────────────────────────────────────
              − if !c(rc) {
              − if `:length local minimum' {
              = if 7 {
              − quietly test, min
        ─────────────────────────────────────────────────────────────
>                                                                        begin t
> est ───────────────────────────────────────────────────────────
              − 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)
                      }
                    ─────────────────────────────────────────────────
```

```
                  – local is_svy = r(is_svy)
                  – if replay() & `is_svy' == 0 {
                  = if replay() & 0 == 0 {
                  – _test `0'
                  = _test , min
                  – return add
                  – exit
                  ─────────────────────────────────────────────
```

```
                  – }
                  – 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 `"4"'
                  – while "`idrop'" != "" {
                  = while "4" != "" {
                  – if !`omit'[1,`idrop'] {
                  = if !__000011[1,4] {
                    local ++drop
                    }
                  – local ++i
                  – local idrop `"`r(dropped_`i')'"'
                  = local idrop `"8"'
                  – }
                  – while "`idrop'" != "" {
                  = while "8" != "" {
                  – if !`omit'[1,`idrop'] {
                  = if !__000011[1,8] {
                    local ++drop
                    }
                  – local ++i
                  – local idrop `"`r(dropped_`i')'"'
                  = local idrop `"9"'
```

```
-   }
-   while "`idrop'" != "" {
=   while "9" != "" {
-       if !`omit'[1,`idrop'] {
=       if !__000011[1,9] {
            local ++drop
        }
-       local ++i
-       local idrop `"`r(dropped_`i')'"'
=       local idrop `"10"'
-   }
-   while "`idrop'" != "" {
=   while "10" != "" {
-       if !`omit'[1,`idrop'] {
=       if !__000011[1,10] {
            local ++drop
        }
-       local ++i
-       local idrop `"`r(dropped_`i')'"'
=       local idrop `"11"'
-   }
-   while "`idrop'" != "" {
=   while "11" != "" {
-       if !`omit'[1,`idrop'] {
=       if !__000011[1,11] {
            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_t
> est ───────────────────────────────────────────────────────
          – }
          – 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 $ML_sample, type(total) svy v(`v') s
> ubpop(`e(subpop)') touse($ML_sample)
         }
         ereturn repost, esample($ML_sample)
         }
       - if `"`moptobj'"' != "" {
       = if `""' != "" {
         local clear noclear
         }
       - if !`:length local clear' {
       = if !0 {
       - Clear
         ─────────────────────────────────────────────────────────
> ──────────────────────────────────────────────────────── begin mopt.Cl
> ear ───────────────────────────────────────────────────
       - syntax [, NOTANOPTION]
       - capture drop $ML_w
       = capture drop __00000D
       - capture drop $ML_samp
       = capture drop __00000D
       - capture drop $ML_sample
       = capture drop __00000D
       - capture drop $ML_subv
       = capture drop
       - capture drop $ML_grp
       = capture drop
       - mata: Mopt_drop_external()
       - macro drop ML_*
```

```
> ─────────────────────────────────────────────────────────────── end mopt.Cl
> ear ───────────────────────────────────────────────────────────────────────
              – }
              – 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.Max
> Min ──────────────────────────────────────────────────────────────────────
            – }
> ─────────────────────────────────────────────────────────────── end mopt.Mo
> del ──────────────────────────────────────────────────────────────────────
          – if c(rc) {
            local rc = c(rc)
            Clear
            exit `rc'
            }
          – exit
> ─────────────────────────────────────────────────────────────────── end m
> opt ──────────────────────────────────────────────────────────────────────
        – exit
> ─────────────────────────────────────────────────────────────────────── end
>  ml ──────────────────────────────────────────────────────────────────────
      – local rc = cond(e(rc) == 430 & `reg', 0, e(rc))
      = local rc = cond(e(rc) == 430 & 0, 0, e(rc))
      – local vcetype `e(vcetype)'
      = local vcetype Robust
      – if $SGLM_estscale {
      = if 0 {
        global SGLM_ph _b[`sigma2']
        }
      – if "`vce'" == "eim" {
      = if "robust" == "eim" {
        nobreak {
        tempname esave
```

```
version 9: estimates store `esave'
capture noisily break {
capture drop `eta'
capture drop `mu'
capture drop `v'
capture drop `dmu'
capture drop `W'
capture drop `z'
quietly predict double `eta', xb
$SGLM_L 1 `eta' `mu'
$SGLM_V 1 `eta' `mu' `v'
$SGLM_L 2 `eta' `mu' `dmu'
gen double `W' = `dmu'*`dmu'/`v' if `touse'
tempname V
version 11: quietly matrix accum `V' = `xvars' [iw=`W'*`wt'], `constant'
matrix `V' = inv(`V')
}
local rc = c(rc)
quietly version 9: estimates restore `esave'
version 9: ereturn local _estimates_name
}
if `rc' {
version 9: ereturn clear
exit `rc'
}
local vcetype "EIM"
estimates repost V = `V'
}
- if `fixme' {
= if 0 {
tempname V fix
mat `V' = e(V)
if `scale' { scalar `fix' = `scale' }
else scalar `fix' = $SGLM_ph
mat `V' = `fix'*`V'
estimates repost V = `V'
}
- if "`vcetype'" == "OPG" | "`opg'" == "opg" {
= if "Robust" == "OPG" | "" == "opg" {
local vce "opg"
}
- else if "`vcetype'" == "" | "`vce'" == "oim" {
= else if "Robust" == "" | "robust" == "oim" {
local vce oim
local vcetype "OIM"
}
```

```
  - if "`unbiased'" != "" {
  = if "" != "" {
    tempvar hat eta mu v dmu dv d2mu z W
    tempname ll
    qui _predict double `eta', xb
    qui $SGLM_L 1 `eta' `mu'
    qui $SGLM_V 1 `eta' `mu' `v'
    qui $SGLM_L 2 `eta' `mu' `dmu'
    qui gen double `z' = `eta' + (`y'-`mu')/`dmu' `moffset' if `touse'
    qui $SGLM_V 2 `eta' `mu' `dv'
    qui $SGLM_L 3 `eta' `mu' `d2mu'
    qui gen double `W' = `dmu'*`dmu'/`v' - (`mu'-`y')*(`dmu'*`dmu'*`dv'/(`v'
> *`v') - `d2mu'/`v') if `touse'
    nobreak {
    estimates hold `ll'
    `VV' qui _regress `z' `xvars' [iw=`W'*`wt'], mse1 `constant'
    qui _predict double `hat' if `touse', stdp `offset'
    qui replace `hat' = `hat'*`hat'*`v'
    estimates unhold `ll'
    }
    qui replace `scvar' = `scvar' / sqrt(1-`hat')
    qui _robust2 `scvar' [fweight=`fwt'] if `touse', `cll' minus(0)
    local setype "Unbiased `setype'"
    local setype "Unbiased Sandwich"
    local vce "unbiased"
    local vcetype "Unbiased"
    }
  - if "`opg'" != "" {
  = if "" != "" {
    tempname V1
    mat `V1' = e(V)
    local nms : colnames `V1'
    local ncol = colsof(`V1')
    mat `V1' = I(`ncol')
    version 11: mat colnames `V1' = `nms'
    version 11: mat rownames `V1' = `nms'
    _robust2 `scvar' [fweight=`fwt'] if `touse', var(`V1')
    mat `V1' = syminv(`V1')
    estimates repost V = `V1'
    local vcetype "OPG"
    }
  - if "`hacnam'" != "" {
  = if "" != "" {
    tempname V
    mat `V' = e(V)
    local p = colsof(`V')-1
```

```
      capture drop `eta'
      capture drop `mu'
      capture drop `v'
      capture drop `dmu'
      capture drop `z'
      qui _predict `eta', xb
      qui $SGLM_L 1 `eta' `mu'
      qui $SGLM_V 1 `eta' `mu' `v'
      qui $SGLM_L 2 `eta' `mu' `dmu'
      qui gen double `z' = `dmu'*(`y'-`mu')/`v'
      sort `touse' `tvar'
      qui HAC "`hacnam'" "`haclag'" "`wt'" "`z'" "`touse'" `"`constant'"' `"`x
> vars'"' "`intlag'"
      tempname vm
      mat `vm' = r(V)
      local pm1 = `p'+1
      `hacnam' `haclag' 0 `nobs' `pm1'
      local delta = 1
      if `scale1' == 0 {
      local delta = $SGLM_ph
      }
      tempname ss
      scalar `ss' = 1/(`delta'*`delta')
      mat `V' = `ss'*`V'*`vm'*`V''
      local hac_kern "`r(setype)'"
      local vce "hac"
      local vcetype "HAC"
      estimates repost V = `V'
      }
    - if "`jknife1'" != "" {
    = if "" != "" {
      tempname b V
      mat `b' = e(b)
      mat `V' = e(V)
      qui JK1nr `b' `V' `y' "`xvars'" `eta' `mu' `v' `dmu' "`tvar'" `z' "`moff
> set'" "`constant'" `wt' `touse' "`weight'"
      local p = colsof(`b')
      tempname ss
      scalar `ss' = (`nobs'-`p')/`nobs'
      mat `V' = `ss'*`V'
      local vce "jackknife1"
      local vcetype "1-step JKnife"
      estimates repost V = `V'
      }
    - if "`jknife'" != "" {
    = if "" != "" {
```

```
      tempname b V
      mat `b' = e(b)
      mat `V' = e(V)
      noi JKnife `b' `V' `y' "`xvars'" "`tvar'" "`offopt'" "`constant'" "`argf
> am'" "" "`arglink'" "[`weight'`exp']" `touse' "`cluster'" `dots' "`weight'"
> "`wt'"
      local mm = `nobs'
      if "`cluster'" != "" { local mm = $SGLM_nc }
      else local mm = 1
      local p = colsof(`b')
      local nnn = `nobs'-$SGLM_bm
      tempname ss
      if "`cluster'" != "" {
      scalar `ss' = (`nnn'-`p')/`nnn'
      }
      else {
      scalar `ss' = (`nnn'-`p')/`nnn'
      }
      mat `V' = `ss'*`V'
      local vcetype "Jackknife"
      estimates repost V = `V'
      }
    - if "`bstrap'" != "" {
    = if "" != "" {
      tempname b V
      mat `b' = e(b)
      mat `V' = e(V)
      noi Bstrap `b' `V' `y' "`xvars'" "`offopt'" "`constant'" "`argfam'" "" "
> `arglink'" "[`weight'`exp']" `touse' `brep' "`clopt'" `dots'
      local p = colsof(`b')
      tempname ss
      scalar `ss' = (`nobs'-`p')/(`nobs'*(`brep'-$SGLM_bm))
      mat `V' = `ss'*`V'
      local vcetype "Bootstrap"
      estimates repost V = `V'
      }
    - if `vfactor' != 1 {
    = if 1 != 1 {
      tempname V
      mat `V' = `vfactor'*e(V)
      estimates repost V = `V'
      }
    - capture drop `eta'
    = capture drop __000004
    - capture drop `mu'
    = capture drop __000005
```

```
         – capture drop `v'
         = capture drop __000007
         – qui predict double `eta', xb
         = qui predict double __000004, xb
         ────────────────────────────────────────────────────────────
```

> ─── begin pred
> ict ───
```
         – version 8.2, missing
         – if "`e(cmd)'" == "rocreg" & "`e(predict)'" == "" {
         = if "ml" == "rocreg" & "ml_p" == "" {
           di as err "predict not allowed after nonparametric ROC"
           exit 198
           }
         – if "`e(mi)'"!="" & "`e(b)'"!="matrix" {
         = if ""!="" & "matrix"!="matrix" {
           error 321
           }
         – if _caller()<=5 | "`e(predict)'"=="" {
         = if _caller()<=5 | "ml_p"=="" {
           _predict `0'
           }
         – else {
         – local v : display string(_caller())
         – version `v', missing
         = version 7, missing
         – `e(predict)' `0'
         = ml_p double __000004, xb
         ────────────────────────────────────────────────────────────
```

> ── begin m
> l_p ───
```
           – version 9
           – local version : di "version " string(_caller()) ":"
           – syntax [anything] [if] [in] [, SCores * ]
           – if `"`scores'"' != "" {
           = if `""' != "" {
             if `"`e(opt)'"' == "ml" {
             `version' ml score `0'
             }
             else {
             `version' mopt score `0'
             }
             exit
             }
           – `version' _predict `0'
           = version 7: _predict double __000004, xb
           ────────────────────────────────────────────────────────
```

```
> ——————————————————————————————————————————————— end m
> l_p ——————————————————————————————————————————————————
      – }
    ——————————————————————————————————————————————————————

> ———————————————————————————————————————————————— end pred
> ict ——————————————————————————————————————————————————
      – qui $SGLM_L 1 `eta' `mu'
      = qui glim_l03 1 __000004 __000005
    ——————————————————————————————————————————————————————

> ———————————————————————————————————————————————— begin glim_
> l03 ——————————————————————————————————————————————————
      – version 7
      – args todo eta mu return
      – if `todo' == –1 {
      = if 1 == –1 {
        global SGLM_lt "Log"
        if "$SGLM_m" == "1" {
        global SGLM_lf "ln(u)"
        }
        else global SGLM_lf "ln(u/$SGLM_m)"
        exit
        }
      – if `todo' == 0 {
      = if 1 == 0 {
        gen double `eta' = ln(`mu'/$SGLM_m)
        exit
        }
      – if `todo' == 1 {
      = if 1 == 1 {
      – gen double `mu' = $SGLM_m*exp(`eta')
      = gen double __000005 = 1*exp(__000004)
      – exit
    ——————————————————————————————————————————————————————

> ——————————————————————————————————————————————— end glim_
> l03 ——————————————————————————————————————————————————
      – qui $SGLM_mu `mu'
      = qui glim_mu 0 . __000005
    ——————————————————————————————————————————————————————

> ———————————————————————————————————————————————— begin glim
> _mu ——————————————————————————————————————————————————
      – version 7
      – args min max mu
      – tempname eps
      – scalar `eps' = 1e–8
      = scalar __00000D = 1e–8
      – replace `mu' = `min'+`eps' if `mu'<=`min'+`eps'
```

```
        = replace __000005 = 0+__00000D if __000005<=0+__00000D
        - replace `mu' = `max'-`eps' if `mu'>=`max'-`eps'
        = replace __000005 = .-__00000D if __000005>=.-__00000D
        ──────────────────────────────────────────────────────────
>  ───────────────────────────────────────────────────────────── end glim
> _mu ──────────────────────────────────────────────────────────
    - qui $SGLM_V 1 `eta' `mu' `v'
    = qui glim_v6 1 __000004 __000005 __000007
        ──────────────────────────────────────────────────────────
>  ───────────────────────────────────────────────────────────── begin glim
> _v6 ──────────────────────────────────────────────────────────
        - version 7
        - args todo eta mu return
        - if `todo' == -1 {
        = if 1 == -1 {
          local y "$SGLM_y"
          local m "$SGLM_m"
          local touse "`eta'"
          capture assert `y'>=0 if `touse'
          if _rc {
          di as err `"dependent variable `y' has negative values"'
          exit 499
          }
          capture assert `y'==int(`y') if `touse'
          if _rc {
          di as txt `"note: `y' has noninteger values"'
          }
          global SGLM_vt "Neg. Binomial"
          local SGLM_a = round($SGLM_a,0.0001)
          global SGLM_vf "u+(`SGLM_a')u^2"
          global SGLM_mu "glim_mu 0 ."
          exit
          }
        - if `todo' == 0 {
        = if 1 == 0 {
          gen double `eta' = -ln1p($SGLM_a/`mu')
          exit
          }
        - if `todo' == 1 {
        = if 1 == 1 {
        - gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
        = gen double __000007 = __000005+__000005*__000005*1
        - exit
        ──────────────────────────────────────────────────────────
>  ───────────────────────────────────────────────────────────── end glim
> _v6 ──────────────────────────────────────────────────────────
```

```
        -  mat `b0' = e(b)
        =  mat __00000B = e(b)
        -  local dfm = e(df_m)
        -  capture drop `z'
        =  capture drop __000008
        -  qui gen double `z' = sum(`wt'*(`y'-`mu')^2/`v')
        =  qui gen double __000008 = sum(__000003*(piq_timing_max-__000005)^2/__000
>  007)
        -  local chi2 = `z'[_N]
        =  local chi2 = __000008[_N]
        -  local df = e(N)-`dfm'
        =  local df = e(N)-6
        -  _post_vce_rank, checksize
           ─────────────────────────────────────────────────────────────
>  ────────────────────────────────────────────── begin _post_vce_r
>  ank ─────────────────────────────────────────────────────────────
           -  syntax, [CHecksize]
           -  if "`checksize'" != "" {
           =  if "checksize" != "" {
           -  tempname V
           -  capture matrix `V' = e(V)
           =  capture matrix __00000D = e(V)
           -  if _rc {
              exit
              }
           -  local cols = colsof(`V')
           =  local cols = colsof(__00000D)
           -  if `cols' == 0 {
           =  if 12 == 0 {
              exit
              }
           -  }
           -  tempname V Vi rank
           -  mat `V' = e(V)
           =  mat __00000E = e(V)
           -  mat `Vi' = invsym(`V')
           =  mat __00000F = invsym(__00000E)
           -  sca `rank' = rowsof(`V') - diag0cnt(`Vi')
           =  sca __00000G = rowsof(__00000E) - diag0cnt(__00000F)
           -  mata:st_numscalar("e(rank)", st_numscalar("`rank'"))
           =  mata:st_numscalar("e(rank)", st_numscalar("__00000G"))
              ─────────────────────────────────────────────────────────
>  ────────────────────────────────────────────────── end _post_vce_r
>  ank ─────────────────────────────────────────────────────────────
        -  local rank = e(rank)
        -  if $SGLM_s1 { global SGLM_ph = $SGLM_s1 }
```

```
      = if 1 { global SGLM_ph = 1 }
      - capture drop `z'
      = capture drop __000008
      - qui $SGLM_V 3 `eta' `mu' `z'
      = qui glim_v6 3 __000004 __000005 __000008
```

> ── begin glim
> _v6 ──

```
      - version 7
      - args todo eta mu return
      - if `todo' == -1 {
      = if 3 == -1 {
        local y "$SGLM_y"
        local m "$SGLM_m"
        local touse "`eta'"
        capture assert `y'>=0 if `touse'
        if _rc {
        di as err `"dependent variable `y' has negative values"'
        exit 499
        }
        capture assert `y'==int(`y') if `touse'
        if _rc {
        di as txt `"note: `y' has noninteger values"'
        }
        global SGLM_vt "Neg. Binomial"
        local SGLM_a = round($SGLM_a,0.0001)
        global SGLM_vf "u+(`SGLM_a')u^2"
        global SGLM_mu "glim_mu 0 ."
        exit
        }
      - if `todo' == 0 {
      = if 3 == 0 {
        gen double `eta' = -ln1p($SGLM_a/`mu')
        exit
        }
      - if `todo' == 1 {
      = if 3 == 1 {
        gen double `return' = `mu'+`mu'*`mu'*$SGLM_a
        exit
        }
      - if `todo' == 2 {
      = if 3 == 2 {
        gen double `return' = 1 + 2*`mu'*$SGLM_a
        exit
        }
      - if `todo' == 3 {
```

```
    = if 3 == 3 {
    - local y "$SGLM_y"
    = local y "piq_timing_max"
    - if "`y'" == "" {
    = if "piq_timing_max" == "" {
      local y "`e(depvar)'"
      }
    - gen double `return' = cond(`y'==0, 2*ln1p(`mu'*$SGLM_a)/$SGLM_a, 2*(`y
> '*ln(`y'/`mu') - (1+`y'*$SGLM_a)/$SGLM_a * ln((1+`y'*$SGLM_a)/(1+`mu'*$SGLM_
> a))))
    = gen double __000008 = cond(piq_timing_max==0, 2*ln1p(__000005*1)/1, 2*
> (piq_timing_max*ln(piq_timing_max/__000005) - (1+piq_timing_max*1)/1 * ln((1
> +piq_timing_max*1)/(1+__000005*1))))
    - exit
    ─────────────────────────────────────────────────────────────────
> ───────────────────────────────────────────────────────── end glim
> _v6 ──────────────────────────────────────────────────────────────
    - qui replace `z' = sum(`wt'*`z')
    = qui replace __000008 = sum(__000003*__000008)
    - scalar `newdev' = `z'[_N]
    = scalar __00000C = __000008[_N]
    - local disp = $SGLM_ph
    = local disp = 1
    - est scalar vf = `vfactor'
    = est scalar vf = 1
    - est scalar rc = `rc'
    = est scalar rc = 0
    - if "`oldIC'"!="" {
    = if "oldic"!="" {
    - est scalar aic = (-2*e(ll)+2*`rank')/`nobs'
    = est scalar aic = (-2*e(ll)+2*7)/217
    - }
    - else est scalar aic = (-2*e(ll)+2*`rank')
    = else est scalar aic = (-2*e(ll)+2*7)
    - }
    - else {
      if `"`mlopts'"' != "" {
      local 0 `", `mlopts'"'
      syntax [, NOOPTION ]
      error 198
      }
      quietly {
      tempvar eta mu dmu v W z
      tempname Wscale b0
      if "`offset'" != "" {
      local moffset = "-`offset'"
```

```
}
if `"`init'"'!="" {
gen double `mu' = `init' if `touse'
}
else {
summ `y' `wwt' if `touse', mean
if "$SGLM_V" != "glim_v2" {
gen double `mu' = (`y'+r(mean))/(`m'+1)
}
else {
gen double `mu' = `m'*(`y'+.5)/(`m'+1)
}
}
if `reg' { local iterate 1 }
capture drop `eta'
$SGLM_L 0 `eta' `mu'
tempvar dev
tempname newdev oldev
scalar `oldev' = 0
scalar `newdev' = 1
local i 1
if `iterate' == 0 { local i 0 }
`iflog' di
while abs(`newdev'-`oldev')>`ltol' & `i'<=`iterate' {
capture drop `v'
capture drop `dmu'
capture drop `W'
capture drop `z'
scalar `oldev' = `newdev'
$SGLM_V 1 `eta' `mu' `v'
$SGLM_L 2 `eta' `mu' `dmu'
gen double `z' = `eta' + (`y'-`mu')/`dmu' `moffset' if `touse'
gen double `W' = `disp'*`dmu'*`dmu'/`v' if `touse'
summ `W' `wwt', meanonly
scalar `Wscale' = r(mean)
`VV' cap noisily quietly _regress `z' `xvars' [iw=`W'*`wt'/`Wscale'], ms
> e1 `constant'
if e(N)>=. {exit 459}
if _rc {exit _rc}
capture drop `eta'
capture drop `mu'
capture drop `dev'
predict double `eta' if `touse', xb
if "`offset'" != "" {
replace `eta' = `eta'+`offset'
}
```

```
      $SGLM_L 1 `eta' `mu'
      $SGLM_mu `mu'
      $SGLM_V 3 `eta' `mu' `dev'
      replace `dev' = sum(`wt'*`dev')
      scalar `newdev' = `dev'[_N]/`disp'
      if `i' < 10 {
      local space " "
      }
      else {
      local space
      }
      `iflog' di as txt "Iteration `i':`space' " "Deviance = " as res %9.0g `n
> ewdev'
      if "`trace'" != "" {
      tempname beta
      `iflog' mat list e(b), noblank noheader
      `iflog' di as txt "{hline 78}"
      `iflog' di
      }
      local ic = `i'
      local i = `i'+1
      }
      if "`unbiased'`jknife1'`jknife'" != "" {
      `VV' cap noisily quietly _regress `z' `xvars' [iw=`W'*`wt'], mse1 `const
> ant'
      if e(N)>=. {exit 459}
      if _rc {exit _rc}
      tempvar h
      qui _predict double `h' if `touse', stdp
      qui replace `h' = `h'*`h'*`v'
      local minus "minus(0)"
      }
      else local h = 0
      local rc = cond(abs(`newdev'-`oldev')>`ltol' & !`reg',430,0)
      replace `z' = sum(`wt'*(`y'-`mu')^2/`v')
      local chi2 = `z'[_N]/`disp'
      local p = e(df_m)
      local df = `nobs'-`p'-(`"`constant'"'=="")
      local dispc = `chi2'/`df'
      local dispd = `newdev'/`df'
      global SGLM_ph = `dispc'
      if `"`scale'"'=="" {
      local scale `scale1'
      if `scale1' { local delta 1 }
      else local delta `dispc'
      }
```

```
else if `scale'==0 {
local delta `dispc'
if `scale1' {
local cd "square root of Pearson"
local cd "`cd' X2-based dispersion"
}
}
else if `scale'==-1 {
local delta `dispd'
local cd "square root of deviance-based"
local cd "`cd' dispersion"
}
else {
local delta `scale'
if !`scale1' | (`scale1' & `scale'!=1) {
local cd "dispersion equal to square"
local cd "`cd' root of `delta'"
}
}
if !`scale1' | (`scale1' & `scale'!=1) {
if `scale1' { local dof 100000 }
else local dof `df'
if `delta'>=. {
local zapse "yes"
}
else {
scalar `Wscale' = `Wscale'/`delta'
}
}
tempname b V
mat `b' = e(b)
mat `V' = e(V)
local vce "eim"
local vcetype "EIM"
if "`robust'`oim'`hacnam'`opg'" != "" {
capture drop `W'
capture drop `z'
capture drop `v'
capture drop `dmu'
tempvar xb
_predict double `xb', xb
$SGLM_V 1 `eta' `mu' `v'
$SGLM_L 2 `eta' `mu' `dmu'
tempvar ys yi
gen double `ys' = `dmu'*(`mu'-`y')/`v'
gen double `yi' = `dmu'*`dmu'
```

```
        if "`oim'" != "" {
        tempvar dv d2m
        $SGLM_V 2 `eta' `mu' `dv'
        $SGLM_L 3 `eta' `mu' `d2m'
        replace `yi' = `yi' + `d2m'*(`mu'-`y') - `dmu'*`dv'*`ys'
        }
        replace `yi' = `awt' * `yi' / `v'
        replace `ys' = `awt' * `ys' / sqrt(1-`h')
        `VV' _regress `xb' `xvars' if `touse' [iweight=`fwt'*`yi'], `constant' m
> se1
        mat `V' = e(V)
        local vce "oim"
        local vcetype "OIM"
        if "`robust'" != "" {
        tempname vmb
        matrix `vmb' = e(V)
        if "`oim'" != "" {
        local vce "robust"
        local vcetype "Robust"
        }
        else {
        local vce "robust"
        if (`canon'==0) {
        local vcetype "Semirobust"
        }
        else {
        local vcetype "Robust"
        }
        }
        _robust2 `ys' [fweight=`fwt'] if `touse', var(`V') `clopt' `minus'
        if "`unbiased'" != "" {
        local setype "Unbiased Sandwich"
        local vce "unbiased"
        local vcetype "Unbiased"
        }
        if `"`clopt'"' != "" {
        global SGLM_nc = r(N_clust)
        }
        }
        else if "`opg'" != "" {
        local nms : colnames `V'
        local ncol = colsof(`V')
        mat `V' = I(`ncol')
        version 11: mat colnames `V' = `nms'
        version 11: mat rownames `V' = `nms'
        replace `ys' = `ys'/`disp'
```

```
        _robust2 `ys' [fweight=`fwt'] if `touse', var(`V')
        mat `V'=`delta'*`delta'*syminv(`V')
        local vce "opg"
        local vcetype "OPG"
        }
        else if "`hacnam'" == "" {
        tempname ss
        scalar `ss' = `delta'*`Wscale'
        mat `V' = `ss'*`V'
        }
        }
        if "`hacnam'" != "" {
        capture drop `v'
        capture drop `dmu'
        capture drop `z'
        $SGLM_V 1 `eta' `mu' `v'
        $SGLM_L 2 `eta' `mu' `dmu'
        gen double `z' = `dmu'*(`y'-`mu')/`v'
        sort `touse' `tvar'
        qui HAC "`hacnam'" "`haclag'" "`wt'" "`z'" "`touse'" `"`constant'"' `"`x
> vars'"' "`intlag'"
        tempname vm
        mat `vm' = r(V)
        local pm1 = `p'+1
        `hacnam' `haclag' 0 `nobs' `pm1'
        local hac_kern "`r(setype)'"
        local vce "hac"
        local vcetype "HAC"
        local ddd = 1
        tempname ss
        scalar `ss' = 1/(`ddd'*`ddd')
        mat `V' = `ss'*`V'*`vm'*`V''
        }
        if "`jknife1'" != "" {
        JK1irls `b' `V' `y' "`xvars'" `h' `eta' `mu' `v' `dmu' "`tvar'" `z' "`mo
> ffset'" "`constant'" `wt' `touse' "`weight'"
        local p = colsof(`b')
        tempname ss
        scalar `ss' = (`nobs'-`p')/`nobs'
        local vce "jackknife1"
        local vcetype "1-step JKnife"
        mat `V' = `ss'*`V'
        }
        if "`jknife'" != "" {
        noi JKnife `b' `V' `y' "`xvars'" "`tvar'" "`offopt'" "`constant'" "`argf
> am'" "irls" "`arglink'" "[`weight'`exp']" `touse' "`cluster'" `dots' "`weigh
```

```
> t'" "`wt'"
      local mm = `nobs'
      local vcetype "Jackknife"
      if "`cluster'" != "" { local mm = $SGLM_nc }
      else local mm=1
      local p = colsof(`b')
      local nnn = `nobs'-$SGLM_bm
      tempname ss
      scalar `ss' = (`nnn'-`p')/(`nnn'*`mm')
      mat `V' = `ss'*`V'
      }
      if "`bstrap'" != "" {
      tempname b V
      mat `b' = e(b)
      mat `V' = e(V)
      noi Bstrap `b' `V' `y' "`xvars'" "`offopt'" "`constant'" "`argfam'" "irl
> s" "`arglink'" "[`weight'`exp']" `touse' `brep' "`clopt'" `dots'
      local vcetype "Bootstrap"
      if "`cluster'" != "" { local mm = $SGLM_nc }
      else local mm=1
      local p = colsof(`b')
      tempname ss
      scalar `ss' = (`nobs'-`p')/(`nobs'*(`brep'-$SGLM_bm))
      mat `V' = `ss'*`V'
      }
      if "`opg'`hacnam'`robust'`jknife'`jknife1'`bstrap'" == "" {
      scalar `Wscale' = 1/`Wscale'
      mat `V' = `Wscale'*`V'
      }
      if `"`zapse'"'=="yes" {
      local i 1
      while `i'<=rowsof(`V') {
      mat `V'[`i',`i'] = 0
      local i=`i'+1
      }
      }
      if `vfactor' != 1 {
      mat `V' = `vfactor'*`V'
      }
      tempvar mysamp
      local k = colsof(`b')
      qui gen byte `mysamp' = `touse'
      est post `b' `V' [`weight'`exp'], depname(`y') obs(`nobs') `dofopt' esam
> ple(`mysamp') buildfvinfo
      if `:length local vmb' {
      est matrix V_modelbased `vmb'
```

```
                }
        est local depvar "`y'"
        est local wtype "`weight'"
        est local wexp "`exp'"
        est local title "Generalized linear models"
        est scalar rc = `rc'
        est scalar disp = `disp'
        est scalar k = `k'
        est hidden scalar ic = `ic'
        est hidden local crittype "deviance"
        }
        est hidden scalar noconstant = cond("`constant'" == "",0,1)
        est hidden scalar consonly = cond("`xvars'"!="",0,1)
        }
  - mac drop SGLM_running SGLM_nonstan
  - if "`score'" != "" {
  = if "" != "" {
        label var `scvar' "Score index from glm"
        rename `scvar' `score'
        est local scorevars `score'
        }
  - _post_vce_rank
        ────────────────────────────────────────────────────────────
> ────────────────────────────────────────────────────── begin _post_vce_r
> ank ─────────────────────────────────────────────────────────
        - syntax, [CHecksize]
        - if "`checksize'" != "" {
        = if "" != "" {
          tempname V
          capture matrix `V' = e(V)
          if _rc {
          exit
          }
          local cols = colsof(`V')
          if `cols' == 0 {
          exit
          }
          }
        - tempname V Vi rank
        - mat `V' = e(V)
        = mat __00000D = e(V)
        - mat `Vi' = invsym(`V')
        = mat __00000E = invsym(__00000D)
        - sca `rank' = rowsof(`V') - diag0cnt(`Vi')
        = sca __00000F = rowsof(__00000D) - diag0cnt(__00000E)
        - mata:st_numscalar("e(rank)", st_numscalar("`rank'"))
```

```
            = mata:st_numscalar("e(rank)", st_numscalar("__00000F"))
         ──────────────────────────────────────────────────────────────
>  ──────────────────────────────────────────────── end _post_vce_r
>  ank ─────────────────────────────────────────────────────────────────
      ─ local dfm = e(rank)─ (`"`constant'"'=="")
      = local dfm = e(rank)─ (`""'=="")
      ─ local df = `nobs'─e(rank)
      = local df = 217─e(rank)
      ─ est local link "$SGLM_L"
      = est local link "glim_l03"
      ─ est local varfunc "$SGLM_V"
      = est local varfunc "glim_v6"
      ─ est local m "$SGLM_m"
      = est local m "1"
      ─ if !inlist("$SGLM_m", "", "1") {
      = if !inlist("1", "", "1") {
        est hidden local marginsprop atslow
        }
      ─ est hidden local a "$SGLM_a"
      = est hidden local a "1"
      ─ est hidden local msg "`cd'"
      = est hidden local msg ""
      ─ est hidden scalar canonical = `canon'
      = est hidden scalar canonical = __000001
      ─ est local cons "`constant'"
      = est local cons ""
      ─ est hidden local oim "`oim'"
      = est hidden local oim "oim"
      ─ est local clustvar "`cluster'"
      = est local clustvar ""
      ─ capture confirm number $SGLM_p
      = capture confirm number 0
      ─ if !_rc {
      ─ est scalar power = $SGLM_p
      = est scalar power = 0
      ─ }
      ─ else {
        version 15: ereturn hidden local power `"$SGLM_p"'
        }
      ─ if "$SGLM_V" == "glim_v2" & "$SGLM_L" == "glim_l01" & "`eform'" == "" {
      = if "glim_v6" == "glim_v2" & "glim_l03" == "glim_l01" & "" == "" {
        est hidden local msg2 "Coefficients are the risk differences"
        }
      ─ if "`irls'" != "" {
      = if "" != "" {
        est local opt irls
```

```
        if "`oim'" == "" {
        est local opt1 "MQL Fisher scoring"
        est local opt2 "(IRLS EIM)"
        }
        else {
        est local opt1 "MQL Newton-Raphson"
        est local opt2 "(IRLS OIM)"
        }
        }
- else {
- est local opt1 "ML"
- est local opt2
- if "`vce'" == "eim" & `disp' != 1 {
= if "robust" == "eim" & 1 != 1 {
  matrix `V' = `disp'*e(V)
  est repost V = `V'
  }
- }
- if "$SGLM_bm" != "" {
= if "" != "" {
  if $SGLM_bm > 0 { est scalar Nf = $SGLM_bm }
  }
- est scalar df_m = `dfm'
= est scalar df_m = 6
- est scalar df = `df'
= est scalar df = 210
- if "$SGLM_nc" != "" {
= if "" != "" {
  est scalar N_clust = $SGLM_nc
  }
- if `brep' > 0 {
= if -1 > 0 {
  est scalar N_brep = `brep'
  }
- est scalar vf = `vfactor'
= est scalar vf = 1
- est scalar phi = `disp'
= est scalar phi = 1
- est scalar deviance = abs(`newdev')
= est scalar deviance = abs(__00000C)
- est scalar dispers = e(deviance)/e(df)
- est scalar deviance_s = e(deviance)/e(phi)
- est scalar dispers_s = e(deviance_s)/e(df)
- est scalar deviance_p = abs(`chi2')
= est scalar deviance_p = abs(142.4940348546169)
- est scalar dispers_p = e(deviance_p)/e(df)
```

```
- est scalar deviance_ps = e(deviance_p)/e(phi)
- est scalar dispers_ps = e(deviance_ps)/e(df)
- capture drop `v'
= capture drop __000007
- qui gen double `v' = sum((`y'-`mu')^2) if `touse'
= qui gen double __000007 = sum((piq_timing_max-__000005)^2) if __000002
- if "`oldIC'" != "" | "`irls'" != "" {
= if "oldic" != "" | "" != "" {
- est scalar bic = e(deviance) - `df'*log(`nobs')
= est scalar bic = e(deviance) - 210*log(217)
- }
- else est scalar bic = -2*e(ll)+log(`nobs')*`p'
= else est scalar bic = -2*e(ll)+log(217)*
- est local varfuncf "$SGLM_vf"
= est local varfuncf "u+(1)u^2"
- est local varfunct "$SGLM_vt"
= est local varfunct "Neg. Binomial"
- est local linkf "$SGLM_lf"
= est local linkf "ln(u)"
- est local linkt "$SGLM_lt"
= est local linkt "Log"
- if "`cluster'" != "" {
= if "" != "" {
  est local vce "cluster"
  }
- else {
- est local vce "`vce'"
= est local vce "robust"
- }
- est local vcetype "`vcetype'"
= est local vcetype "Robust"
- est local setype "`setype'"
= est local setype ""
- est local hac_kernel "`hac_kern'"
= est local hac_kernel ""
- est local hac_lag "`haclag'"
= est local hac_lag "215"
- est local offset "`offvar'"
= est local offset ""
- est local offset1
- est scalar k_eq_model = 0
- est local marginsok default
- est local marginsnotok stdp Anscombe Cooksd Deviance Hat Likelihood Pear
> son Response Score Working ADJusted STAndardized STUdentized MODified
- est local predict "glim_p"
- est local cmd "glm"
```

```
    - capture mac drop SGLM_bm SGLM_nc
    - if "$SGLM_V" == "glim_v2" {
    = if "glim_v6" == "glim_v2" {
      if "$SGLM_L" == "glim_l01" | "$SGLM_L" == "glim_l03" {
      CheckAdmiss
      }
      }
    - est scalar nbml = `"$SGLM_ml"' == "ml"
    = est scalar nbml = `""' == "ml"
    - if "`display'" == "" {
    = if "" == "" {
    - Display, `eform' level(`level') `header' `table' `diopts'
    = Display,  level(95)
   ─────────────────────────────────────────────────────────────
> ──────────────────────────────────────────────────── begin glm.Disp
> lay ─────────────────────────────────────────────────────────
    - if "`e(prefix)'" == "svy" {
    = if "" == "svy" {
      _prefix_display `0'
      exit
      }
    - di

    - syntax [, noHEADer noTABLE Level(cilevel) eform *]
    - _get_diopts diopts, `options'
    = _get_diopts diopts,
   ─────────────────────────────────────────────────────────────
> ──────────────────────────────────────────────────── begin _get_dio
> pts ─────────────────────────────────────────────────────────
      - version 11
      - syntax namelist(max=2) [, *]
      - gettoken name1 namelist : namelist
      - gettoken name2 namelist : namelist
      - GetDiopts diopts options, `options'
      = GetDiopts diopts options,
     ───────────────────────────────────────────────────────────
> ─────────────────────────────────────────────── begin _get_diopts.GetDio
> pts ─────────────────────────────────────────────────────────
        - 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_exclus
> ive ─────────────────────────────────────────────────────────────
              - version 8.2
              - args opts optname errcode optslab
              - local opts `opts'
              = local opts
              - local n 0
              - while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              - if `n' < 2 {
              = if 0 < 2 {
              - exit
              ─────────────────────────────────────────────────────
> ───────────────────────────────────────────────────── end opts_exclus
> ive ─────────────────────────────────────────────────────────────
              - opts_exclusive "`allbaselevels' `nobaselevels'"
              = opts_exclusive " "
              ─────────────────────────────────────────────────────
> ───────────────────────────────────────────────────── begin opts_exclus
> ive ─────────────────────────────────────────────────────────────
              - version 8.2
              - args opts optname errcode optslab
              - local opts `opts'
              = local opts
              - local n 0
              - while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              - if `n' < 2 {
              = if 0 < 2 {
              - exit
              ─────────────────────────────────────────────────────
> ───────────────────────────────────────────────────── end opts_exclus
```

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

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

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

> ── end opts_exclus
> ive ───

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

> ── begin opts_exclus
> ive ───

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

> ── end opts_exclus
> ive ───

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

> ── begin opts_exclus
> ive ───

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

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

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

```
                – exit
               ─────────────────────────────────────────────────
  > ─────────────────────────────────────────────── end opts_exclus
  > ive ───────────────────────────────────────────────────────────
               – 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.Wra
> pon ─────────────────────────────────────────────────────────────────
         – 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_exclus
> ive ───────────────────────────────────────────────────────────────
            - version 8.2
            - args opts optname errcode optslab
            - local opts `opts'
            = local opts
            - local n 0
            - while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            - if `n' < 2 {
            = if 0 < 2 {
            - exit
            ────────────────────────────────────────────────────
> ──────────────────────────────────────────────── end opts_exclus
> ive ───────────────────────────────────────────────────────────────
            - local fvwrapon `word' `width'
            = local fvwrapon
            - if `:length local fvwrapon' {
            = if 0 {
              c_local fvwrapon fvwrapon(`fvwrapon')
              }
            ────────────────────────────────────────────────────
> ──────────────────────────────────────────────── end _get_diopts.Wra
> pon ───────────────────────────────────────────────────────────────
         - 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.GetDio
> pts ─────────────────────────────────────────────────────────────
        – 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_nolog = s(nolog)
        – }
        – 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_after = s(after)
        – }
        – local S_`sname' = s(`sname')
        = local S_before = s(before)
        – }
        – 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.GetDio
> pts ─────────────────────────────────────────────────────────────
        – 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_exclus
> ive ─────────────────────────────────────────────────────────────
          - version 8.2
          - args opts optname errcode optslab
          - local opts `opts'
          = local opts
          - local n 0
          - while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          - if `n' < 2 {
          = if 0 < 2 {
          - exit
          ─────────────────────────────────────────────────────────────
> ───────────────────────────────────────────────────────────── end opts_exclus
> ive ─────────────────────────────────────────────────────────────
          - opts_exclusive "`allbaselevels' `nobaselevels'"
          = opts_exclusive " "
          ─────────────────────────────────────────────────────────────
> ───────────────────────────────────────────────────────── begin opts_exclus
> ive ─────────────────────────────────────────────────────────────
          - version 8.2
          - args opts optname errcode optslab
          - local opts `opts'
          = local opts
          - local n 0
          - while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
```

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

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

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

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

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

> ──────────────────────────────────────────────────────────────────────── end opts_exclus
> ive ─────────────────────────────────────────────────────────────────────────
          – opts_exclusive "`lstretch' `nolstretch'"
```

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

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

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

> ─── end opts_exclus
> ive ──

```
          - opts_exclusive "`versus' `compare'"
          = opts_exclusive " "
```

> ─── begin opts_exclus
> ive ──

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

> ─── end opts_exclus
> ive ──

```
          - opts_exclusive "`abbrev' `noabbrev'"
          = opts_exclusive " "
```

> ─── begin opts_exclus
> ive ──

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

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

  ─────────────────────────────────────────────
```

> ─── end opts_exclus
> ive ───

```
- 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')
            }
          ───────────────────────────────────────────────────────
```

```
        - 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.GetDio
> pts ─────────────────────────────────────────────────────────────
          - if `"`name2'"' == "" {
          = if `""' == "" {
          - GetDiopts DUPS, `options'
          = GetDiopts DUPS,
          ─────────────────────────────────────────────────────
> ───────────────────────────────────────────── begin _get_diopts.GetDio
> pts ─────────────────────────────────────────────────────────────
          - 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_exclus
> ive ─────────────────────────────────────────────────────────────
          - version 8.2
          - args opts optname errcode optslab
          - local opts `opts'
          = local opts
          - local n 0
```

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

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

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

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

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

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

```
    -  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_exclus
> ive ──

```
    -  version 8.2
    -  args opts optname errcode optslab
    -  local opts `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' `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 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 nolog = `"nolog"'
        - }
        - 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 after = `", robust"'
        - }
        - sreturn local `sname' = `"`S_`sname''"'
        = sreturn local before = `", argoptlist(CLuster) optlist(OIM OPG Robus
> t) old "'
        - }
        - sreturn local `sname' = `"`S_`sname''"'
        = sreturn local k_fill = `"12"'
        - }
        - sreturn local `sname' = `"`S_`sname''"'
        = sreturn local k = `"12"'
        - }
        ─────────────────────────────────────────────────────────────
> ──────────────────────────────────────────────────────── end _get_dio
> pts ─────────────────────────────────────────────────────────────
      - if "`eform'" != "" {
      = if "" != "" {
        Eform
        local eform "`r(eform)'"
        }
```

```
          - if "`eform'" != "" {
          = if "" != "" {
            local eopt "eform(`eform')"
            }
          - if "`header'" == "" { Head }
          = if "" == "" { Head }
```
───

> ── begin glm.H
> ead ───
```
          - di as txt "Generalized linear models" _col(51) "Number of obs" _col(
> 67) "=" _col(69) as res %10.0gc e(N)
Generalized linear models                        Number of obs   =          217
          - di as txt "Optimization     : " as res "`e(opt1)'" as txt _col(51) "
> Residual df" _col(67) "=" _col(69) as res %10.0gc e(df)
          = di as txt "Optimization     : " as res "ML" as txt _col(51) "Residua
> l df" _col(67) "=" _col(69) as res %10.0gc e(df)
Optimization     : ML                            Residual df     =          210
          - di as res _col(20) "`e(opt2)'" as txt _col(51) "Scale parameter" _co
> l(67) "=" _col(70) as res %9.0g e(phi)
          = di as res _col(20) "" as txt _col(51) "Scale parameter" _col(67) "="
>  _col(70) as res %9.0g e(phi)
                                                 Scale parameter =            1
          - di as txt "Deviance" _col(18) "=" as res _col(20) %12.0g e(deviance)
>  as txt _col(51) "(1/df) Deviance" _col(67) "=" as res _col(70) %9.0g e(disp
> ers)
Deviance         =  81.32983804                  (1/df) Deviance =    .3872849
          - di as txt "Pearson" _col(18) "=" as res _col(20) %12.0g e(deviance_p
> ) as txt _col(51) "(1/df) Pearson" _col(67) "=" as res _col(70) %9.0g e(disp
> ers_p)
Pearson          =  142.4940349                  (1/df) Pearson  =     .678543
          - di

          - if `"$SGLM_ml"' == "ml" {
          = if `""' == "ml" {
            di as txt "Variance function: " as res "V(u) = " as res _col(27) "`e
> (varfuncf)'" _col(51) as txt "[" as res "`e(varfunct)'" as txt "]"
            }
          - else {
          - di as txt "Variance function: " as res "V(u) = " as res _col(27) "`e
> (varfuncf)'" _col(51) as txt "[" as res "`e(varfunct)'" as txt "]"
          = di as txt "Variance function: " as res "V(u) = " as res _col(27) "u+
> (1)u^2" _col(51) as txt "[" as res "Neg. Binomial" as txt "]"
Variance function: V(u) = u+(1)u^2               [Neg. Binomial]
          - }
          - di as txt "Link function    : " as res "g(u) = " as res _col(27) "`e
> (linkf)'" _col(51) as txt "[" as res "`e(linkt)'" as txt "]"
```

```
        = di as txt "Link function    : " as res "g(u) = " as res _col(27) "ln
> (u)" _col(51) as txt "[" as res "Log" as txt "]"
Link function    : g(u) = ln(u)                      [Log]
        - if "`e(hac_kernel)'" != "" {
        = if "" != "" {
          di
          di as txt "HAC kernel (lags): " e(hac_kernel) " ({yellow:`e(hac_lag)
> '})" _c
          local di di
          }
        - else if "`e(setype)'" != "" {
        = else if "" != "" {
          di
          di as txt "Standard errors  : " as res "`e(setype)'" _c
          local di di
          }
        - else local cr _n
        - if "`e(ll)'" != "" {
        = if "-435.9938703228528" != "" {
        - local cr
        - di

        - local crtype = upper(bsubstr(`"`e(crittype)'"',1,1)) + bsubstr(`"`e(
> crittype)'"',2,.)
        = local crtype = upper(bsubstr(`"log pseudolikelihood"',1,1)) + bsubst
> r(`"log pseudolikelihood"',2,.)
        - local crlen = max(18,length(`"`crtype'"') + 2)
        = local crlen = max(18,length(`"Log pseudolikelihood"') + 2)
        - di as txt _col(51) "{help j_glmic##|_new:AIC}" _col(67) "=" as res _
> col(70) %9.0g e(aic)
                                                   AIC           =   4.082893
        - di as txt "`crtype'" _col(`crlen') "= " as res %12.0g e(ll) _c
        = di as txt "Log pseudolikelihood" _col(22) "= " as res %12.0g e(ll) _
> c
Log pseudolikelihood = -435.9938703        - }
        - else if "`e(disp)'" != "" & "`e(disp)'" != "1" {
        = else if "" != "" & "" != "1" {
          local cr
          `di'
          di
          di as txt "Quasi-likelihood model with dispersion: " as res `e(disp)
> ' _c
          }
        - if "`e(ll)'" != "" {
        = if "-435.9938703228528" != "" {
        - di as txt `cr' _col(51) "{help j_glmic##|_new:BIC}" _col(67) "=" as
```

```
> res _col(70) %9.0g e(bic)
        = di as txt  _col(51) "{help j_glmic##|_new:BIC}" _col(67) "=" as res
> _col(70) %9.0g e(bic)
                                                BIC              =  -1048.449
        - }
        - else {
          di as txt `cr' _col(51) "BIC" _col(67) "=" as res _col(70) %9.0g e(b
> ic)
          }
        - di


    ─────────────────────────────────────────────────────────────
> ─────────────────────────────────────────────────────────── end glm.H
> ead ─────────────────────────────────────────────────────────
      - if "`table'" != "" { exit }
      = if "" != "" { exit }
      - _coef_table , level(`level') `eopt' first `diopts'
      = _coef_table , level(95)  first
    ─────────────────────────────────────────────────────────────

> ─────────────────────────────────────────────────────── begin _coef_ta
> ble ─────────────────────────────────────────────────────────
        - version 11
        - local vv : di "version " string(max(11,_caller())) ", missing:"
        - 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 "glm"
        - local keepmc : list cmd in mc_cmds
        - if inlist("`cmd'", "pwcompare", "pwmean") {
        = if inlist("glm", "pwcompare", "pwmean") {
          local groups GROUPS
          }
        - if "`cmd'" == "regress" {
        = if "glm" == "regress" {
          local beta Beta
          }
        - if "`cmd'" == "gsem" {
        = if "glm" == "gsem" {
```

```
              local fvignore fvignore(int 0)
              local flignore flignore
              }
        – if "`cmd'" == "sem" {
        = if "glm" == "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) PMATrix
> (string) TSMATrix(string) ROWCFormat(string) ROWPFormat(string) ROWSFormat(s
> tring) NOROWCI MMATrix(string) MVMATrix(string) MEMATrix(string) BSTDMATrix(
> string) CNSMATrix(string) PCLASSMATrix(string) Level(cilevel) prefix(name) c
> nszero(string) suffix(name) OFFSETlist(string asis) `beta' `standardized' NO
> CI NOPValues `dftable' `dfonly' dfci DFPValues dfmissing `groups' COEFLegend
>  selegend `fvignore' `flignore' `showginvariant' `nolabel' `nofootnote' `wra
> p' sort `pisematrix' depname(string) COEFTitle(string) coeftitle2(string) pt
> itle(string) cititle(string) NOMCLEGend noCNSReport FULLCNSReport `noclustre
> port' cformat(passthru) sformat(passthru) pformat(passthru) NOFirst First SH
> OWEQns neq(integer -1) NODIPARM NOTEST SEParator(integer 0) NOSKIP OFFSETONL
> Y1 PLus NOEQCHECK EFORMALL CITYPE(string) eqselect(string) cidisjoint noEFOR
> MNOTE * ]
        = syntax [, cmdextras BMATrix(string) VMATrix(string) EMATrix(string)
> DFMATrix(string) EQMATrix(string) ROWMATrix(string) CIMATrix(string) PMATrix
> (string) TSMATrix(string) ROWCFormat(string) ROWPFormat(string) ROWSFormat(s
> tring) NOROWCI MMATrix(string) MVMATrix(string) MEMATrix(string) BSTDMATrix(
> string) CNSMATrix(string) PCLASSMATrix(string) Level(cilevel) prefix(name) c
> nszero(string) suffix(name) OFFSETlist(string asis)   NOCI NOPValues   dfci
> DFPValues dfmissing  COEFLegend selegend      sort  depname(string) COEFTit
> le(string) coeftitle2(string) ptitle(string) cititle(string) NOMCLEGend noCN
> SReport FULLCNSReport  cformat(passthru) sformat(passthru) pformat(passthru)
>  NOFirst First SHOWEQns neq(integer -1) NODIPARM NOTEST SEParator(integer 0)
>  NOSKIP OFFSETONLY1 PLus NOEQCHECK EFORMALL CITYPE(string) eqselect(string)
> cidisjoint 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
            }
            }
        - _novce_other_mats, cimatrix("`cimatrix'") pmatrix("`pmatrix'") tsmat
> rix("`tsmatrix'") `noci' `nopvalues' `dfci' `dfpvalues' `cidisjoint'
        = _novce_other_mats, cimatrix("") pmatrix("") tsmatrix("")
              ─────────────────────────────────────────────────────────────
> ─────────────────────────────────── begin _coef_table._novce_other_m
> ats ────────────────────────────────
        - syntax [anything], [ CIMATrix(string) PMATrix(string) TSMATrix(str
> ing) NOCI NOPValues dfci DFPValues cidisjoint ]
        - if ("`pmatrix'"=="" & "`tsmatrix'"=="" & "`e(V)'"=="" & "`cimatrix
> '"!="" & "`noci'"!="") {
        = if (""=="" & ""=="" & "matrix"=="" & ""!="" & ""!="") {
            sreturn local cimatrix "empt"
            }
        - if ("`pmatrix'"=="" & "`tsmatrix'"!="" & "`e(V)'"=="" & "`cimatrix
> '"=="" & ("`noci'"!=""|"`nopvalues'"!="")) {
        = if (""=="" & ""!="" & "matrix"=="" & ""=="" & (""!=""|""!="")) {
            sreturn local noci "empt"
            sreturn local nopvalues "empt"
            }
        - if ("`pmatrix'"=="" & "`tsmatrix'"=="" & "`e(V)'"=="" & "`cimatrix
> '"!="" & "`noci'"!="") {
        = if (""=="" & ""=="" & "matrix"=="" & ""!="" & ""!="") {
            sreturn local cimatrix "empt"
            }
        - if ("`pmatrix'"!="" & "`tsmatrix'"=="" & "`e(V)'"=="" & "`cimatrix
> '"=="" & "`nopvalues'"!="") {
        = if (""!="" & ""=="" & "matrix"=="" & ""=="" & ""!="") {
            sreturn local pmatrix "empt"
            }
        - if ("`pmatrix'"!="" & "`tsmatrix'"=="" & "`e(V)'"=="" & "`cimatrix
```

```
> '"=="" & "`noci'"!="") {
        = if (""!="" & ""=="" & "matrix"=="" & ""=="" & ""!="") {
          sreturn local noci "empt"
          }
      - if ("`pmatrix'"!="") {
        = if (""!="") {
          tempname pmat isvalid
          capture matrix `pmat' = `pmatrix'
          local rc = _rc
          if (`rc') {
          display as error "invalid {bf:pmatrix()}"
          exit 198
          }
          else {
          local k: rowsof `pmat'
          if (`k'>1 | `k'==0) {
          display as error "{bf:pmatrix()} should be a row vector"
          exit 198
          }
          }
          scalar `isvalid' = 1
          mata: _is_in_0_1void("`pmat'", "`isvalid'")
          if (`isvalid'==0) {
          display as error "invalid {bf:pmatrix()}"
          di as txt "{p 4 4 2}"
          di as smcl as err "{bf:pmatrix()}"
          di as smcl as err "should contain values inside"
          di as smcl as err "the interval [0,1]."
          di as smcl as err "{p_end}"
          exit 198
          }
          }
      - if ("`tsmatrix'"!="") {
        = if (""!="") {
          tempname tmat
          capture matrix `tmat' = `tsmatrix'
          local rc = _rc
          if (`rc') {
          display as error "invalid {bf:tsmatrix()}"
          exit 198
          }
          else {
          local k: rowsof `tmat'
          if (`k'>1 | `k'==0) {
          display as error "{bf:tsmatrix()} should be a row vector"
          exit 198
```

```
              }
              }
              }
     -  if ("`cimatrix'"!="") {
     =  if (""!="") {
              tempname cimat isvalid
              capture matrix `cimat' = `cimatrix'
              local rc = _rc
              if (`rc') {
              display as error "invalid {bf:cimatrix()}"
              exit 198
              }
              if ("`cidisjoint'"=="" & "`e(disjoint)'"=="") {
              scalar `isvalid' = 1
              mata: _is_in_ci("`cimat'", "`isvalid'")
              if (`isvalid'==0) {
              display as error "invalid {bf:cimatrix()}"
              di as txt "{p 4 4 2}"
              di as smcl as err "{bf:cimatrix()}"
              di as smcl as err "lower limit should be"
              di as smcl as err "smaller than the upper"
              di as smcl as err "limit."
              di as smcl as err "{p_end}"
              exit 198
              }
              }
              }
     -  if ("`e(V)'"=="" & "`dfci'"!="" & "`pmatrix'"!="") {
     =  if ("matrix"=="" & ""!="" & ""!="") {
              opts_exclusive "pmatrix() `dfci'"
              }
     -  if ("`e(V)'"=="" & "`dfci'"!="" & "`tsmatrix'"!="") {
     =  if ("matrix"=="" & ""!="" & ""!="") {
              opts_exclusive "tsmatrix() `dfci'"
              }
     -  if ("`e(V)'"=="" & "`dfci'"!="" & "`cimatrix'"!="") {
     =  if ("matrix"=="" & ""!="" & ""!="") {
              opts_exclusive "cimatrix() `dfci'"
              }
     -  if ("`e(V)'"=="" & "`dfpvalues'"!="" & "`pmatrix'"!="") {
     =  if ("matrix"=="" & ""!="" & ""!="") {
              opts_exclusive "pmatrix() `dfci'"
              }
     -  if ("`e(V)'"=="" & "`dfpvalues'"!="" & "`tsmatrix'"!="") {
     =  if ("matrix"=="" & ""!="" & ""!="") {
              opts_exclusive "tsmatrix() `dfpvalues'"
```

```
                }
        – if ("`e(V)'"=="" & "`dfpvalues'"!="" & "`cimatrix'"!="") {
        = if ("matrix"=="" & ""!="" & ""!="") {
          opts_exclusive "cimatrix() `dfpvalues'"
          }
        ────────────────────────────────────────────────────
```

```
        – if ("`s(cimatrix)'"=="empt") {
        = if (""=="empt") {
          local cimatrix ""
          }
        – if ("`s(pmatrix)'"=="empt") {
        = if (""=="empt") {
          local pmatrix ""
          }
        – if ("`s(noci)'"=="empt") {
        = if (""=="empt") {
          local noci ""
          }
        – if ("`s(nopvalues)'"=="empt") {
        = if (""=="empt") {
          local nopvalues ""
          }
        – if ("`e(V)'"!="" & "`cidisjoint'"!="") {
        = if ("matrix"!="" & ""!="") {
          display in red "option {bf:cidisjoint} not allowed when e(V) is post
```

```
          exit 198
          }
        – else local fvlabel `nofvlabel' `fvlabel'
        = else local fvlabel
        – local type `coeflegend' `selegend'
        = local type
        – opts_exclusive "`type' `standardized'"
        = opts_exclusive " "
          ────────────────────────────────────────────────
```

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

```
            local ++n
            gettoken item`n' opts : opts, bind
            }
      – if `n' < 2 {
      = if 0 < 2 {
      – exit
```
```
>   ─────────────────────────────────────────────── end opts_exclus
> ive ────────────────────────────────────────────────────────────
```
```
      – 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' `groups' `df
> ci' `dfpvalues'
      = local type
      – }
      – opts_exclusive "`type'"
      = opts_exclusive ""
```
```
>   ─────────────────────────────────────────────── begin opts_exclus
> ive ────────────────────────────────────────────────────────────
```
```
      – version 8.2
```

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

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

```
        – 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,
          ─────────────────────────────────────────────────────────────
>  ─────────────────────────────────────────────── begin _get_mcomp
> are ─────────────────────────────────────────────
        – version 11
        – local cmd `"`e(cmd)'"'
        = local cmd `"glm"'
        – syntax [name(name=caller)] [, *]
        – local is_pwc = inlist("pwcompare", "`cmd'", "`caller'") | inlist("
> pwmean", "`cmd'", "`caller'")
        = local is_pwc = inlist("pwcompare", "glm", "") | inlist("pwmean", "
> glm", "")
        – local is_marg = inlist("margins", "`cmd'", "`e(cmd2)'", "`caller'"
> )
        = local is_marg = inlist("margins", "glm", "", "")
        – local OPTIONS NOADJust BONferroni DUNCan DUNNett SCHeffe 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 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' `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_exclus
>  ive ─────────────────────────────────────────────────────────────────────────
            - version 8.2
            - args opts optname errcode optslab
            - local opts `opts'
            = local opts
            - local n 0
            - while `"`opts'"' != "" {
            = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
            - if `n' < 2 {
            = if 0 < 2 {
            - exit
                ─────────────────────────────────────────────────────────────
>  ────────────────────────────────────────────────────────── end opts_exclus
>  ive ─────────────────────────────────────────────────────────────────────────
            - if "`METHOD'" == "" {
            = if "" == "" {
            - if "`ALL'" != "" {
            = if "" != "" {
                di as err "multiple comparison method required with the adjustall
```

```
> option"
            exit 198
            }
        – local METHOD noadjust
        – local noadjust noadjust
        – }
        – opts_exclusive "`ALL' `noadjust'" `suboption'
        = opts_exclusive " noadjust" mcompare()
            ─────────────────────────────────────────────
> ─────────────────────────────────────────── begin opts_exclus
> ive ──────────────────────────────────────────────────────
            – 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_exclus
> ive ──────────────────────────────────────────────────────
        – 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(`vc
> e')"'
            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 `METHOD'"'
            exit 198
            }
            }
        — sreturn local method `"`METHOD'"'
        = sreturn local method `"noadjust"'
        — sreturn local adjustall `"`ALL'"'
        = sreturn local adjustall `""'
            ─────────────────────────────────────────────────────────
> ─────────────────────────────────────────── end _get_mcomp
> are ─────────────────────────────────────────────────────────
        — 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_exclus
>  ive ───────────────────────────────────────────────────
          – version 8.2
          – args opts optname errcode optslab
          – local opts `opts'
          = local opts
          – local n 0
          – while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          – if `n' < 2 {
          = if 0 < 2 {
          – exit
     ─────────────────────────────────────────────────────
>  ─────────────────────────────────────────────────── end opts_exclus
>  ive ───────────────────────────────────────────────────
        – if "`method'" == "dunnett" {
        = if "noadjust" == "dunnett" {
          opts_exclusive "`method' `groups'"
          }
        – _get_diopts diopts options, `options' `fvwrap' `fvlabel'
        = _get_diopts diopts options,
     ─────────────────────────────────────────────────────
>  ─────────────────────────────────────────────────── begin _get_dio
>  pts ───────────────────────────────────────────────────
          – version 11
          – syntax namelist(max=2) [, *]
          – gettoken name1 namelist : namelist
          – gettoken name2 namelist : namelist
          – GetDiopts diopts options, `options'
          = GetDiopts diopts options,
     ─────────────────────────────────────────────────────
>  ─────────────────────────────────────────────────── begin _get_diopts.GetDio
>  pts ───────────────────────────────────────────────────
          – 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_exclus
> ive ──────────────────────────────────────────────────────────────
              - version 8.2
              - args opts optname errcode optslab
              - local opts `opts'
              = local opts
              - local n 0
              - while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              - if `n' < 2 {
              = if 0 < 2 {
              - exit
              ─────────────────────────────────────────────────────
> ──────────────────────────────────────────────────── end opts_exclus
> ive ──────────────────────────────────────────────────────────────
              - opts_exclusive "`allbaselevels' `nobaselevels'"
              = opts_exclusive " "
              ─────────────────────────────────────────────────────
> ──────────────────────────────────────────────────── begin opts_exclus
> ive ──────────────────────────────────────────────────────────────
              - version 8.2
              - args opts optname errcode optslab
              - local opts `opts'
              = local opts
              - local n 0
              - while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              - if `n' < 2 {
              = if 0 < 2 {
              - exit
              ─────────────────────────────────────────────────────
> ──────────────────────────────────────────────────── end opts_exclus
> ive ──────────────────────────────────────────────────────────────
```

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

> ── begin opts_exclus
> ive ──

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

> ── end opts_exclus
> ive ──

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

> ── begin opts_exclus
> ive ──

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

> ── end opts_exclus
> ive ──

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

> ── begin opts_exclus

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

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

> ─── end opts_exclus
> ive ──

```
          - opts_exclusive "`cnsreport' `fullcnsreport'"
          = opts_exclusive " "
          _____
```

> ─── begin opts_exclus
> ive ──

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

> ─── end opts_exclus
> ive ──

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

> ─── begin opts_exclus
> ive ──

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

```
                    ─────────────────────────────────────────────────
> ───────────────────────────────────────────────────────── end opts_exclus
> ive ──────────────────────────────────────────────────────
              – 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.Wra
>  pon ─────────────────────────────────────────────────────────────────
                - 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_exclus
> ive ─────────────────────────────────────────────────────
              - version 8.2
              - args opts optname errcode optslab
              - local opts `opts'
              = local opts
              - local n 0
              - while `"`opts'"' != "" {
              = while `""' != "" {
                local ++n
                gettoken item`n' opts : opts, bind
                }
              - if `n' < 2 {
              = if 0 < 2 {
              - exit
              ─────────────────────────────────────────────────
> ─────────────────────────────────────────────────── end opts_exclus
> ive ─────────────────────────────────────────────────────
              - local fvwrapon `word' `width'
              = local fvwrapon
              - if `:length local fvwrapon' {
              = if 0 {
                c_local fvwrapon fvwrapon(`fvwrapon')
                }
              ─────────────────────────────────────────────────
> ─────────────────────────────────────────────────── end _get_diopts.Wra
> pon ─────────────────────────────────────────────────────
              - 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
                ─────────────────────────────────────────
>  ───────────────────────────────────────── end _get_diopts.GetDio
> pts ─────────────────────────────────────────
                − 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.GetDio
> pts ─────────────────────────────────────────
                − 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_exclus
> ive ─────────────────────────────────────────
                − version 8.2
                − args opts optname errcode optslab
                − local opts `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 "`allbaselevels' `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 "`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
```

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

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

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

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

```
                                 = while `""' != "" {
                                   local ++n
                                   gettoken item`n' opts : opts, bind
                                   }
                                 – if `n' < 2 {
                                 = if 0 < 2 {
                                 – exit
                              ─────────────────────────────────────────────
>  ──────────────────────────────────────────────── end opts_exclus
>  ive ──────────────────────────────────────────────────────────
                              – local fvwrapon `word' `width'
                              = local fvwrapon
                              – if `:length local fvwrapon' {
                              = if 0 {
                                c_local fvwrapon fvwrapon(`fvwrapon')
                                }
                              ─────────────────────────────────────────────
>  ──────────────────────────────────────────────── end _get_diopts.Wra
>  pon ──────────────────────────────────────────────────────────
                          – 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.GetDio
>  pts ──────────────────────────────────────────────────────────
                        – if `"`name2'"' == "" {
                      = if `"options"' == "" {
                        GetDiopts DUPS, `options'
```

```
            }
          - else {
          - GetDiopts DUPS options, `options'
          = GetDiopts DUPS options,
          ─────────────────────────────────────────────────────
> ──────────────────────────────────────────────── begin _get_diopts.GetDio
> pts ─────────────────────────────────────────────────────────────────────
          - 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_exclus
> ive ─────────────────────────────────────────────────────────────────────
          - version 8.2
          - args opts optname errcode optslab
          - local opts `opts'
          = local opts
          - local n 0
          - while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
          - if `n' < 2 {
          = if 0 < 2 {
          - exit
          ─────────────────────────────────────────────────────
> ───────────────────────────────────────────────────────── end opts_exclus
> ive ─────────────────────────────────────────────────────────────────────
          - opts_exclusive "`allbaselevels' `nobaselevels'"
          = opts_exclusive " "
          ─────────────────────────────────────────────────────
> ─────────────────────────────────────────────────────── begin opts_exclus
> ive ─────────────────────────────────────────────────────────────────────
```

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

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

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

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

> ───────────────────────────────────────────── end _get_diopts.Wra
```

```
              – 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 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.GetDio
```
```
            – 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_dio
  > pts ──────────────────────────────────────────────────────────────
          - 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_dio
  > pts ──────────────────────────────────────────────────────────────
          - version 11
          - syntax namelist(max=2) [, *]
          - gettoken name1 namelist : namelist
          - gettoken name2 namelist : namelist
          - GetDiopts diopts options, `options'
          = GetDiopts diopts options,
          ────────────────────────────────────────────────────────────
  > ──────────────────────────────────────────────── begin _get_diopts.GetDio
  > pts ──────────────────────────────────────────────────────────────
            - 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_exclus
  > ive ──────────────────────────────────────────────────────────────
```

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

> ─── end opts_exclus
> ive ───

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

> ─── begin opts_exclus
> ive ───

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

> ─── end opts_exclus
> ive ───

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

> ─── begin opts_exclus
> ive ───

```
          – version 8.2
          – args opts optname errcode optslab
          – local opts `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
```

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

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

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

> ─── begin opts_exclus
> ive ───

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

> ─── end opts_exclus
> ive ───

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

> ─── begin opts_exclus
> ive ───

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

> ─── end opts_exclus
> ive ───

```
          - opts_exclusive "`versus' `compare'"
          = opts_exclusive " "
```

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

```
            – 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_exclus
> ive ──

```
              – version 8.2
              – args opts optname errcode optslab
              – local opts `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
                ─────────────────────────────────────────────
```

```
> pts ───────────────────────────────────────────────────────────────────
            ─ 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.GetDio
> pts ───────────────────────────────────────────────────────────────────
            ─ 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_exclus
> ive ───────────────────────────────────────────────────────────────────
            ─ version 8.2
            ─ args opts optname errcode optslab
            ─ local opts `opts'
            = local opts
            ─ local n 0
            ─ while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            ─ if `n' < 2 {
            = if 0 < 2 {
```

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

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

> ─── begin opts_exclus
> ive ──

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

> ─── end opts_exclus
> ive ──

```
          − opts_exclusive "`fvlabel' `nofvlabel'"
          = opts_exclusive " "
```

> ─── begin opts_exclus
> ive ──

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

> ─── end opts_exclus
> ive ──

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

> ─── begin opts_exclus

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

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

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

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

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

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

          ────────────────────────────────────────────────────
> ──────────────────────────────────────────────────────── end opts_exclus
> ive ──────────────────────────────────────────────────────────
          – 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.Wra
> pon ──

```
              −  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_exclus
> ive ──

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

> ── end opts_exclus
```

```
> ive ─────────────────────────────────────────────────────────────
              – local fvwrapon `word' `width'
              = local fvwrapon
              – if `:length local fvwrapon' {
              = if 0 {
                c_local fvwrapon fvwrapon(`fvwrapon')
                 }
              ─────────────────────────────────────────────────────
> ──────────────────────────────────────────────────── end _get_diopts.Wra
> pon ─────────────────────────────────────────────────────────────
              – 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.GetDio
> pts ─────────────────────────────────────────────────────────────
            – if `"`name2'"' == "" {
            = if `""' == "" {
            – GetDiopts DUPS, `options'
            = GetDiopts DUPS,
              ─────────────────────────────────────────────────────
> ──────────────────────────────────────────────────── begin _get_diopts.GetDio
> pts ─────────────────────────────────────────────────────────────
              – 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_exclus
> ive ───────────────────────────────────────────────────────────────
             – version 8.2
             – args opts optname errcode optslab
             – local opts `opts'
             = local opts
             – local n 0
             – while `"`opts'"' != "" {
             = while `""' != "" {
               local ++n
               gettoken item`n' opts : opts, bind
               }
             – if `n' < 2 {
             = if 0 < 2 {
             – exit
             ─────────────────────────────────────────────────────────
> ───────────────────────────────────────────────────── end opts_exclus
> ive ───────────────────────────────────────────────────────────────
             – opts_exclusive "`allbaselevels' `nobaselevels'"
             = opts_exclusive " "
             ─────────────────────────────────────────────────────────
> ──────────────────────────────────────────────────── begin opts_exclus
> ive ───────────────────────────────────────────────────────────────
             – version 8.2
             – args opts optname errcode optslab
             – local opts `opts'
             = local opts
             – local n 0
             – while `"`opts'"' != "" {
             = while `""' != "" {
               local ++n
               gettoken item`n' opts : opts, bind
               }
             – if `n' < 2 {
             = if 0 < 2 {
```

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

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

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

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

> ——————————————————————————————————————————— end opts_exclus
> ive ———————————————————————————————————————————
            – opts_exclusive "`noci' `nopvalues'"
            = opts_exclusive " "
            _____

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

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

> ——————————————————————————————————————————— begin opts_exclus
> ive ———————————————————————————————————————————
            – version 8.2
            – args opts optname errcode optslab
            – local opts `opts'
            = local opts
            – local n 0
```

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

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

```
          ────────────────────────────────────────────
> ──────────────────────────────────────────── end opts_exclus
> ive ────────────────────────────────────────
```

```
          - 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.Wra
>  pon ───────────────────────────────────────────────────────────────
             -  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_exclus
> ive ──

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

> ── end opts_exclus
> ive ──

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

> ─── end _get_diopts.Wra
> pon ───

```
               − 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
        ─────────────────────────────────────────────
> ─────────────────────────────────────── end _get_diopts.GetDio
> pts ────────────────────────────────────────────────
        – }
        – 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_dio
> pts ────────────────────────────────────────────────
        – local cformat `"`s(cformat)'"'
        = local cformat `""'
        – local sformat `"`s(sformat)'"'
        = local sformat `""'
        – local pformat `"`s(pformat)'"'
        = local pformat `""'
```

```
            ─ _get_eformopts , eformopts(`options') allowed(__all__) soptions
            = _get_eformopts , eformopts() allowed(__all__) soptions
                   ─────────────────────────────────────────────────────
> ──────────────────────────────────────────────────── begin _get_eformo
> pts ─────────────────────────────────────────────────────────────────
            ─ 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 T
> Ratio * ]
            ─ local opts `"`options'"'
            = local opts `""'
            ─ local 0 , `eform1' `eform' `nohr' `hr' `noshr' `shr' `or' `irr' `r
> rr' `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 TRa
> tio ]
- 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_eformo
> pts ──────────────────────────────────────────────────────
      - 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_diparmo
> pts ───
```
        – 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 SYN
> TAXonly * ]
        – local goptions `options'
        = local goptions level(95)
        – SpliceGlobals junk , `goptions'
        = SpliceGlobals junk , level(95)
```

> ── begin _get_diparmopts.SpliceGlob
> als ───
```
          – 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.SpliceGlob
> als ───
```
        – 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' `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 `""' == "" {
- 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
```

```
    – 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 `""' != "" {
      local i 1
      local diparm `"`e(diparm1)'"'
      }
    – 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 11, missing: mata: _coef_table()
```
───

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

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

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

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

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

> ──────────────────────────────────────────────────────── begin opts_exclus
> ive ──────────────────────────────────────────────────────────────────
            – version 8.2
            – args opts optname errcode optslab
```

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

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

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

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

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

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

```
            ─ opts_exclusive "`versus' `compare'"
            = opts_exclusive " "
```

> ── begin opts_exclus
> ive ──

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

> ── end opts_exclus
> ive ──

```
            ─ opts_exclusive "`abbrev' `noabbrev'"
            = opts_exclusive " "
```

> ── begin opts_exclus
> ive ──

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

> ── end opts_exclus
> ive ──

```
            ─ 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.Wra
> pon ─────────────────────────────────────────────────────────────────
        - 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_exclus
> ive ─────────────────────────────────────────────────────────────────
          - version 8.2
```

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```
            – args opts optname errcode optslab
            – local opts `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
```

```
                     ───────────────────────────────────────────────
 > ───────────────────────────────────────────── end _get_diopts.GetDio
 > pts ───────────────────────────────────────────────────────────
          – c_local `name1' `"`diopts'"'
          = c_local __00000D `""'
          – 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.GetDio
 > pts ───────────────────────────────────────────────────────────
          – 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_exclus
 > ive ───────────────────────────────────────────────────────────
          – version 8.2
          – args opts optname errcode optslab
          – local opts `opts'
          = local opts
          – local n 0
          – while `"`opts'"' != "" {
          = while `""' != "" {
            local ++n
            gettoken item`n' opts : opts, bind
            }
```

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

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

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

```
            – args opts optname errcode optslab
            – local opts `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
            ─────────────────────────────────────────────
```

```
            – 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
          _____
```

> ── end opts_exclus
> ive ───

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

> ── begin opts_exclus
> ive ───

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

> ── end opts_exclus
> ive ───

```
          – opts_exclusive "`versus' `compare'"
          = opts_exclusive " "
          _____
```

> ── begin opts_exclus
> ive ───

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

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

> ── end opts_exclus
> ive ──

```
        - opts_exclusive "`abbrev' `noabbrev'"
        = opts_exclusive " "
```
───────────────────────────────────────

> ── begin opts_exclus
> ive ──

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

> ── end opts_exclus
> ive ──

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

```
                      ───────────────────────────────────────────────────────
> ─────────────────────────────────────────────────────────── end opts_exclus
> ive ─────────────────────────────────────────────────────────────────────
                 – local fvwrapon `word' `width'
                 = local fvwrapon
                 – if `:length local fvwrapon' {
                 = if 0 {
                   c_local fvwrapon fvwrapon(`fvwrapon')
                    }
                      ───────────────────────────────────────────────────────
> ─────────────────────────────────────────────────────── end _get_diopts.Wra
> pon ─────────────────────────────────────────────────────────────────────
                 – 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.GetDio
> pts ─────────────────────────────────────────────────────────────────────
                 – if `"`name2'"' == "" {
                 = if `""' == "" {
                 – GetDiopts DUPS, `options'
                 = GetDiopts DUPS,
                      ───────────────────────────────────────────────────────
> ──────────────────────────────────────────────────────── begin _get_diopts.GetDio
> pts ─────────────────────────────────────────────────────────────────────
                 – 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_exclus
> ive ───────────────────────────────────────────────
            - version 8.2
            - args opts optname errcode optslab
            - local opts `opts'
            = local opts
            - local n 0
            - while `"`opts'"' != "" {
            = while `""' != "" {
              local ++n
              gettoken item`n' opts : opts, bind
              }
            - if `n' < 2 {
            = if 0 < 2 {
            - exit
            ────────────────────────────────────────────────────
> ───────────────────────────────────────────────────── end opts_exclus
> ive ───────────────────────────────────────────────
            - opts_exclusive "`allbaselevels' `nobaselevels'"
            = opts_exclusive " "
            ────────────────────────────────────────────────────
> ─────────────────────────────────────────────────── begin opts_exclus
> ive ───────────────────────────────────────────────
            - version 8.2
            - args opts optname errcode optslab
            - local opts `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_exclus
> ive ─────────────────────────────────────────────────
              − opts_exclusive "`fvlabel' `nofvlabel'"
              = opts_exclusive " "
              ────────────────────────────────────────────

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

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

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

> ──────────────────────────────────────────────── end opts_exclus
> ive ─────────────────────────────────────────────────
              − opts_exclusive "`lstretch' `nolstretch'"
              = opts_exclusive " "
```

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

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

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

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

> ──────────────────────────────────────────────────────────── begin opts_exclus
> ive ─────────────────────────────────────────────────────────────────────────
              – version 8.2
```

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

> ─── end opts_exclus
> ive ──

```
            — opts_exclusive "`noci' `nopvalues'"
            = opts_exclusive " "
            ─────────────────────────────────────────────
```

> ─── begin opts_exclus
> ive ──

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

> ─── end opts_exclus
> ive ──

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

> ─── begin opts_exclus
> ive ──

```
            — version 8.2
            — args opts optname errcode optslab
            — local opts `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_exclus
> ive ─────────────────────────────────────────────────────────────
               − 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.Wra

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

> ──────────────────────────────────────────────────────────── end opts_exclus
> ive ────────────────────────────────────────────────────────────────────────
                − local fvwrapon `word' `width'
                = local fvwrapon
                − if `:length local fvwrapon' {
                = if 0 {
                  c_local fvwrapon fvwrapon(`fvwrapon')
                  }
                  ─────────────────────────────────────────────────────────────

> ─────────────────────────────────────────────────────────── end _get_diopts.Wra
> pon ────────────────────────────────────────────────────────────────────────
              − 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
            ─────────────────────────────────────────────
> ─────────────────────────────────────────────── end _get_diopts.GetDio
> pts ─────────────────────────────────────────────────────────
            – }
            – 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_dio
> pts ─────────────────────────────────────────────────────────
───────────────────────────────────────┬
> ──────
                                        │                Robust
                   piq_timing_max │ Coefficient  std. err.      z    P>|z|     [95% conf. int
```

```
> erval]
─────────────┼──────────────────────────────────────────────────────────
> ─────
       rule_g │    .2066539    .1753684     1.18   0.239    -.1370617      .5
> 503696
     rule_itr │     .048412    .1656059     0.29   0.770    -.2761696      .3
> 729936
    estimated │    1.020239     .154366     6.61   0.000     .7176875     1.
> 322791
               │
 stky_wg#pr_ndx │
          0 1 │    .0504508    .2898305     0.17   0.862    -.5176066      .6
> 185082
          1 0 │    .1143108        .222     0.51   0.607    -.3208013      .5
> 494228
          1 1 │   -.1951246    .2415442    -0.81   0.419    -.6685425      .2
> 782933
               │
stky_wg#not_pr_ndx │
          0 1 │           0  (omitted)
          1 0 │           0  (omitted)
          1 1 │           0  (omitted)
               │
        _cons │    .1550338    .1472045     1.05   0.292    -.1334817      .4
> 435492
─────────────┼──────────────────────────────────────────────────────────
> ─────
        - if "`markdown'" != "" {
      = if "" != "" {
        set linesize `lsize'
         }
        - if "`eqselect'" == "" & "`eformnote'" != "noeformnote" {
      = if "" == "" & "" != "noeformnote" {
        - if `"`eformdi'"'!="" & ("`e(cmd)'"!="gnbreg" | "`e(prefix)'"=="svy")
> {
      = if `""'!="" & ("glm"!="gnbreg" | ""=="svy") {
        local k_eform `r(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_cons_ti'"'
>  !="" & "`e(consonly)'"!="1") {
        = if (`""'!="" & "0"=="0" & `""'!="" & "0"!="1") {
           if ("`e(cmd)'"=="asclogit" | "`e(cmd)'"=="cmclogit" | "`e(cmd)'"=="c
>  mmixlogit" | "`e(cmd)'"=="cmxtmixlogit" ) {
           local asvar = `"`e(ranvars)'`e(fixvars)'`e(indvars)'"' != ""
           if `"`e(casevars)'"' != "" & `asvar' {
           local note1 "Exponentiated coefficients represent odds ratios 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_cons_note'`
> extranote'" _c
          if ("`e(cmd)'"=="mlogit" | "`e(cmd)'"=="asclogit" | "`e(cmd)'"=="cmc
> logit" | "`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_ta
> ble ───────────────────────────────────────────────────────────────────────
      - if "`e(msg)'" != "" {
      = if "" != "" {
        noi di as txt "(Standard errors scaled using `e(msg)'.)"
        }
      - if "`e(msg2)'" != "" {
      = if "" != "" {
        noi di as txt "`e(msg2)'."
        }
      - if "`e(adm_warn)'" != "" {
      = if "" != "" {
        noi di "{help j_glmadmiss##|_new:Warning: Parameter estimates produce
> }" _c
        noi di "{help j_glmadmiss##|_new:inadmissible mean estimates in one or
>  }"
        noi di "{help j_glmadmiss##|_new:          more observations.}"
        }
      - if "`e(Nf)'" != "" {
      = if "" != "" {
        if `e(Nf)' > 1 { local s "s" }
        noi di as txt "(" as res `e(Nf)' as txt " model`s' failed to converge)
> "
        }
      - if `e(nbml)' {
      = if 0 {
        di as txt "{p 0 6 0 79}Note: Negative binomial "
        di as txt "parameter estimated via ML and treated "
        di as txt "as fixed once estimated."
        }
```

```
          - _prefix_footnote
         ─────────────────────────────────────────────────────────────
> ──────────────────────────────────────────────────── begin _prefix_footn
> ote ─────────────────────────────────────────────────
          - version 9
          - local is_st = "`e(cmd2)'" == "streg"
          = local is_st = "" == "streg"
          - if `is_st' {
          = if 0 {
            local tropt TR
            }
          - syntax [, deff `tropt' linesize(int 79) * ]
          = syntax [, deff  linesize(int 79) * ]
          - if `is_st' & `"`e(noeform)'"' != "" & `"`tr'"' != "" {
          = if 0 & `""' != "" & `""' != "" {
            di as smcl as txt "{p 0 6 2}" "Note: Option {res:tr} ignored; " "not
>  appropriate with option {res:strata()} or {res:ancillary()}." "{p_end}"
            }
          - local footnote `"`e(footnote)'"'
          = local footnote `""'
          - gettoken cmd args : footnote, parse(" ,")
          - capture which `cmd'
          = capture which
          - if !c(rc) {
            if `:length local options' {
            `footnote' , `options'
            }
            else {
            `footnote'
            }
            }
          - capture
          - if "`e(prefix)'" == "svy" {
          = if "" == "svy" {
            _svy_fpc_note "`deff'" `linesize'
            _svy_subpop_note, linesize(`linesize')
            _svy_singleton_note, linesize(`linesize')
            }
          - if inlist(`"`e(cmd)'"',"logit","logistic","probit") {
          = if inlist(`"glm"',"logit","logistic","probit") {
            CompleteLogit
            }
          - if inlist(`"`e(cmd)'"',"mlogit","ologit","oprobit") {
          = if inlist(`"glm"',"mlogit","ologit","oprobit") {
            CompleteOlogit
            }
```

```
      - if "`e(missing)'" == "missing" & inlist("`e(vce)'", "brr", "bootstra
> p", "jackknife") {
      = if "" == "missing" & inlist("robust", "brr", "bootstrap", "jackknife
> ") {
        if "`e(vce)'" == "brr" {
        local vcetype BRR
        }
        else local vcetype `e(vce)'
        if e(N_misreps) == 1 {
        local reps replicate
        }
        else {
        local reps replicates
        }
        if "`e(N_misreps)'" != "" {
        local the `e(N_misreps)'
        }
        else local the "some of the"
        di as txt "{p 0 6 0 `linesize'}" "Note: One or more parameters could
>  not be estimated in " "`the' `vcetype' `reps'; " "standard-error estimates
> include only complete replications.{p_end}"
        }
      - if inlist(`"`e(opt)'"', "ml", "moptimize") | !missing(e(converged))
> {
      = if inlist(`"moptimize"', "ml", "moptimize") | !missing(e(converged))
>  {
      - ml_footnote
        ─────────────────────────────────────────────────────────
> ───────────────────────────────────────────── begin ml_footn
> ote ─────────────────────────────────────────
        - version 9
        - syntax
        - _check_e_rc
        ─────────────────────────────────────────────────────────
> ───────────────────────────────────────────── begin _check_e
> _rc ─────────────────────────────────────────
          - version 11
          - syntax [, ignorerc]
          - if e(rc) == 504 & inlist("`e(opt)'", "ml", "moptimize") {
          = if e(rc) == 504 & inlist("moptimize", "ml", "moptimize") {
            di as err "{p 0 0 2}variance matrix missing because `e(user)' fa
> iled" "to compute scores or computed scores with missing values{p_end}"
            exit 504
            }
          - if (`"`ignorerc'"'=="" & !missing(e(rc)) & e(rc) != 0) error e(r
> c)
```

```
                = if (`""'=="" & !missing(e(rc)) & e(rc) != 0) error e(rc)
                ────────────────────────────────────────────────────────────
> ──────────────────────────────────────────────────────── end _check_e
> _rc ────────────────────────────────────────────────────────────────
            - if `"`e(converged)'"' == "0" {
            = if `"1"' == "0" {
            di as txt "Warning: Convergence not achieved."
            }
                ────────────────────────────────────────────────────────────
> ──────────────────────────────────────────────────────── end ml_footn
> ote ────────────────────────────────────────────────────────────────
        - }
        - _check_e_rc
            ────────────────────────────────────────────────────────────
> ──────────────────────────────────────────────────────── begin _check_e
> _rc ────────────────────────────────────────────────────────────────
            - version 11
            - syntax [, ignorerc]
            - if e(rc) == 504 & inlist("`e(opt)'", "ml", "moptimize") {
            = if e(rc) == 504 & inlist("moptimize", "ml", "moptimize") {
            di as err "{p 0 0 2}variance matrix missing because `e(user)' fail
> ed" "to compute scores or computed scores with missing values{p_end}"
            exit 504
            }
            - if (`"`ignorerc'"'=="" & !missing(e(rc)) & e(rc) != 0) error e(rc)
            = if (`""'=="" & !missing(e(rc)) & e(rc) != 0) error e(rc)
                ────────────────────────────────────────────────────────────
> ──────────────────────────────────────────────────────── end _check_e
> _rc ────────────────────────────────────────────────────────────────
            ────────────────────────────────────────────────────────────
> ──────────────────────────────────────────────────────── end _prefix_footn
> ote ────────────────────────────────────────────────────────────────
            ────────────────────────────────────────────────────────────
> ──────────────────────────────────────────────────────── end glm.Disp
> lay ────────────────────────────────────────────────────────────────
    - }
    - error `e(rc)'
    = error 0
            ────────────────────────────────────────────────────────────
> ──────────────────────────────────────────────────────── end glm.gl
> m_7 ────────────────────────────────────────────────────────────────
  - if _rc {
    if "$SGLM_running" ~= "" & "$SGLM_nonstan" ~= "" {
    di as err "data not suitable for nonstandard family-link combination"
    mac drop SGLM_*
    exit 459
```

```
        }
        else {
        mac drop SGLM_*
        exit _rc
        }
        }
    – version 10: ereturn local cmdline `"glm `0'"'
    = version 10: ereturn local cmdline `"glm piq_timing_max rule_g rule_itr est
> imated   i.stky_wg#i.pr_ndx i.stky_wg#i.not_pr_ndx if piq_timing_max < 99 , f
> amily(nbinomial) link(log) vce(robust) nolog"'
    – if "$SGLM_running" == "" & "$SGLM_nonstan" == "" {
    = if "" == "" & "" == "" {
    – mac drop SGLM_*
    – }
```

```
> ───────────────────────────────────────────────────────────── end
> glm ──────────────────────────────────────────────
– log close
       name:  <unnamed>
        log:  /Users/connorbrennan/Library/CloudStorage/OneDrive–TheUniversityo
> fChicago/mmb/output/stepwise_regressions/piq_timing_max_nomrig_all.smcl
   log type:  smcl
  closed on:  12 Sep 2025, 19:25:34
───────────────────────────────────────────────────────────────
```