# Reverse Engineering the FRB/US Model in R

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# Contents

# Chapter 1

# Introduction

I am starting to reverse engineer[1] the Federal Reserve's FRB/US model packages to create my own version in the R Language. I quote their about page:

> The FRB/US model is a large-scale estimated general equilibrium model of the U.S. economy that has been in use at the Federal Reserve Board since 1996. The model is designed for detailed analysis of monetary and fiscal policies. One distinctive feature compared to dynamic stochastic general equilibrium (DSGE) models is the ability to switch between alternative assumptions about expectations formation of economic agents. Another is the models level of detail: FRB/US contains all major components of the product and income sides of the U.S. national accounts. Since its original development, the model has continuously undergone changes to cope with the evolving structure of the economy, including conceptual revisions to sectoral definitions of the national accounts.
>
> The article "The FRB/US Model: A Tool for Macroeconomic Policy Analysis" provides a brief overview of the structure of FRB/US, and presents some key properties of the model and some applications, code for which is included with the main FRB/US model package. The article "November 2014 Update of the FRB/US Model" presents some model properties of the most recently released version of FRB/US.

This is an evolving document, where I will initially create the Fed's model files byte for byte and reverse engineer the structure of the model. Then I

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[1] The pdf was created with noweb, the literate programming tool: "noweb frbus.nw — pdflatex -synctex=1 -interaction=nonstopmode frbus.tex"

plan to morph it into the R software environment for statistical computing and graphics, to use to create my own models. I'm using the literate programming method of Donald Knuth to combine the documentation with the actual code.

# Chapter 2

# Model Equations and Coefficients

Compare my version of the "Model Equations and Coefficients" to the documentation.

## 2.1  Household Expenditures

### 2.1.1  a.1 ECO: Consumer expenditures on non-durable goods and non-housing services, cw 2009$

17a  ⟨*variable ECO* 17a⟩≡                                                     (221)

```
ECO        = Consumer expenditures on non-durable goods and non-housing services, cw 2009$
```

Defines:
    ECO, used in chunks 183a and 233.

17b  ⟨*stdverEqs eco* 17b⟩≡                                                    (254)

```
eco: d( log(eco), 0, 1) - eco_aerr   _
                  = (y_eco(1) * log(qeco(-1)/eco(-1)) _
                  + y_eco(2) * d(log(eco(-1)), 0, 1) _
                  + y_eco(3) * zeco) * (1-y_eco(4)) _
                  + y_eco(4) * (d(log(yhl+yht), 0, 1))
```

Defines:
    eco, used in chunks 21d, 24c, and 111c.
Uses qeco 20b, y_eco 17c, yhl 81d, yht 84f, and zeco 183b.

17c  ⟨*stdver_Coeffs y_eco* 17c⟩≡                                              (263)

```
y_eco    4        0.1088704831212408,0.4609714707829828,1,0.252176379778204
```

Defines:
    y_eco, used in chunk 17b.

### 2.1.2   a.2 ECD: Consumer expenditures on durable goods, cw 2009$

18a    ⟨*variable ECD* 18a⟩≡                                              (221)
```
ECD       = Consumer expenditures on durable goods, cw 2009$
```
Defines:
  ECD, used in chunks 184b, 185b, and 233.

18b    ⟨*stdverEqs ecd* 18b⟩≡                                            (254)
```
ecd: d( log(ecd), 0, 1) - ecd_aerr  _
                = y_ecd(1) * log(qecd(-1)/ecd(-1)) _
                + y_ecd(2) * d( log(ecd(-1)), 0, 1) _
                + y_ecd(3) * zecd _
                + y_ecd(4) * zgapc2 / 400
```

Defines:
  ecd, used in chunks 21d, 22e, 80d, 111c, and 155a.
Uses qecd 20e, y_ecd 18c, zecd 184c, and zgapc2 185c.

18c    ⟨*stdver_Coeffs y_ecd* 18c⟩≡                                      (263)
```
y_ecd   4        0.1553557918476032,-0.05860156240430123,1,9.039065475739223
```
Defines:
  y_ecd, used in chunk 18b.

### 2.1.3   a.3 EH: Residential investment expenditures, cw 2009$

18d    ⟨*variable EH* 18d⟩≡                                              (221)
```
EH        = Residential investment expenditures, cw 2009$
```
Defines:
  EH, used in chunks 186a and 233.

18e    ⟨*stdverEqs eh* 18e⟩≡                                             (254)
```
eh: d( log(eh), 0, 1 ) - eh_aerr _
                = y_eh(1) * log(qeh(-1)/eh(-1)) _
                + y_eh(2) * d( log(eh(-1)), 0, 1 ) _
                + y_eh(3) * d( log(eh(-2)), 0, 1 ) _
                + y_eh(4) * zeh _
                + y_eh(5) * d( rme(-1), 0, 1 ) _
                + y_eh(6) * d83 * d( rme(-1), 0, 1 )
```

Defines:
  eh, used in chunks 22c, 23a, 48b, and 51a.
Uses d83 206b, qeh 21a, rme 152a, y_eh 18f, and zeh 186b.

18f    ⟨*stdver_Coeffs y_eh* 18f⟩≡                                       (263)
```
y_eh    6        0.01184830003855771,0.3575993755366778,0.2161402157869259,1,-0.051357
```
Defines:
  y_eh, used in chunk 18e.

### 2.1.4   a.4 ECH: Consumer expenditures on housing services, cw 2009\$

19a       ⟨*variable ECH* 19a⟩≡                                                    (221)
          ECH       = Consumer expenditures on housing services, cw 2009\$
          Defines:
            ECH, used in chunk 233.

19b       ⟨*stdverEqs ech* 19b⟩≡                                                  (254)
          ech: d( (ech)/kh(-1), 0, 1 ) - ech_aerr _
                           = y_ech(1)  _
                           + y_ech(2) * ech(-1)/kh(-2) _
                           + y_ech(3) * d( ech(-1)/kh(-2), 0, 1 ) _
                           + y_ech(4) * rrmet/100


          Defines:
            ech, used in chunks 21d, 24c, and 111c.
          Uses kh 23a, rrmet 157f, and y_ech 19c.

19c       ⟨*stdver_Coeffs y_ech* 19c⟩≡                                            (263)
          y_ech   4        0.002890569762594884,-0.02415873224871467,0.5006794105950545,0.0017367936693711
          Defines:
            y_ech, used in chunk 19b.

### 2.1.5   a.5 QEC: Desired level of consumption (FRBUS definition)

19d       ⟨*variable QEC* 19d⟩≡                                                   (221)
          QEC       = Desired level of consumption (FRBUS definition)
          Defines:
            QEC, used in chunks 199–201 and 233.

19e       ⟨*stdverEqs qec* 19e⟩≡                                                  (254)
          qec: qec - qec_aerr = y_qec(1) * zyh  _
                         + y_qec(2) * (dcon*(zyh-zyht)) _
                         + y_qec(3) * zyht _
                         + y_qec(4) * zyhp _
                         + y_qec(5) * (wps+wpo)


          Defines:
            qec, used in chunks 20, 21a, and 183d.
          Uses dcon 206e, wpo 156a, wps 153e, y_qec 19f, zyh 200a 200c, zyhp 201a 201c,
            and zyht 202a 202c.

19f       ⟨*stdver_Coeffs y_qec* 19f⟩≡                                            (263)
          y_qec   5        0.7592609842874721,0.002578773939057793,0.2407390157125279,-0.2514158240890368,
          Defines:
            y_qec, used in chunk 19e.

### 2.1.6  a.6 QECO: Desired level of consumption of non-durable goods and nonhousing services

20a    ⟨*variable QECO* 20a⟩≡                                                    (221)
```
QECO    = Desired level of consumption of nondurable goods and nonhousing services
```
Defines:
    QECO, used in chunk 233.

20b    ⟨*stdverEqs qeco* 20b⟩≡                                                   (254)
```
qeco: log(qeco) - qeco_aerr = log(qec) - log(pcor) + y_qeco(1)
```

Defines:
    qeco, used in chunks 17b and 183b.
Uses pcor 111c, qec 19e, and y_qeco 20c.

20c    ⟨*stdver_Coeffs y_qeco* 20c⟩≡                                             (263)
```
y_qeco  1       -0.3372292498223053
```
Defines:
    y_qeco, used in chunk 20b.

### 2.1.7  a.7 QECD: Target level of consumption of durable goods, trending component

20d    ⟨*variable QECD* 20d⟩≡                                                    (221)
```
QECD    = Target level of consumption of durable goods, trending component
```
Defines:
    QECD, used in chunk 233.

20e    ⟨*stdverEqs qecd* 20e⟩≡                                                   (254)
```
qecd: qecd - qecd_aerr = qec _
                * (jrcd/4 + hggdpt/400 + y_qecd(1)*hgpcdr/400) _
                * exp(y_qecd(2) + y_qecd(3)*log(pcdr*rccd))
```

Defines:
    qecd, used in chunks 18b and 184.
Uses hggdpt 60d, hgpcdr 209f, jrcd 209h, pcdr 112f, qec 19e, rccd 23c, and y_qecd 20f.

20f    ⟨*stdver_Coeffs y_qecd* 20f⟩≡                                             (263)
```
y_qecd  3       -0.6165972226120303,2.557266037164673,-0.6165972226120303
```
Defines:
    y_qecd, used in chunk 20e.

### 2.1.8  a.8 QEH: Target level of residential investment

20g    ⟨*variable QEH* 20g⟩≡                                                     (221)
```
QEH     = Target level of residential investment
```
Defines:
    QEH, used in chunk 233.

21a        ⟨*stdverEqs qeh* 21a⟩≡                                                          (254)
```
qeh: qeh - qeh_aerr = qec _
               * (jrh/4 + hggdpt/400) _
               * exp(y_qeh(1) - log(phr*pxp/pcnia) + y_qeh(2)*log(rcch))
```

Defines:
    qeh, used in chunks 18e and 186.
Uses hggdpt 60d, jrh 210a, pcnia 89b, phr 95d, pxp 93b, qec 19e, rcch 23e, and y_qeh 21b.

21b        ⟨*stdver_Coeffs y_qeh* 21b⟩≡                                                    (263)
```
y_qeh    2         1.935026993649364,-0.1570195518635583
```
Defines:
    y_qeh, used in chunk 21a.

### 2.1.9    a.9 ECNIA: Personal consumption expenditures, cw 2009$ (NIPA definition)

21c        ⟨*variable ECNIA* 21c⟩≡                                                         (221)
```
ECNIA    = Personal consumption expenditures, cw 2009$ (NIPA definition)
```
Defines:
    ECNIA, used in chunk 233.

21d        ⟨*stdverEqs ecnia* 21d⟩≡                                                        (254)
```
ecnia: log(ecnia) - ecnia_aerr = log(ecnia(-1)) + _
        .5 * .01 * (pcor*pcnia*eco/ecnian  _
           + pcor(-1)*pcnia(-1)*eco(-1)/ecnian(-1)) _
            * d(log(eco), 0, 1) _
      + .5 * .01 * (pcdr*pcnia*ecd/ecnian  _
           + pcdr(-1)*pcnia(-1)*ecd(-1)/ecnian(-1))  _
            * d(log(ecd), 0, 1) _
      + .5 * .01 * (pchr*pcnia*ech/ecnian  _
           + pchr(-1)*pcnia(-1)*ech(-1)/ecnian(-1))  _
            * d(log(ech), 0, 1)
```

Defines:
    ecnia, used in chunks 22a, 48b, and 51a.
Uses ecd 18b, ech 19b, ecnian 22a, eco 17b, pcdr 112f, pchr 112a, pcnia 89b, and pcor 111c.

### 2.1.10    a.10 ECNIAN: Personal consumption expenditures, current $ (NIPA definition)

21e        ⟨*variable ECNIAN* 21e⟩≡                                                        (221)
```
ECNIAN   = Personal consumption expenditures, current $ (NIPA definition)
```
Defines:
    ECNIAN, used in chunk 233.

22a     $\langle$*stdverEqs ecnian* 22a$\rangle\equiv$                                                       (254)
```
ecnian: ecnian - ecnian_aerr = .01*pcnia*ecnia
```

Defines:
   ecnian, used in chunks 21d, 48b, 51a, 80d, 84d, 93b, 98a, 111c, 131c, 137b, and 155a.
Uses `ecnia` 21d and `pcnia` 89b.

### 2.1.11   a.11 EHN: Residential investment expenditures

22b     $\langle$*variable EHN* 22b$\rangle\equiv$                                                         (221)
```
EHN      = Residential investment expenditures
```
Defines:
   EHN, used in chunk 233.

22c     $\langle$*stdverEqs ehn* 22c$\rangle\equiv$                                                         (254)
```
ehn: ehn - ehn_aerr = .01 * phr * pxp * eh
```

Defines:
   ehn, used in chunks 38c, 48b, 51a, and 98a.
Uses `eh` 18e, `phr` 95d, and `pxp` 93b.

### 2.1.12   a.12 KCD: Stock of consumer durables, cw 2009$

22d     $\langle$*variable KCD* 22d$\rangle\equiv$                                                         (221)
```
KCD      = Stock of consumer durables, cw 2009$
```
Defines:
   KCD, used in chunk 233.

22e     $\langle$*stdverEqs kcd* 22e$\rangle\equiv$                                                         (254)
```
kcd: kcd - kcd_aerr = .25*ecd + (1-jrcd/4)*kcd(-1)
```

Defines:
   kcd, used in chunk 24.
Uses `ecd` 18b and `jrcd` 209h.

### 2.1.13   a.13 KH: Stock of residential structures, cw 2009$

22f     $\langle$*variable KH* 22f$\rangle\equiv$                                                          (221)
```
KH       = Stock of residential structures, cw 2009$
```
Defines:
   KH, used in chunk 233.

23a      ⟨*stdverEqs kh* 23a⟩≡                                                   (254)

```
kh: kh - kh_aerr = .25*eh + (1-jrh/4)*kh(-1)
```

Defines:
    kh, used in chunks 19b, 72, 75d, and 155a.
Uses eh 18e and jrh 210a.

### 2.1.14    a.14 RCCD: Cost of capital for consumer durables

23b      ⟨*variable RCCD* 23b⟩≡                                                   (221)

```
RCCD      = Cost of capital for consumer durables
```
Defines:
    RCCD, used in chunks 175e and 233.

23c      ⟨*stdverEqs rccd* 23c⟩≡                                                  (254)

```
rccd: rccd - rccd_aerr = (@recode((100*jrcd + rcar - zpi5)>( .01),100*jrcd + rcar - zpi5, .01))
```

Defines:
    rccd, used in chunk 20e.
Uses jrcd 209h, rcar 151d, and zpi5 176a 176c.

### 2.1.15    a.15 RCCH: Cost of capital for residential investment

23d      ⟨*variable RCCH* 23d⟩≡                                                  (221)

```
RCCH      = Cost of capital for residential investment
```
Defines:
    RCCH, used in chunks 177e and 233.

23e      ⟨*stdverEqs rcch* 23e⟩≡                                                 (254)

```
rcch: rcch - rcch_aerr = (@recode((100*jrh + (1-trfpm/100)*(rme+100*trspp) - zpi10)>( .1),100*j
```

Defines:
    rcch, used in chunk 21a.
Uses jrh 210a, rme 152a, trfpm 213g, trspp 214c, and zpi10 178a.

### 2.1.16    a.16 JKCD: Consumption of fixed capital, consumer durables

23f      ⟨*variable JKCD* 23f⟩≡                                                   (221)

```
JKCD      = Consumption of fixed capital, consumer durables
```
Defines:
    JKCD, used in chunk 233.

24a    ⟨*stdverEqs jkcd* 24a⟩≡                                              (254)
```
jkcd: jkcd - jkcd_aerr = jrcd * kcd(-1)
```

Defines:
    jkcd, used in chunks 24c and 155a.
Uses jrcd 209h and kcd 22e.

### 2.1.17    a.17 EC: Consumption, cw 2009$ (FRB/US definition)

24b    ⟨*variable EC* 24b⟩≡                                               (221)
```
EC        = Consumption, cw 2009$ (FRB/US definition)
```
Defines:
    EC, used in chunk 233.

24c    ⟨*stdverEqs ec* 24c⟩≡                                              (254)
```
ec: log(ec) - ec_aerr = log(ec(-1)) +  _
       .5 * (pcor*pcnia*eco/(ec*pcnia)   _
          + pcor(-1)*pcnia(-1)*eco(-1)/(ec(-1)*pcnia(-1)))  _
          * d(log(eco), 0, 1) _
     + .5 * (pchr*pcnia*ech/(ec*pcnia)   _
          + pchr(-1)*pcnia(-1)*ech(-1)/(ec(-1)*pcnia(-1)))  _
          * d(log(ech), 0, 1) _
     + .5 * ((pcdr*pcnia*yhpcd+pcdr*pcnia*jkcd)/(ec*pcnia)  _
          + (pcdr(-1)*pcnia(-1)*yhpcd(-1)+pcdr(-1)*pcnia(-1)*jkcd(-1))/(ec(-1)*pcnia(-
          * d(log(yhpcd+jkcd), 0, 1)
```

Defines:
    ec, never used.
Uses ech 19b, eco 17b, jkcd 24a, pcdr 112f, pchr 112a, pcnia 89b, pcor 111c, and yhpcd 24e.

### 2.1.18    a.18 YHPCD: Imputed income of the stock of consumer durables, 2009$

24d    ⟨*variable YHPCD* 24d⟩≡                                            (221)
```
YHPCD     = Imputed income of the stock of consumer durables, 2009$
```
Defines:
    YHPCD, used in chunk 233.

24e    ⟨*stdverEqs yhpcd* 24e⟩≡                                           (254)
```
yhpcd: log(yhpcd) - yhpcd_aerr = log(y_yhpcd(1)) + log(kcd(-1))
```

Defines:
    yhpcd, used in chunks 24c and 83a.
Uses kcd 22e and y_yhpcd 25a.

25a      ⟨*stdver_Coeffs y_yhpcd* 25a⟩≡                                             (263)

```
y_yhpcd 1          0.053750000000000000E+00
```
Defines:
   y_yhpcd, used in chunk 24e.

## 2.2    Business Expenditures

### 2.2.1    b.1 EPD: Investment in equipment, cw 2009$

25b      ⟨*variable EPD* 25b⟩≡                                              (221)

```
EPD      = Investment in equipment, cw 2009$
```
Defines:
   EPD, used in chunks 95f, 190d, 194e, and 233.

25c      ⟨*stdverEqs epd* 25c⟩≡                                               (254)

```
epd: d( log(epd), 0, 1 ) - epd_aerr = _
 ( y_epd(1)*(log(qepd(-2)/epd(-2)))  _
 + ( y_epd(2) *  d( log(epd(-1)), 0, 1 ) +  y_epd(3) *  d( log(epd(-2)), 0, 1 ))  _
 + zxbd(-1)  _
 + zvpd(-1) )*(1-y_epd(4))  _
 + y_epd(4) * (d( log(xbo(-1)), 0, 1 ) + hgvpd(-1))
```

Defines:
   epd, used in chunks 29g, 35d, 48b, 51a, and 132c.
Uses hgvpd 34d, qepd 28a, xbo 50e, y_epd 25d, zvpd 191a 191c, and zxbd 195a 195c.

25d      ⟨*stdver_Coeffs y_epd* 25d⟩≡                                         (263)

```
y_epd   4        0.1639648722427122,0.4446158979500308,0.3699597791648127,0.5
```
Defines:
   y_epd, used in chunk 25c.

### 2.2.2    b.2 EPI: Investment in intellectual property, cw 2009$

25e      ⟨*variable EPI* 25e⟩≡                                              (221)

```
EPI      = Investment in intellectual property, cw 2009$
```
Defines:
   EPI, used in chunks 96b, 192e, 195e, and 233.

26a        ⟨*stdverEqs epi* 26a⟩≡                                                    (254)
```
epi: d( log(epi), 0, 1 ) - epi_aerr = _
( y_epi(1)*(log(qepi(-2)/epi(-2)))  _
+ ( y_epi(2) * d( log(epi(-1)), 0, 1 ) + y_epi(3) * d( log(epi(-2)), 0, 1 ))  _
+ zxbi(-1)  _
+ zvpi(-1) )*(1-y_epi(4))  _
+ y_epi(4) * d( log(xbo(-1)), 0, 1 )
```

Defines:
    epi, used in chunks 30b, 35f, 48b, and 51a.
Uses qepi 29a, xbo 50e, y_epi 26b, zvpi 193a 193c, and zxbi 196a 196c.

26b        ⟨*stdver_Coeffs y_epi* 26b⟩≡                                              (263)
```
y_epi    4        0.01211724517486588,0.6819035622357826,0.1766782129232528,0.2122945277
```
Defines:
    y_epi, used in chunk 26a.

### 2.2.3    b.3 EPS: Investment in nonresidential structures, cw 2009\$

26c        ⟨*variable EPS* 26c⟩≡                                                     (221)
```
EPS      = Investment in nonresidential structures, cw 2009$
```
Defines:
    EPS, used in chunks 193e, 196e, and 233.

26d        ⟨*stdverEqs eps* 26d⟩≡                                                    (254)
```
eps: d( log(eps), 0, 1 ) - eps_aerr = _
                    (y_eps(1) * log(qeps(-2)/eps(-2)) _
                    + ( y_eps(2) *  d( log(eps(-1)), 0, 1 ) +  y_eps(3) *  d( log(eps(
                    + zxbs(-1) _
                    + zvps(-1)) * (1-y_eps(4)) _
                    + y_eps(4) * (d( log(xbo(-1)), 0, 1 )) _
                    + y_eps(5) * d01q4
```

Defines:
    eps, used in chunks 30d, 36b, 48b, and 51a.
Uses d01q4 205a, qeps 28d, xbo 50e, y_eps 26e, zvps 194a 194c, and zxbs 197a 197c.

26e        ⟨*stdver_Coeffs y_eps* 26e⟩≡                                              (263)
```
y_eps    5        0.06660965676110558,0.5425646472109228,0.3261733908091358,0.5,-0.0969
```
Defines:
    y_eps, used in chunk 26d.

## 2.2.4  b.4 KI: Stock of private inventories, cw 2009\$

27a       ⟨*variable KI* 27a⟩≡                                                    (221)
```
KI        = Stock of private inventories, cw 2009$
```
Defines:
   KI, used in chunk 233.


27b       ⟨*stdverEqs ki* 27b⟩≡                                                  (254)
```
ki: d( log(ki), 0, 1 ) - ki_aerr _
                = y_ki(5) _
                + y_ki(1) * (log(qkir) - log(ki(-1)/xfs(-1))) _
                + y_ki(2) * (d( log(ki(-1)), 0, 1 ) - y_ki(5)) _
                + y_ki(3) * d( log(xfs(-1)), 0, 1 ) _
                + y_ki(4) * d( log(xfs(-2)), 0, 1 )
```


Defines:
   ki, used in chunks 27e, 31a, and 78f.
Uses qkir 29d, xfs 48b, and y_ki 27c.


27c       ⟨*stdver_Coeffs y_ki* 27c⟩≡                                            (263)
```
y_ki    5        0.01679108530917215,0.451650730999944,0.2617948535758293,0.2865544154242267,-0.
```
Defines:
   y_ki, used in chunk 27b.


## 2.2.5  b.5 EI: Change in private inventories, cw 2009\$

27d       ⟨*variable EI* 27d⟩≡                                                   (221)
```
EI        = Change in private inventories, cw 2009$
```
Defines:
   EI, used in chunks 87d and 233.


27e       ⟨*stdverEqs ei* 27e⟩≡                                                  (254)
```
ei: ei - ei_aerr = 4*d( ki, 0, 1 )
```


Defines:
   ei, used in chunks 36d and 49a.
Uses ki 27b.


## 2.2.6  b.6 QEPD: Desired level of investment in equipment

27f       ⟨*variable QEPD* 27f⟩≡                                                 (221)
```
QEPD      = Desired level of investment in equipment
```
Defines:
   QEPD, used in chunk 233.

28a    ⟨*stdverEqs qepd* 28a⟩≡                                                    (254)
```
qepd: log(qepd) - qepd_aerr = y_qepd(1)   _
                            + y_qepd(2) * log(xbo) _
                            + y_qepd(3) * log(vpd) _
                            + y_qepd(4) * log(hgx/100 + jrpd )
```

Defines:
  qepd, used in chunk 25c.
Uses hgx 59e, jrpd 210b, vpd 33d, xbo 50e, and y_qepd 28b.

28b    ⟨*stdver_Coeffs y_qepd* 28b⟩≡                                             (263)
```
y_qepd  4         0,1.000000000000000000e+00,1.000000000000000000e+00,1.0000000000000000
```
Defines:
  y_qepd, used in chunk 28a.


### 2.2.7    b.7 QEPS: Desired level of investment in structures

28c    ⟨*variable QEPS* 28c⟩≡                                                    (221)
```
QEPS     = Desired level of investment in structures
```
Defines:
  QEPS, used in chunk 233.

28d    ⟨*stdverEqs qeps* 28d⟩≡                                                   (254)
```
qeps: log(qeps) - qeps_aerr = y_qeps(1)   _
                            + y_qeps(2) * log(xbo) _
                            + y_qeps(3) * log(vps) _
                            + y_qeps(4) * log(hgx/100 + jrps )
```

Defines:
  qeps, used in chunk 26d.
Uses hgx 59e, jrps 210d, vps 34b, xbo 50e, and y_qeps 28e.

28e    ⟨*stdver_Coeffs y_qeps* 28e⟩≡                                             (263)
```
y_qeps  4         0,1.000000000000000000e+00,1.000000000000000000e+00,1.0000000000000000
```
Defines:
  y_qeps, used in chunk 28d.


### 2.2.8    b.8 QEPI: Desired level of investment in intellectual property

28f    ⟨*variable QEPI* 28f⟩≡                                                    (221)
```
QEPI     = Desired level of investment in intellectual property
```
Defines:
  QEPI, used in chunk 233.

29a      ⟨*stdverEqs qepi* 29a⟩≡                                                        (254)
```
qepi: log(qepi) - qepi_aerr = y_qepi(1)    _
                            + y_qepi(2) * log(xbo) _
                            + y_qepi(3) * log(vpi) _
                            + y_qepi(4) * log(hgx/100 + jrpi )
```

Defines:
   qepi, used in chunk 26a.
Uses hgx 59e, jrpi 210c, vpi 33f, xbo 50e, and y_qepi 29b.

29b      ⟨*stdver_Coeffs y_qepi* 29b⟩≡                                                  (263)
```
y_qepi  4        0,1.000000000000000000e+00,1.000000000000000000e+00,1.000000000000000000e+00
```
Defines:
   y_qepi, used in chunk 29a.

## 2.2.9   b.9 QKIR: Desired Inventory Sales Ratio

29c      ⟨*variable QKIR* 29c⟩≡                                                         (221)
```
QKIR      = Desired Inventory Sales Ratio
```
Defines:
   QKIR, used in chunk 233.

29d      ⟨*stdverEqs qkir* 29d⟩≡                                                        (254)
```
qkir: log(qkir) - qkir_aerr = (1-dglprd)*y_qkir(1) + log(qkir(-1))
```

Defines:
   qkir, used in chunk 27b.
Uses dglprd 207d and y_qkir 29e.

29e      ⟨*stdver_Coeffs y_qkir* 29e⟩≡                                                  (263)
```
y_qkir  1        -0.001885366737710053
```
Defines:
   y_qkir, used in chunk 29d.

## 2.2.10   b.10 KPD: Capital stock - Equipment, 2009\$

29f      ⟨*variable KPD* 29f⟩≡                                                          (221)
```
KPD       = Capital stock - Equipment, 2009$
```
Defines:
   KPD, used in chunks 107d and 233.

29g      ⟨*stdverEqs kpd* 29g⟩≡                                                         (254)
```
kpd: kpd - kpd_aerr = 0.25 * epd + (1-jrpd/4) * kpd(-1)
```

Defines:
   kpd, used in chunks 31a, 72c, and 79b.
Uses epd 25c and jrpd 210b.

## 2.2.11   b.11 KPI: Capital Stock - Intellectual Property, 2009$

30a        ⟨*variable KPI* 30a⟩≡                                                      (221)
```
KPI       = Capital Stock - Intellectual Property, 2009$
```
Defines:
   KPI, used in chunk 233.

30b        ⟨*stdverEqs kpi* 30b⟩≡                                                    (254)
```
kpi: kpi - kpi_aerr = 0.25 * epi + (1-jrpi/4) * kpi(-1)
```

Defines:
   kpi, never used.
Uses epi 26a and jrpi 210c.

## 2.2.12   b.12 KPS: Capital stock - nonresidential structures, 2009$

30c        ⟨*variable KPS* 30c⟩≡                                                      (221)
```
KPS       = Capital stock - nonresidential structures, 2009$
```
Defines:
   KPS, used in chunk 233.

30d        ⟨*stdverEqs kps* 30d⟩≡                                                    (254)
```
kps: kps - kps_aerr = 0.25 * eps + (1-jrps/4) * kps(-1)
```

Defines:
   kps, used in chunks 31a, 72c, and 79d.
Uses eps 26d and jrps 210d.

## 2.2.13   b.13 HKS: Growth rate of KS, cw 2009$ (compound annual rate)

30e        ⟨*variable HKS* 30e⟩≡                                                      (221)
```
HKS       = Growth rate of KS, cw 2009$ (compound annual rate)
```
Defines:
   HKS, used in chunk 233.
Uses KS 31b.

31a        ⟨*stdverEqs hks* 31a⟩≡                                                                   (254)
```
hks: hks - hks_aerr = 400 * (ykpdn * d( log(kpd), 0, 1 ) _
                        + ykpsn * d( log(kps), 0, 1 ) + ykin * d( log(ki), 0, 1 )) / _
                      (ykpdn + ykpsn + ykin) + hksr
```

Defines:
   `hks`, used in chunks 31c and 59e.
Uses `hksr` 209g, `ki` 27b, `kpd` 29g, `kps` 30d, `ykin` 78f, `ykpdn` 79b, and `ykpsn` 79d.


## 2.2.14   b.14 KS: Capital services, 2009 $

31b        ⟨*variable KS* 31b⟩≡                                                                     (221)
```
KS        = Capital services, 2009 $
```
Defines:
   `KS`, used in chunks 30e and 233.


31c        ⟨*stdverEqs ks* 31c⟩≡                                                                    (254)
```
ks: log(ks) - ks_aerr = log(ks(-1)) + hks/400
```

Defines:
   `ks`, used in chunk 52c.
Uses `hks` 31a.


## 2.2.15   b.15 RPD: After-tax real financial cost of capital for business investment

31d        ⟨*variable RPD* 31d⟩≡                                                                    (221)
```
RPD       = After-tax real financial cost of capital for business investment
```
Defines:
   `RPD`, used in chunks 176e and 233.


31e        ⟨*stdverEqs rpd* 31e⟩≡                                                                   (254)
```
rpd: rpd - rpd_aerr = 0.5*(7.2 + (1-trfcim)*(rg5e + rbbbe- rg10e) - zpib5) + 0.5*req
```

Defines:
   `rpd`, used in chunks 32, 33b, 37a, and 38a.
Uses `rbbbe` 150f, `req` 153a, `rg10e` 148d, `rg5e` 147c, `trfcim` 213e, and `zpib5` 177a 177c.


## 2.2.16   b.16 RTPD: User cost of capital for equipment

31f        ⟨*variable RTPD* 31f⟩≡                                                                   (221)
```
RTPD      = User cost of capital for equipment
```
Defines:
   `RTPD`, used in chunk 233.

32a        ⟨*stdverEqs rtpd* 32a⟩≡                                              (254)
```
rtpd: rtpd - rtpd_aerr = (.01*rpd + jrpd - .01*hgpdr) _
                    * ((1-.01*tapdt-trfcim*(1-tapddp*.01*tapdt)*tapdd)/(1-trfcim)) _
                    * ( ( pxp*pkpdr +  pxp(-1)*pkpdr(-1)) /2)/pxb
```

Defines:
  rtpd, used in chunks 33d and 79b.
Uses hgpdr 108f, jrpd 210b, pkpdr 107e, pxb 108d, pxp 93b, rpd 31e, tapdd 38a, tapddp 212g,
  tapdt 213a, and trfcim 213e.

### 2.2.17    b.17 RTPI: User cost of capital for intellectual property

32b        ⟨*variable RTPI* 32b⟩≡                                              (221)
```
RTPI     = User cost of capital for intellectual property
```
Defines:
  RTPI, used in chunk 233.

32c        ⟨*stdverEqs rtpi* 32c⟩≡                                              (254)
```
rtpi: rtpi - rtpi_aerr = (.01*rpd + jrpi - .01*hgpir) _
                    * ( ( pxp*ppir +  pxp(-1)*ppir(-1)) /2)/pxb
```

Defines:
  rtpi, used in chunk 33f.
Uses hgpir 109c, jrpi 210c, ppir 96c, pxb 108d, pxp 93b, and rpd 31e.

### 2.2.18    b.18 RTPS: User cost of capital for nonresidential structures

32d        ⟨*variable RTPS* 32d⟩≡                                              (221)
```
RTPS     = User cost of capital for nonresidential structures
```
Defines:
  RTPS, used in chunk 233.

32e        ⟨*stdverEqs rtps* 32e⟩≡                                              (254)
```
rtps: rtps - rtps_aerr = (@recode(((.01*rpd + jrps - .01*hgppsr)  _
                    * ((1-trfcim*tapsda)/(1-trfcim)) _
                    * ( ( pxp*ppsr +  pxp(-1)*ppsr(-1)) /2)/pxb)>( .02),(.01*rpd + jrps
                    * ((1-trfcim*tapsda)/(1-trfcim)) _
                    * ( ( pxp*ppsr +  pxp(-1)*ppsr(-1)) /2)/pxb, .02))
```

Defines:
  rtps, used in chunks 34b and 79d.
Uses hgppsr 110b, jrps 210d, ppsr 96e, pxb 108d, pxp 93b, rpd 31e, tapsda 37a,
  and trfcim 213e.

### 2.2.19   b.19 RTINV: User cost of capital for inventories

33a   ⟨*variable RTINV* 33a⟩≡                                                        (221)
```
RTINV    = User cost of capital for inventories
```
Defines:
    RTINV, used in chunk 233.

33b   ⟨*stdverEqs rtinv* 33b⟩≡                                                      (254)
```
rtinv: rtinv - rtinv_aerr = (.01*rpd - .01*hgpkir) _
                   * ( ( pxp*pkir +  pxp(-1)*pkir(-1)) /2)/pxb
```

Defines:
    rtinv, used in chunk 78f.
Uses hgpkir 109f, pkir 211d, pxb 108d, pxp 93b, and rpd 31e.

### 2.2.20   b.20 VPD: Desired equipment-output ratio

33c   ⟨*variable VPD* 33c⟩≡                                                         (221)
```
VPD      = Desired equipment-output ratio
```
Defines:
    VPD, used in chunks 34c, 218d, and 233.

33d   ⟨*stdverEqs vpd* 33d⟩≡                                                        (254)
```
vpd: vpd - vpd_aerr = uvpd*(pkpdr/ppdr)/rtpd
```

Defines:
    vpd, used in chunks 28a, 34d, 191, and 195a.
Uses pkpdr 107e, ppdr 95g, rtpd 32a, and uvpd 218d.

### 2.2.21   b.21 VPI: Desired intellectual property-output ratio

33e   ⟨*variable VPI* 33e⟩≡                                                         (221)
```
VPI      = Desired intellectual property-output ratio
```
Defines:
    VPI, used in chunks 38d, 218e, and 233.

33f   ⟨*stdverEqs vpi* 33f⟩≡                                                        (254)
```
vpi: vpi - vpi_aerr = uvpi/rtpi
```

Defines:
    vpi, used in chunks 29a, 38e, 193, and 196a.
Uses rtpi 32c and uvpi 218e.

## 2.2.22   b.22 VPS: Desired structures-output ratio

34a      ⟨*variable VPS* 34a⟩≡                                                    (221)
```
VPS      = Desired structures-output ratio
```
Defines:
   VPS, used in chunks 34f, 218f, and 233.

34b      ⟨*stdverEqs vps* 34b⟩≡                                                  (254)
```
vps: vps - vps_aerr = uvps/rtps
```

Defines:
   vps, used in chunks 28d, 35a, 194, and 197a.
Uses rtps 32e and uvps 218f.

## 2.2.23   b.23 HGVPD: Trend Growth of VPD

34c      ⟨*variable HGVPD* 34c⟩≡                                                 (221)
```
HGVPD    = Trend Growth of VPD
```
Defines:
   HGVPD, used in chunk 233.
Uses VPD 33c.

34d      ⟨*stdverEqs hgvpd* 34d⟩≡                                                (254)
```
hgvpd: hgvpd - hgvpd_aerr = y_hgvpd(1) * hgvpd(-1) _
                      + y_hgvpd(2) * log(vpd/vpd(-1))
```

Defines:
   hgvpd, used in chunks 25c and 191a.
Uses vpd 33d and y‗hgvpd 34e.

34e      ⟨*stdver_Coeffs y_hgvpd* 34e⟩≡                                          (263)
```
y_hgvpd 2        0.97,0.03
```
Defines:
   y‗hgvpd, used in chunk 34d.

## 2.2.24   b.24 HGVPS: Trend growth rate of VPS

34f      ⟨*variable HGVPS* 34f⟩≡                                                 (221)
```
HGVPS    = Trend growth rate of VPS
```
Defines:
   HGVPS, used in chunk 233.
Uses VPS 34a.

35a      ⟨*stdverEqs hgvps* 35a⟩≡                                                                        (254)

```
hgvps: hgvps - hgvps_aerr = y_hgvps(1) * hgvps(-1) _
                     + y_hgvps(2) * log(vps/vps(-1))
```

Defines:
   hgvps, used in chunk 194a.
Uses vps 34b and y_hgvps 35b.

35b      ⟨*stdver_Coeffs y_hgvps* 35b⟩≡                                                                   (263)

```
y_hgvps 2          0.97,0.03
```

Defines:
   y_hgvps, used in chunk 35a.

## 2.2.25    b.25 EPDN: Investment in equipment, current $

35c      ⟨*variable EPDN* 35c⟩≡                                                                          (221)

```
EPDN      = Investment in equipment, current $
```

Defines:
   EPDN, used in chunk 233.

35d      ⟨*stdverEqs epdn* 35d⟩≡                                                                         (254)

```
epdn: epdn - epdn_aerr = 0.01*ppdr*pxp*epd
```

Defines:
   epdn, used in chunks 38c, 48b, 51a, and 98a.
Uses epd 25c, ppdr 95g, and pxp 93b.

## 2.2.26    b.26 EPIN: Investment in intellectual property, current $

35e      ⟨*variable EPIN* 35e⟩≡                                                                          (221)

```
EPIN      = Investment in intellectual property, current $
```

Defines:
   EPIN, used in chunk 233.

35f      ⟨*stdverEqs epin* 35f⟩≡                                                                         (254)

```
epin: epin - epin_aerr = 0.01*ppir*pxp*epi
```

Defines:
   epin, used in chunks 38c, 48b, 51a, and 98a.
Uses epi 26a, ppir 96c, and pxp 93b.

### 2.2.27    b.27 EPSN: Investment in nonresidential structures, current $

36a        ⟨*variable EPSN* 36a⟩≡                                                    (221)
           EPSN      = Investment in nonresidential structures, current $
           Defines:
             EPSN, used in chunk 233.

36b        ⟨*stdverEqs epsn* 36b⟩≡                                                   (254)
           epsn: epsn - epsn_aerr = .01 * ppsr * pxp * eps


           Defines:
             epsn, used in chunks 38c, 48b, 51a, and 98a.
           Uses eps 26d, ppsr 96e, and pxp 93b.

### 2.2.28    b.28 EIN: Change in business inventories, current $

36c        ⟨*variable EIN* 36c⟩≡                                                     (221)
           EIN       = Change in business inventories, current $
           Defines:
             EIN, used in chunk 233.

36d        ⟨*stdverEqs ein* 36d⟩≡                                                    (254)
           ein: ein - ein_aerr = .01*pxp*pkir*ei


           Defines:
             ein, used in chunks 38c and 70.
           Uses ei 27e, pkir 211d, and pxp 93b.

### 2.2.29    b.29 TAPSDA: Present value of depreciation allowances for nonresidential structures

36e        ⟨*variable TAPSDA* 36e⟩≡                                                  (221)
           TAPSDA    = Present value of depreciation allowances for nonresidential structures
           Defines:
             TAPSDA, used in chunk 233.

37a        $\langle stdverEqs\ tapsda\ 37a\rangle\equiv$                                                                (254)
```
tapsda: tapsda - tapsda_aerr = (1-tapsad)*(1-exp(-0.01*(rpd+zpib5)*tapssl))/ _
                     (0.01*(rpd+zpib5)*tapssl) + _
                     tapsad*(1-d69) * 2 *  _
                     (1 - (1-exp(-0.01*(rpd+zpib5)*tapssl))/ _
                     (0.01*(rpd+zpib5)*tapssl)) / (0.01*(rpd+zpib5)*tapssl) _
                     + tapsad*(d69-d81) *(  (1.5 /  _
                     (1.5 + .01 * tapssl * (rpd + zpib5))) *  _
                     (1 - exp(-0.5-0.33*(0.01*(rpd+zpib5)*tapssl))) + _
                     (exp(-0.5)/(0.67*(0.01*(rpd+zpib5)*tapssl)))* _
                     (exp(-0.33*(0.01*(rpd+zpib5)*tapssl)) -  _
                     exp(-(0.01*(rpd+zpib5)*tapssl))) ) _
                     + tapsad * (d81-d86) *(  (1.75 /  _
                     (1.75 + .01 * tapssl * (rpd + zpib5))) *  _
                     (1 - exp(-0.75-0.428*(0.01*(rpd+zpib5)*tapssl))) + _
                     (exp(-0.75)/(0.572*(0.01*(rpd+zpib5)*tapssl)))* _
                     (exp(-0.428*(0.01*(rpd+zpib5)*tapssl)) -  _
                     exp(-(0.01*(rpd+zpib5)*tapssl))) ) _
                     + tapsad * d86 * (1-exp(-0.01*(rpd+zpib5)*tapssl))/ _
                     (0.01*(rpd+zpib5)*tapssl)
```

Defines:
    tapsda, used in chunk 32e.
Uses d69 205d, d81 206a, d86 206c, rpd 31e, tapsad 213b, tapssl 213c, and zpib5 177a 177c.

## 2.2.30    b.30 TAPDD: Present value of depreciation allowances for equipment

37b        $\langle variable\ TAPDD\ 37b\rangle\equiv$                                                           (221)
```
TAPDD     = Present value of depreciation allowances for equipment
```
Defines:
    TAPDD, used in chunk 233.

38a      ⟨*stdverEqs tapdd* 38a⟩≡                                                        (254)
```
tapdd: tapdd - tapdd_aerr = .5 * d2003 + .5 * d2003 * (2.0 / (2.0 + .01 * tapds * (rp
                          + .3 * d2002 + .7 * d2002 * (2.0 / (2.0 + .01 * tapds * (rpd + z
                          + (d87 - d2002 - d2003) * (2.0 / (2.0 + .01 * tapds * (rpd + zp
                          + (d81-d87) * (1.5 / (1.5 + .01 * tapds * (rpd + zpib5))) _
                          + (1-d81) _
                                * (((1-tapdad)*(1-exp(-(.01*tapds*(rpd+zpib5)))) _
                                        /(.01*tapds*(rpd+zpib5))) _
                                  + tapdad *2*(1-(1-exp(-(.01*tapds*(rpd+zpib5)))) _
                                        /(.01*tapds*(rpd+zpib5))) _
                                        /(.01 * tapds * (rpd + zpib5)))
```

Defines:
   tapdd, used in chunk 32a.
Uses d2002 205b, d2003 205c, d81 206a, d87 206d, rpd 31e, tapdad 212f, tapds 212h,
   and zpib5 177a 177c.

### 2.2.31    b.31 EGPDIN: Gross private domestic investment

38b      ⟨*variable EGPDIN* 38b⟩≡                                                        (221)
```
EGPDIN   = Gross private domestic investment
```
Defines:
   EGPDIN, used in chunk 233.

38c      ⟨*stdverEqs egpdin* 38c⟩≡                                                       (254)
```
egpdin: egpdin - egpdin_aerr = epdn + epsn + epin + ehn + ein
```

Defines:
   egpdin, never used.
Uses ehn 22c, ein 36d, epdn 35d, epin 35f, and epsn 36b.

### 2.2.32    b.32 HGVPI: Trend growth rate of VPI

38d      ⟨*variable HGVPI* 38d⟩≡                                                         (221)
```
HGVPI    = Trend growth rate of VPI
```
Defines:
   HGVPI, used in chunk 233.
Uses VPI 33e.

38e      ⟨*stdverEqs hgvpi* 38e⟩≡                                                        (254)
```
hgvpi: hgvpi - hgvpi_aerr = y_hgvpi(1) * hgvpi(-1) _
                        + y_hgvpi(2) * log(vpi/vpi(-1))
```

Defines:
   hgvpi, used in chunk 193a.
Uses vpi 33f and y_hgvpi 39a.

39a     ⟨*stdver_Coeffs y_hgvpi* 39a⟩≡                                    (263)
    y_hgvpi 2          0.97,0.03
Defines:
    y_hgvpi, used in chunk 38e.

## 2.3   Foreign Trade

### 2.3.1   c.1 EX: Exports of goods and services, cw 2009 $

39b     ⟨*variable EX* 39b⟩≡                                              (221)
    EX         = Exports of goods and services, cw 2009 $
Defines:
    EX, used in chunk 233.

39c     ⟨*stdverEqs ex* 39c⟩≡                                            (254)
```
ex: d( log(ex), 0, 1 ) - ex_aerr _
                = y_ex(1)   _
                + y_ex(2) * log(ex(-1)*(pxr(-1)*pxp(-1)*fpx(-1))/(fgdp(-1)*fpc(-1))) _
                + y_ex(3) * (fxgap - fxgap(-1))/100 _
                + y_ex(4) * (fxgap(-1) - fxgap(-2))/100 _
                + y_ex(5) * ddockx
```

Defines:
    ex, used in chunks 39, 40, 48b, 49e, 51a, 62f, 63b, 67, 87a, 91d, 93f, 94f, 101c, 105d, 117,
        118, 122, 123, 154f, 155e, and 233.
Uses ddockx 206g, fgdp 158e, fpc 161b, fpx 164d, fxgap 158b, pxp 93b, pxr 97b,
    and y_ex 39d.

39d     ⟨*stdver_Coeffs y_ex* 39d⟩≡                                       (263)
    y_ex    5       0.8118629319610274,-0.1074807087618527,1.38575824141273,1.092856118288064,1.014
Defines:
    y_ex, used in chunk 39c.

### 2.3.2   c.2 EXN: Exports of goods and services, current $

39e     ⟨*variable EXN* 39e⟩≡                                            (221)
    EXN        = Exports of goods and services, current $
Defines:
    EXN, used in chunk 233.

39f     ⟨*stdverEqs exn* 39f⟩≡                                           (254)
```
exn: exn - exn_aerr = .01*pxp*pxr*ex
```

Defines:
    exn, used in chunks 43a, 48b, 49e, 51a, 71a, and 98a.
Uses ex 39c, pxp 93b, and pxr 97b.

### 2.3.3   c.3 EMO: Imports of goods and services ex. petroleum, cw 2009\$

40a      ⟨*variable EMO* 40a⟩≡                                                   (221)
```
EMO      = Imports of goods and services ex. petroleum, cw 2009$
```
Defines:
    EMO, used in chunk 233.
Uses ex 39c.

40b      ⟨*stdverEqs emo* 40b⟩≡                                                  (254)
```
emo: d( log(emo), 0, 1 ) - emo_aerr _
                    =  y_emo(1) _
                    + y_emo(2) * log(emo(-1)*(pmo(-1)/100)/(uemot(-1)*xgden(-1))) _
                    + y_emo(3) * (xgap2-xgap2(-1))/100 _
                    + y_emo(4) * (xgap2(-1)-xgap2(-2))/100 _
                    + y_emo(5) * log(ddockm) _
                    + y_emo(6) * log(ddockm/ddockm(-1))
```
Defines:
    emo, used in chunks 40e, 42e, 48b, and 49e.
Uses ddockm 206f, pmo 105e, uemot 214f, xgap2 59c, xgden 71a, and y_emo 40c.

40c      ⟨*stdver_Coeffs y_emo* 40c⟩≡                                            (263)
```
y_emo   6       0.01701497186817749,-0.1984753225812535,1.352328263830308,1.67397668
```
Defines:
    y_emo, used in chunk 40b.

### 2.3.4   c.4 EMON: Imports of goods and services ex. petroleum

40d      ⟨*variable EMON* 40d⟩≡                                                  (221)
```
EMON     = Imports of goods and services ex. petroleum
```
Defines:
    EMON, used in chunks 214f and 233.
Uses ex 39c.

40e      ⟨*stdverEqs emon* 40e⟩≡                                                 (254)
```
emon: emon - emon_aerr = .01 * pmo * emo
```
Defines:
    emon, used in chunks 42, 48b, 49e, and 88c.
Uses emo 40b and pmo 105e.

### 2.3.5   c.5 CENG: Consumption of crude energy (oil, coal, natural gas), 2009 $

41a    ⟨*variable CENG* 41a⟩≡                                                   (221)
       ```
       CENG      = Consumption of crude energy (oil, coal, natural gas),  2009 $
       ```
       Defines:
          CENG, used in chunk 233.

41b    ⟨*stdverEqs ceng* 41b⟩≡                                                 (254)
       ```
       ceng: d( log(ceng), 0, 1 ) - ceng_aerr = _
                          y_ceng(1) * (log(ceng(-1))-log(xg(-1)*veoa(-1))) _
                        + y_ceng(2) * d( log(xg), 0, 1 ) _
                        + y_ceng(3) * d( log(xg(-1)), 0, 1 ) _
                        + y_ceng(4) * d( log(ceng(-1)), 0, 1 ) _
                        + y_ceng(5) * d( log(veoa(-1)), 0, 1 ) _
                        + y_ceng(6) * hgx(-1)/400
       ```
       Defines:
          ceng, used in chunks 41e, 52a, 55a, 60b, 104d, and 110e.
       Uses hgx 59e, veoa 54a, xg 52a, and y_ceng 41c.

41c    ⟨*stdver_Coeffs y_ceng* 41c⟩≡                                           (263)
       ```
       y_ceng  6      -0.1483451935619194,0.475653118183134,0.5437644321944857,-0.2301598753097478,0.
       ```
       Defines:
          y_ceng, used in chunk 41b.

### 2.3.6   c.6 EMP: Petroleum imports, cw 2009$

41d    ⟨*variable EMP* 41d⟩≡                                                   (221)
       ```
       EMP       = Petroleum imports, cw 2009$
       ```
       Defines:
          EMP, used in chunks 214g and 233.

41e    ⟨*stdverEqs emp* 41e⟩≡                                                  (254)
       ```
       emp: emp - emp_aerr = uemp*(ceng-xeng)
       ```
       Defines:
          emp, used in chunks 42, 44f, 48b, 49e, 52a, 54d, 55a, 62c, 93f, 94f, and 233.
       Uses ceng 41b, uemp 214g, and xeng 55e.

### 2.3.7   c.7 EMPN: Petroleum imports, current $

41f    ⟨*variable EMPN* 41f⟩≡                                                  (221)
       ```
       EMPN      = Petroleum imports, current $
       ```
       Defines:
          EMPN, used in chunk 233.

42a      ⟨*stdverEqs empn* 42a⟩≡                                          (254)
         ```
         empn: empn - empn_aerr = .01*pmp*emp
         ```

Defines:
    empn, used in chunks 42, 48b, 49e, 52a, 55a, 60b, and 71e.
Uses emp 41e and pmp 102b.

### 2.3.8    c.8 EMN: Imports of goods and services, current $

42b      ⟨*variable EMN* 42b⟩≡                                          (221)
         ```
         EMN       = Imports of goods and services, current $
         ```
Defines:
    EMN, used in chunk 233.

42c      ⟨*stdverEqs emn* 42c⟩≡                                          (254)
         ```
         emn: emn - emn_aerr = emon + empn
         ```

Defines:
    emn, used in chunks 42e, 43a, 70c, and 71a.
Uses emon 40e and empn 42a.

### 2.3.9    c.9 EM: Imports of goods and services, cw 2009$

42d      ⟨*variable EM* 42d⟩≡                                           (221)
         ```
         EM        = Imports of goods and services, cw 2009$
         ```
Defines:
    EM, used in chunk 233.

42e      ⟨*stdverEqs em* 42e⟩≡                                           (254)
         ```
         em: log(em) - em_aerr = log(em(-1))    _
                         + .5 * (emon/emn + emon(-1)/emn(-1)) * d(log(emo), 0, 1) _
                         + .5 * (empn/emn + empn(-1)/emn(-1)) * d(log(emp), 0, 1)
         ```

Defines:
    em, never used.
Uses emn 42c, emo 40b, emon 40e, emp 41e, and empn 42a.

### 2.3.10    c.10 FCBN: US current account balance, current $

42f      ⟨*variable FCBN* 42f⟩≡                                          (221)
         ```
         FCBN      = US current account balance, current $
         ```
Defines:
    FCBN, used in chunk 233.

43a          ⟨*stdverEqs fcbn* 43a⟩≡                                                          (254)
             ```
             fcbn: fcbn - fcbn_aerr = exn - emn + fynin + fcbrn
             ```

Defines:
    `fcbn`, used in chunk 43e.
Uses `emn` 42c, `exn` 39f, `fcbrn` 43c, and `fynin` 44d.

## 2.3.11    c.11 FCBRN: US current account balance residual, current $

43b          ⟨*variable FCBRN* 43b⟩≡                                                          (221)
             ```
             FCBRN     = US current account balance residual, current $
             ```
Defines:
    `FCBRN`, used in chunks 214h and 233.

43c          ⟨*stdverEqs fcbrn* 43c⟩≡                                                         (254)
             ```
             fcbrn: fcbrn - fcbrn_aerr = ufcbr*pxg*xgpot/100
             ```

Defines:
    `fcbrn`, used in chunk 43a.
Uses `pxg` 108b, `ufcbr` 214h, and `xgpot` 52c.

## 2.3.12    c.12 FNIN: Net stock of claims of US residents on the rest of the world, current $

43d          ⟨*variable FNIN* 43d⟩≡                                                           (221)
             ```
             FNIN      = Net stock of claims of US residents on the rest of the world, current $
             ```
Defines:
    `FNIN`, used in chunk 233.

43e          ⟨*stdverEqs fnin* 43e⟩≡                                                          (254)
             ```
             fnin: d( fnin, 0, 1 ) - fnin_aerr = .25*fcbn  _
                                   + .54 * (d( log(fpc), 0, 1) * fnicn(-1)) _
                                   - .32 * (d( log(pgdp), 0, 1) * fniln(-1))   _
                                   - .67 * (d( log(fpx), 0, 1) * fnicn(-1)) _
                                   + .06 * (d( log(fpx), 0, 1) * fniln(-1))   _
                                   + fnirn
             ```

Defines:
    `fnin`, used in chunks 45e, 75d, and 163d.
Uses `fcbn` 43a, `fnicn` 45c, `fniln` 45e, `fnirn` 47e, `fpc` 161b, `fpx` 164d, and `pgdp` 106f.

### 2.3.13   c.13 FTCIN: Corporate taxes paid to rest of world, current $

44a    ⟨*variable FTCIN* 44a⟩≡                                                    (221)
```
FTCIN    = Corporate taxes paid to rest of world, current $
```
Defines:
   FTCIN, used in chunks 215d and 233.

44b    ⟨*stdverEqs ftcin* 44b⟩≡                                                   (254)
```
ftcin: ftcin - ftcin_aerr = uftcin * ynicpn
```


Defines:
   ftcin, used in chunk 78d.
Uses uftcin 215d and ynicpn 77b.

### 2.3.14   c.14 FYNIN: Net investment income received from the rest of the world, current $

44c    ⟨*variable FYNIN* 44c⟩≡                                                    (221)
```
FYNIN    = Net investment income received from the rest of the world, current $
```
Defines:
   FYNIN, used in chunk 233.

44d    ⟨*stdverEqs fynin* 44d⟩≡                                                   (254)
```
fynin: fynin - fynin_aerr = fynicn - fyniln
```


Defines:
   fynin, used in chunks 43a and 74d.
Uses fynicn 46a and fyniln 46c.

### 2.3.15   c.15 HGEMP: Petroleum imports, cw 2009$, trend growth rate

44e    ⟨*variable HGEMP* 44e⟩≡                                                    (221)
```
HGEMP    = Petroleum imports, cw 2009$, trend growth rate
```
Defines:
   HGEMP, used in chunk 233.

44f    ⟨*stdverEqs hgemp* 44f⟩≡                                                   (254)
```
hgemp: hgemp - hgemp_aerr = y_hgemp(1) * hgemp(-1) _
                  + y_hgemp(2) * 400*log(emp/emp(-1))
```


Defines:
   hgemp, never used.
Uses emp 41e and y_hgemp 45a.

45a        ⟨*stdver_Coeffs y_hgemp* 45a⟩≡                                      (263)
    y_hgemp 2          .9,.1

Defines:
    y_hgemp, used in chunk 44f.


### 2.3.16   c.16 FNICN: Gross stock of claims of US residents on the rest of the world, current $

45b        ⟨*variable FNICN* 45b⟩≡                                            (221)
    FNICN      = Gross stock of claims of US residents on the rest of the world, current $

Defines:
    FNICN, used in chunks 212b and 233.


45c        ⟨*stdverEqs fnicn* 45c⟩≡                                           (254)
    fnicn: d(fnicn, 0, 1)/xgdptn - fnicn_aerr = .54 * d( log(fpc), 0, 1)*fnicn(-1)/xgdptn _
                                - .67 * d( log(fpx), 0, 1)*fnicn(-1)/xgdptn  _
                                + rfnict

Defines:
    fnicn, used in chunks 43e, 45e, and 46a.
Uses fpc 161b, fpx 164d, rfnict 212b, and xgdptn 61a.


### 2.3.17   c.17 FNILN: Gross stock of liabilities of US residents to the rest of the world, current $

45d        ⟨*variable FNILN* 45d⟩≡                                            (221)
    FNILN      = Gross stock of liabilities of US residents to the rest of the world, current $

Defines:
    FNILN, used in chunk 233.


45e        ⟨*stdverEqs fniln* 45e⟩≡                                           (254)
    fniln: fniln - fniln_aerr = fnicn - fnin

Defines:
    fniln, used in chunks 43e and 46c.
Uses fnicn 45c and fnin 43e.


### 2.3.18   c.18 FYNICN: Gross investment income received from the rest of the world, current $

45f        ⟨*variable FYNICN* 45f⟩≡                                           (221)
    FYNICN     = Gross investment income received from the rest of the world, current $

Defines:
    FYNICN, used in chunk 233.

46a    ⟨*stdverEqs fynicn* 46a⟩≡                                               (254)
```
fynicn:  fynicn - fynicn_aerr = .01*rfynic*fnicn(-1)
```

Defines:
   fynicn, used in chunk 44d.
Uses fnicn 45c and rfynic 46e.

### 2.3.19   c.19 FYNILN: Gross investment income paid to the rest of the world, current $

46b    ⟨*variable FYNILN* 46b⟩≡                                               (221)
```
FYNILN   = Gross investment income paid to the rest of the world, current $
```
Defines:
   FYNILN, used in chunk 233.

46c    ⟨*stdverEqs fyniln* 46c⟩≡                                              (254)
```
fyniln:  fyniln - fyniln_aerr = .01*rfynil*fniln(-1)
```

Defines:
   fyniln, used in chunk 44d.
Uses fniln 45e and rfynil 47b.

### 2.3.20   c.20 RFYNIC: Average yield earned on gross claims of US residents on the rest of the world

46d    ⟨*variable RFYNIC* 46d⟩≡                                               (221)
```
RFYNIC   = Average yield earned on gross claims of US residents on the rest of the wo
```
Defines:
   RFYNIC, used in chunk 233.

46e    ⟨*stdverEqs rfynic* 46e⟩≡                                              (254)
```
rfynic: d( rfynic, 0, 1 ) - rfynic_aerr = y_rfynic(1) _
                 + y_rfynic(2) * (rfynic(-1)-rfynil(-1)) _
                 + y_rfynic(3) * d( rfynic(-1), 0, 1 ) _
                 + y_rfynic(4) * d( rfynil, 0, 1 )
```

Defines:
   rfynic, used in chunk 46a.
Uses rfynil 47b and y_rfynic 46f.

46f    ⟨*stdver_Coeffs y_rfynic* 46f⟩≡                                        (263)
```
y_rfynic       4        0.2599432734430575,-0.1468767116652314,0.1482396937168886,0.6
```
Defines:
   y_rfynic, used in chunk 46e.

### 2.3.21   c.21 RFYNIL: Average yield earned on liabilities of US residents on the rest of the world

47a        ⟨*variable RFYNIL* 47a⟩≡                                                        (221)
    RFYNIL    = Average yield earned on liabilities of US residents on the rest of the world
Defines:
    RFYNIL, used in chunk 233.

47b        ⟨*stdverEqs rfynil* 47b⟩≡                                                       (254)
```
   rfynil: d( rfynil, 0, 1 ) - rfynil_aerr = y_rfynil(1) _
                  + y_rfynil(2) * rfynil(-1) _
                  + y_rfynil(3) * rg10(-1) _
                  + y_rfynil(4) * rtb(-1) _
                  + y_rfynil(5) * reqp(-1) _
                  + y_rfynil(6) * d( rfynil(-1), 0, 1 ) _
                  + y_rfynil(7) * d( rg10, 0, 1 ) _
                  + y_rfynil(8) * d( rtb, 0, 1 ) _
                  + y_rfynil(9) * d( reqp, 0, 1 )
```

Defines:
    rfynil, used in chunk 46.
Uses reqp 152d, rg10 148f, rtb 146d, and y_rfynil 47c.

47c        ⟨*stdver_Coeffs y_rfynil* 47c⟩≡                                                 (263)
    y_rfynil        9          0.1878356791714486,-0.2435367622231839,0.07902780819914431,0.0888015190
Defines:
    y_rfynil, used in chunk 47b.

### 2.3.22   c.22 FNIRN: Net stock of claims of US residents on the rest of the world, residual

47d        ⟨*variable FNIRN* 47d⟩≡                                                         (221)
    FNIRN     = Net stock of claims of US residents on the rest of the world, residual
Defines:
    FNIRN, used in chunks 215a and 233.

47e        ⟨*stdverEqs fnirn* 47e⟩≡                                                        (254)
```
   fnirn: fnirn - fnirn_aerr = ufnir * xgdpn
```

Defines:
    fnirn, used in chunk 43e.
Uses ufnir 215a and xgdpn 70c.

## 2.4    Aggregate Output Identities

### 2.4.1    d.1 XFS: Final sales of gross domestic product, cw 2009$

48a       ⟨*variable XFS* 48a⟩≡                                              (221)
          XFS       = Final sales of gross domestic product, cw 2009$
          Defines:
             XFS, used in chunk 233.


48b       ⟨*stdverEqs xfs* 48b⟩≡                                            (254)
          xfs: log(xfs) - xfs_aerr = log(xfs(-1)) _
             + .5*( (ecnian/xfsn + ecnian(-1)/xfsn(-1)) * d(log(ecnia), 0, 1) _
             + (ehn/xfsn + ehn(-1)/xfsn(-1)) * d(log(eh), 0, 1) _
             + (epdn/xfsn + epdn(-1)/xfsn(-1)) * d(log(epd), 0, 1) _
             + (epsn/xfsn + epsn(-1)/xfsn(-1)) * d(log(eps), 0, 1) _
             + (epin/xfsn + epin(-1)/xfsn(-1)) * d(log(epi), 0, 1) _
             + (egfon/xfsn + egfon(-1)/xfsn(-1)) * d(log(egfo), 0, 1) _
             + (egfin/xfsn + egfin(-1)/xfsn(-1)) * d(log(egfi), 0, 1) _
             + (egfln/xfsn + egfln(-1)/xfsn(-1)) * d(log(egfl), 0, 1) _
             + (egson/xfsn + egson(-1)/xfsn(-1)) * d(log(egso), 0, 1) _
             + (egsin/xfsn + egsin(-1)/xfsn(-1)) * d(log(egsi), 0, 1) _
             + (egsln/xfsn + egsln(-1)/xfsn(-1)) * d(log(egsl), 0, 1) _
             + (exn/xfsn + exn(-1)/xfsn(-1)) * d(log(ex), 0, 1) _
             - (emon/xfsn + emon(-1)/xfsn(-1)) * d(log(emo), 0, 1) _
             - (empn/xfsn + empn(-1)/xfsn(-1)) * d(log(emp), 0, 1))


          Defines:
             xfs, used in chunks 27b and 49a.
          Uses ecnia 21d, ecnian 22a, egfi 114d, egfin 115a, egfl 116a, egfln 116d, egfo 117d,
             egfon 118b, egsi 119e, egsin 120c, egsl 121b, egsln 121e, egso 122d, egson 123b, eh 18e,
             ehn 22c, emo 40b, emon 40e, emp 41e, empn 42a, epd 25c, epdn 35d, epi 26a, epin 35f,
             eps 26d, epsn 36b, ex 39c, exn 39f, and xfsn 70e.


### 2.4.2    d.2 XGDP: GDP, cw 2009$

48c       ⟨*variable XGDP* 48c⟩≡                                            (221)
          XGDP      = GDP, cw 2009$
          Defines:
             XGDP, used in chunks 60c, 80a, 84a, 156b, and 233.

49a    ⟨*stdverEqs xgdp* 49a⟩≡                                              (254)
```
xgdp: xgdp - xgdp_aerr = xgdp(-1) * @sqrt( _
        ( (xfsn(-1)/xgdpn(-1)) * (xfs/xfs(-1)) _
         + (.01 * ei(-1)*pkir(-1)*pxp(-1) / xgdpn(-1)) * (ei/ei(-1))) _
        * 1/ _
        ((xfsn/xgdpn) * (xfs(-1)/xfs) _
         + (.01 * ei*pkir*pxp / xgdpn) * (ei(-1)/ei)))
```

Defines:
    xgdp, used in chunks 49, 56c, 84b, and 106f.
Uses ei 27e, pkir 211d, pxp 93b, xfs 48b, xfsn 70e, and xgdpn 70c.

### 2.4.3    d.3 HGGDP: Growth rate of GDP, cw 2009\$ (annual rate)

49b    ⟨*variable HGGDP* 49b⟩≡                                              (221)
```
HGGDP    = Growth rate of GDP, cw 2009$ (annual rate)
```
Defines:
    HGGDP, used in chunk 233.

49c    ⟨*stdverEqs hggdp* 49c⟩≡                                             (254)
```
hggdp: hggdp - hggdp_aerr = 400*d( log(xgdp), 0, 1 )
```

Defines:
    hggdp, never used.
Uses xgdp 49a.

### 2.4.4    d.4 XGDE: Domestic absorption, cw 2009\$

49d    ⟨*variable XGDE* 49d⟩≡                                               (221)
```
XGDE     = Domestic absorption, cw 2009$
```
Defines:
    XGDE, used in chunk 233.

49e    ⟨*stdverEqs xgde* 49e⟩≡                                              (254)
```
xgde: log(xgde) - xgde_aerr = log(xgde(-1)) _
   + .5*( (xgdpn/xgden + xgdpn(-1)/xgden(-1)) * d(log(xgdp), 0, 1) _
    - (exn/xgden + exn(-1)/xgden(-1)) * d(log(ex), 0, 1) _
   + (emon/xgden + emon(-1)/xgden(-1)) * d(log(emo), 0, 1) _
   + (empn/xgden + empn(-1)/xgden(-1)) * d(log(emp), 0, 1))
```

Defines:
    xgde, never used.
Uses emo 40b, emon 40e, emp 41e, empn 42a, ex 39c, exn 39f, xgden 71a, xgdp 49a,
    and xgdpn 70c.

### 2.4.5   d.5 XGO: Output of business sector plus oil imports, adjusted for measurement error, cw 2009$

50a        ⟨*variable XGO* 50a⟩≡                                              (221)
```
   XGO     = Output of business sector plus oil imports, adjusted for measurement error
```
Defines:
    XGO, used in chunk 233.

50b        ⟨*stdverEqs xgo* 50b⟩≡                                            (254)
```
   xgo: log(xgo) - xgo_aerr =  log(xgpot) + y_xgo(1) * xgap2/100
```

Defines:
    xgo, used in chunks 56e, 57c, 59a, and 187b.
Uses xgap2 59c, xgpot 52c, and y_xgo 50c.

50c        ⟨*stdver_Coeffs y_xgo* 50c⟩≡                                      (263)
```
   y_xgo    1          1.313096
```
Defines:
    y_xgo, used in chunk 50b.

### 2.4.6   d.6 XBO: Business output, adjusted for measurement error, cw 2009$

50d        ⟨*variable XBO* 50d⟩≡                                             (221)
```
   XBO     = Business output, adjusted for measurement error, cw  2009$
```
Defines:
    XBO, used in chunk 233.

50e        ⟨*stdverEqs xbo* 50e⟩≡                                           (254)
```
   xbo: log(xbo) - xbo_aerr =  log(xbt) + y_xbo(1) * xgap2/100
```

Defines:
    xbo, used in chunks 25, 26, 28, 29a, 71c, 191a, and 193–97.
Uses xbt 55a, xgap2 59c, and y_xbo 50f.

50f        ⟨*stdver_Coeffs y_xbo* 50f⟩≡                                      (263)
```
   y_xbo    1          1.338129148984226
```
Defines:
    y_xbo, used in chunk 50e.

### 2.4.7   d.7 XP: Final sales plus imports less government labor, cw 2009$

50g        ⟨*variable XP* 50g⟩≡                                             (221)
```
   XP      = Final sales plus imports less government labor, cw 2009$
```
Defines:
    XP, used in chunk 233.

51a        ⟨*stdverEqs xp* 51a⟩≡                                                    (254)
```
xp: log(xp) - xp_aerr = log(xp(-1)) _
  + .5 * (ecnian/xpn + ecnian(-1)/xpn(-1)) * d(log(ecnia), 0, 1) _
  + .5 * (ehn/xpn + ehn(-1)/xpn(-1))       * d(log(eh), 0, 1) _
  + .5 * (epdn/xpn + epdn(-1)/xpn(-1))     * d(log(epd), 0, 1) _
  + .5 * (epin/xpn + epin(-1)/xpn(-1))     * d(log(epi), 0, 1) _
  + .5 * (epsn/xpn + epsn(-1)/xpn(-1))     * d(log(eps), 0, 1) _
  + .5 * (egfon/xpn + egfon(-1)/xpn(-1))   * d(log(egfo), 0, 1) _
  + .5 * (egfin/xpn + egfin(-1)/xpn(-1))   * d(log(egfi), 0, 1) _
  + .5 * (egson/xpn + egson(-1)/xpn(-1))   * d(log(egso), 0, 1) _
  + .5 * (egsin/xpn + egsin(-1)/xpn(-1))   * d(log(egsi), 0, 1) _
  + .5 * (exn/xpn + exn(-1)/xpn(-1))       * d(log(ex), 0, 1)
```

Defines:
    xp, used in chunks 70a, 92d, and 110e.
Uses ecnia 21d, ecnian 22a, egfi 114d, egfin 115a, egfo 117d, egfon 118b, egsi 119e,
    egsin 120c, egso 122d, egson 123b, eh 18e, ehn 22c, epd 25c, epdn 35d, epi 26a, epin 35f,
    eps 26d, epsn 36b, ex 39c, exn 39f, and xpn 70a.

### 2.4.8    d.8 XB: Business output (BEA definition), cw 2009\$

51b        ⟨*variable XB* 51b⟩≡                                                     (221)
```
XB        = Business output (BEA definition), cw 2009$
```
Defines:
    XB, used in chunks 60a and 233.

51c        ⟨*stdverEqs xb* 51c⟩≡                                                    (254)
```
xb: xb - xb_aerr =  xbn/ (pxb/100)
```

Defines:
    xb, used in chunks 52a and 55a.
Uses pxb 108d and xbn 71c.

### 2.4.9    d.9 XG: Output of business sector plus oil imports, cw 2009\$

51d        ⟨*variable XG* 51d⟩≡                                                     (221)
```
XG        = Output of  business sector plus oil imports, cw 2009$
```
Defines:
    XG, used in chunks 59d and 233.

52a    ⟨*stdverEqs xg* 52a⟩≡                                              (254)
```
xg: log(xg) - xg_aerr = log(xg(-1))    _
   + (1 - .5*(.035*empn/(.01*pceng*ceng) + .035*empn(-1)/(.01*pceng(-1)*ceng(-1)))) *
   +  .5*(.035*empn/(.01*pceng*ceng) + .035*empn(-1)/(.01*pceng(-1)*ceng(-1))) * d(log
```

Defines:
   xg, used in chunks 41b, 55a, 92d, 104d, and 108b.
Uses ceng 41b, emp 41e, empn 42a, pceng 103a, and xb 51c.

### 2.4.10    d.10 XGPOT: Potential output of business sector plus oil imports, cw 2009$

52b    ⟨*variable XGPOT* 52b⟩≡                                            (221)
```
XGPOT     = Potential output of  business sector plus oil imports,  cw 2009$
```
Defines:
   XGPOT, used in chunk 233.

52c    ⟨*stdverEqs xgpot* 52c⟩≡                                          (254)
```
xgpot: log(xgpot) - xgpot_aerr = (y_xgpot(1) * (log(leppot) + log(qlww) + log(lqualt)
                               + y_xgpot(2) * log(ks) _
                               + y_xgpot(3) * log(veoa) _
                               + log(mfpt)) / (1-y_xgpot(4))
```

Defines:
   xgpot, used in chunks 43c, 50b, 55, 59a, and 69a.
Uses ks 31c, leppot 68b, lqualt 210f, mfpt 53c, qlww 61c, veoa 54a, and y_xgpot 52d.

52d    ⟨*stdver_Coeffs y_xgpot* 52d⟩≡                                     (263)
```
y_xgpot 4          .7000,.265,.035,.035
```
Defines:
   y_xgpot, used in chunk 52c.

### 2.4.11    d.11 HMFPT: Trend growth rate of multifactor productivity

52e    ⟨*variable HMFPT* 52e⟩≡                                           (221)
```
HMFPT     = Trend growth rate of multifactor productivity
```
Defines:
   HMFPT, used in chunk 233.

52f    ⟨*stdverEqs hmfpt* 52f⟩≡                                          (254)
```
hmfpt: hmfpt - hmfpt_aerr = y_hmfpt(1) + y_hmfpt(2)*hmfpt(-1)
```

Defines:
   hmfpt, used in chunks 53c, 56e, and 59e.
Uses y_hmfpt 53a.

53a        $\langle stdver\_Coeffs\ y\_hmfpt\ 53a \rangle \equiv$                                    (263)
           ```
           y_hmfpt 2        0.055,0.95
           ```
           Defines:
             y_hmfpt, used in chunk 52f.


## 2.4.12    d.12 MFPT: Multifactor productivity, trend level

53b        $\langle variable\ MFPT\ 53b \rangle \equiv$                                              (221)
           ```
           MFPT      = Multifactor productivity, trend level
           ```
           Defines:
             MFPT, used in chunk 233.

53c        $\langle stdverEqs\ mfpt\ 53c \rangle \equiv$                                             (254)
           ```
           mfpt: log(mfpt) - mfpt_aerr = y_mfpt(1) + log(mfpt(-1)) + hmfpt/400
           ```


           Defines:
             mfpt, used in chunks 52c and 56e.
           Uses hmfpt 52f and y_mfpt 53d.

53d        $\langle stdver\_Coeffs\ y\_mfpt\ 53d \rangle \equiv$                                     (263)
           ```
           y_mfpt   1        0.0
           ```
           Defines:
             y_mfpt, used in chunk 53c.


## 2.4.13    d.13 VEO: Desired energy-output ratio

53e        $\langle variable\ VEO\ 53e \rangle \equiv$                                               (221)
           ```
           VEO       = Desired energy-output ratio
           ```
           Defines:
             VEO, used in chunk 233.

53f        $\langle stdverEqs\ veo\ 53f \rangle \equiv$                                              (254)
           ```
           veo: log(veo) - veo_aerr = log(pxb/pceng)
           ```


           Defines:
             veo, used in chunk 54a.
           Uses pceng 103a and pxb 108d.


## 2.4.14    d.14 VEOA: Average energy-output ratio of existing capital stock

53g        $\langle variable\ VEOA\ 53g \rangle \equiv$                                              (221)
           ```
           VEOA      = Average energy-output ratio of existing capital stock
           ```
           Defines:
             VEOA, used in chunks 218c and 233.

54a      ⟨*stdverEqs veoa* 54a⟩≡                                                    (254)
```
veoa: log(veoa) - veoa_aerr = y_veoa(1) * log(veoa(-1)) _
                            + y_veoa(2) * log(veo(-1)) _
                            + uveoa
```

Defines:
    `veoa`, used in chunks 41b, 52c, and 59e.
Uses `uveoa` 218c, `veo` 53f, and `y_veoa` 54b.

54b      ⟨*stdver_Coeffs y_veoa* 54b⟩≡                                              (263)
```
y_veoa  2        0.988,0.012
```
Defines:
    `y_veoa`, used in chunk 54a.

### 2.4.15    d.15 EMPT: Petroleum imports trend, cw 2009$

54c      ⟨*variable EMPT* 54c⟩≡                                                     (221)
```
EMPT    = Petroleum imports trend, cw 2009$
```
Defines:
    `EMPT`, used in chunk 233.

54d      ⟨*stdverEqs empt* 54d⟩≡                                                    (254)
```
empt: d( log(empt), 0, 1) - empt_aerr   _
                = y_empt(1) * log(emp(-1)/empt(-1)) _
                + y_empt(2) * hgx/400
```

Defines:
    `empt`, used in chunks 55a and 60b.
Uses `emp` 41e, `hgx` 59e, and `y_empt` 54e.

54e      ⟨*stdver_Coeffs y_empt* 54e⟩≡                                              (263)
```
y_empt  2        0.10000000000000000E+00,1.00000000000000000E+00
```
Defines:
    `y_empt`, used in chunk 54d.

### 2.4.16    d.16 XBT: Potential business output, cw 2009$

54f      ⟨*variable XBT* 54f⟩≡                                                      (221)
```
XBT     = Potential business output, cw 2009$
```
Defines:
    `XBT`, used in chunks 58a and 233.

55a     ⟨*stdverEqs xbt* 55a⟩≡                                                (254)
```
xbt: log(xbt) - xbt_aerr = log(xb) + (log(xgpot/xg)  _
   - .5 *(.035*empn/(.01*pceng*ceng) + .035*empn(-1)/(.01*pceng(-1)*ceng(-1))) * log(empt/emp))
   (1 -   .5 *(.035*empn/(.01*pceng*ceng) + .035*empn(-1)/(.01*pceng(-1)*ceng(-1))))
```

Defines:
   xbt, used in chunks 50e and 55c.
Uses ceng 41b, emp 41e, empn 42a, empt 54d, pceng 103a, xb 51c, xg 52a, and xgpot 52c.


### 2.4.17   d.17 XGDPT: Potential GDP, cw 2009\$

55b     ⟨*variable XGDPT* 55b⟩≡                                               (221)
```
XGDPT     = Potential GDP, cw 2009$
```
Defines:
   XGDPT, used in chunks 58a and 233.

55c     ⟨*stdverEqs xgdpt* 55c⟩≡                                              (254)
```
xgdpt: log(xgdpt) - xgdpt_aerr = log(xbt) + log(uxbt)
```

Defines:
   xgdpt, used in chunks 59c, 61a, 72, 73, 126f, 129f, 130e, 159b, and 200–202.
Uses uxbt 58b and xbt 55a.


### 2.4.18   d.26 XENG: Crude energy production, cw 2009\$

55d     ⟨*variable XENG* 55d⟩≡                                                (221)
```
XENG      = Crude energy production, cw 2009$
```
Defines:
   XENG, used in chunks 218g and 233.

55e     ⟨*stdverEqs xeng* 55e⟩≡                                               (254)
```
xeng: xeng - xeng_aerr = uxeng * xgpot
```

Defines:
   xeng, used in chunk 41e.
Uses uxeng 218g and xgpot 52c.


### 2.4.19   d.27 XGDI: Gross domestic income, cw 2009\$

55f     ⟨*variable XGDI* 55f⟩≡                                                (221)
```
XGDI      = Gross domestic income, cw 2009$
```
Defines:
   XGDI, used in chunks 155b and 233.

56a     ⟨*stdverEqs xgdi* 56a⟩≡                                        (254)
```
xgdi: xgdi - xgdi_aerr = xgdo*mei
```

Defines:
   xgdi, used in chunk 86e.
Uses mei 155c and xgdo 56c.

### 2.4.20   d.28 XGDO: Gross domestic product, adjusted for measurement error, cw 2009$

56b     ⟨*variable XGDO* 56b⟩≡                                        (221)
```
XGDO      = Gross domestic product, adjusted for measurement error, cw 2009$
```
Defines:
   XGDO, used in chunks 155b, 156b, and 233.

56c     ⟨*stdverEqs xgdo* 56c⟩≡                                       (254)
```
xgdo: xgdo - xgdo_aerr = xgdp/mep
```

Defines:
   xgdo, used in chunks 56a, 59c, and 71c.
Uses mep 156c and xgdp 49a.

## 2.5   Labor Market

### 2.5.1   e.1 LHP: Aggregate labor hours, business sector (employee and self-employed)

56d     ⟨*variable LHP* 56d⟩≡                                         (221)
```
LHP       = Aggregate labor hours,  business sector (employee and  self-employed)
```
Defines:
   LHP, used in chunk 233.

56e     ⟨*stdverEqs lhp* 56e⟩≡                                        (254)
```
lhp: d( log(lhp), 0, 1 ) - lhp_aerr = _
                 y_lhp(1) * (log(qlhp(-1)/lhp(-1))-d( log(mfpt), 0, 1 )/.965) _
               + y_lhp(2) * d( log(lhp(-1)), 0, 1 ) _
               + y_lhp(3) * zlhp _
               + y_lhp(4) * (d( log(xgo), 0, 1 ) - hlprdt(-1)/400 - d( hmfpt, 0, :
               + y_lhp(5) * (d( log(xgo(-1)), 0, 1 ) - hlprdt(-2)/400 - d( hmfpt(-
```

Defines:
   lhp, used in chunks 57e, 62b, 66d, and 74f.
Uses hlprdt 69c, hmfpt 52f, mfpt 53c, qlhp 57c, xgo 50b, y_lhp 57a, and zlhp 187b.

57a          ⟨*stdver_Coeffs y_lhp* 57a⟩≡                                                                 (263)
    y_lhp    5        0.255040531063274,0.1491232069118806,0.3902648422452434,0.6097351577547565,-0.0
Defines:
    y_lhp, used in chunk 56e.


### 2.5.2   e.2 QLHP: Desired level of business labor hours

57b          ⟨*variable QLHP* 57b⟩≡                                                                       (221)
    QLHP     = Desired level of  business labor hours
Defines:
    QLHP, used in chunk 233.

57c          ⟨*stdverEqs qlhp* 57c⟩≡                                                                      (254)
    qlhp: qlhp - qlhp_aerr = xgo/lprdt



Defines:
    qlhp, used in chunks 56e and 187d.
Uses lprdt 69a and xgo 50b.


### 2.5.3   e.3 LWW: Workweek, business sector (employee and self-employed)

57d          ⟨*variable LWW* 57d⟩≡                                                                        (221)
    LWW      = Workweek,  business sector (employee and self-employed)
Defines:
    LWW, used in chunk 233.

57e          ⟨*stdverEqs lww* 57e⟩≡                                                                       (254)
    lww: d( log(lww), 0, 1 ) - lww_aerr _
                      = hqlww/400 _
                      + y_lww(1) * log(qlww(-1)/lww(-1)) _
                        + y_lww(2) * (d( log(lhp), 0, 1 ) - (hlept + hqlww)/400)



Defines:
    lww, used in chunk 62b.
Uses hlept 68d, hqlww 61e, lhp 56e, qlww 61c, and y_lww 57f.

57f          ⟨*stdver_Coeffs y_lww* 57f⟩≡                                                                 (263)
    y_lww    2        0.1984470411422383,0.3128887644653584
Defines:
    y_lww, used in chunk 57e.

### 2.5.4  d.18 UXBT: Stochastic component of trend ratio of XGDPT to XBT

58a      ⟨*variable UXBT* 58a⟩≡                                                    (221)
```
UXBT     = Stochastic component of trend ratio of XGDPT to XBT
```
Defines:
    UXBT, used in chunks 58d and 233.
Uses XBT 54f and XGDPT 55b.

58b      ⟨*stdverEqs uxbt* 58b⟩≡                                                  (254)
```
uxbt: log(uxbt) - uxbt_aerr = y_uxbt(1) + log(uxbt(-1)) + .0025*huxb
```

Defines:
    uxbt, used in chunk 55c.
Uses huxb 58e and y_uxbt 58c.

58c      ⟨*stdver_Coeffs y_uxbt* 58c⟩≡                                            (263)
```
y_uxbt  1        0.0
```
Defines:
    y_uxbt, used in chunk 58b.

### 2.5.5  d.19 HUXB: Drift term in UXBT

58d      ⟨*variable HUXB* 58d⟩≡                                                   (221)
```
HUXB     = Drift term in UXBT
```
Defines:
    HUXB, used in chunk 233.
Uses UXBT 58a.

58e      ⟨*stdverEqs huxb* 58e⟩≡                                                  (254)
```
huxb: huxb - huxb_aerr = (1-dglprd) *(y_huxb(1) + y_huxb(2)*huxb(-1))
```

Defines:
    huxb, used in chunks 58b and 60d.
Uses dglprd 207d and y_huxb 58f.

58f      ⟨*stdver_Coeffs y_huxb* 58f⟩≡                                            (263)
```
y_huxb  2        -0.01817091647656927,0.95
```
Defines:
    y_huxb, used in chunk 58e.

### 2.5.6  d.20 XGAP: Output gap for business plus oil imports (100*log(actual/potential)

58g      ⟨*variable XGAP* 58g⟩≡                                                   (221)
```
XGAP     = Output gap for  business plus oil imports  (100*log(actual/potential)
```
Defines:
    XGAP, used in chunk 233.

59a        ⟨*stdverEqs xgap* 59a⟩≡                                                            (254)
           xgap: xgap - xgap_aerr = 100*log(xgo/xgpot)


           Defines:
               xgap, used in chunks 170–80, 187b, 191a, and 193–99.
           Uses xgo 50b and xgpot 52c.


### 2.5.7   d.21 XGAP2: Output gap for GDP (100*log(actual/potential)

59b        ⟨*variable XGAP2* 59b⟩≡                                                           (221)
           XGAP2     = Output gap for GDP (100*log(actual/potential)
           Defines:
               XGAP2, used in chunk 233.


59c        ⟨*stdverEqs xgap2* 59c⟩≡                                                          (254)
           xgap2: xgap2 - xgap2_aerr = 100 * log(xgdo/xgdpt)


           Defines:
               xgap2, used in chunks 40b, 50, 62d, 86b, 114d, 116a, 117d, 119e, 121b, 122d, 127d, 130b,
                   132–36, 139–41, 154a, 158b, 181–86, and 200–202.
           Uses xgdo 56c and xgdpt 55c.


### 2.5.8   d.22 HGX: Trend growth rate of XG, cw 2009$ (annual rate)

59d        ⟨*variable HGX* 59d⟩≡                                                             (221)
           HGX       = Trend growth rate of XG, cw 2009$ (annual rate)
           Defines:
               HGX, used in chunk 233.
           Uses XG 51d.


59e        ⟨*stdverEqs hgx* 59e⟩≡                                                            (254)
           hgx: hgx - hgx_aerr = (.7*(hlept + hqlww + 400*d( log(lqualt), 0, 1 )) + .265*hks _
                           + .035*400*d( log(veoa), 0, 1 ) + hmfpt)/.965


           Defines:
               hgx, used in chunks 28, 29a, 41b, 54d, 60b, 69c, and 195–98.
           Uses hks 31a, hlept 68d, hmfpt 52f, hqlww 61e, lqualt 210f, and veoa 54a.

### 2.5.9   d.23 HXBT: Trend rate of growth of XB , cw 2009$ (annual rate)

60a      ⟨*variable HXBT* 60a⟩≡                                                      (221)
         HXBT     = Trend rate of growth of XB  , cw 2009$ (annual rate)

Defines:
    HXBT, used in chunk 233.
Uses XB 51b.

60b      ⟨*stdverEqs hxbt* 60b⟩≡                                                    (254)
         hxbt: hxbt - hxbt_aerr = ( hgx  _
           - .5 *(.035*empn/(.01*pceng*ceng) + .035*empn(-1)/(.01*pceng(-1)*ceng(-1))) * 400*
           (1 -  .5 *(.035*empn/(.01*pceng*ceng) + .035*empn(-1)/(.01*pceng(-1)*ceng(-1))))

Defines:
    hxbt, used in chunk 60d.
Uses ceng 41b, empn 42a, empt 54d, hgx 59e, and pceng 103a.

### 2.5.10   d.24 HGGDPT: Trend growth rate of XGDP, cw 2009$ (annual rate)

60c      ⟨*variable HGGDPT* 60c⟩≡                                                   (221)
         HGGDPT   = Trend growth rate of XGDP, cw 2009$ (annual rate)

Defines:
    HGGDPT, used in chunk 233.
Uses XGDP 48c.

60d      ⟨*stdverEqs hggdpt* 60d⟩≡                                                  (254)
         hggdpt: hggdpt - hggdpt_aerr = hxbt + huxb

Defines:
    hggdpt, used in chunks 20e, 21a, 115c, 117a, 118d, 120e, 122–24, 126a, 159b, 183b, 184c,
        186b, and 199a.
Uses huxb 58e and hxbt 60b.

### 2.5.11   d.25 XGDPTN: Potential GDP, current $

60e      ⟨*variable XGDPTN* 60e⟩≡                                                   (221)
         XGDPTN   = Potential GDP, current $

Defines:
    XGDPTN, used in chunk 233.

61a ⟨*stdverEqs xgdptn* 61a⟩≡                                           (254)
```
xgdptn: xgdptn - xgdptn_aerr = .01*pgdp*xgdpt
```

Defines:
  xgdptn, used in chunks 45c, 84d, 115c, 117a, 118d, 120e, 122–24, and 126a.
Uses pgdp 106f and xgdpt 55c.

## 2.5.12   e.4 QLWW: Trend workweek, business sector (employee and self-employed)

61b ⟨*variable QLWW* 61b⟩≡                                             (221)
```
QLWW      = Trend workweek,  business sector (employee and  self-employed)
```
Defines:
  QLWW, used in chunk 233.

61c ⟨*stdverEqs qlww* 61c⟩≡                                            (254)
```
qlww: log(qlww) - qlww_aerr = log(qlww(-1)) + hqlww(-1)/400
```

Defines:
  qlww, used in chunks 52c, 57e, 66d, and 69a.
Uses hqlww 61e.

## 2.5.13   e.5 HQLWW: Trend growth rate of workweek

61d ⟨*variable HQLWW* 61d⟩≡                                            (221)
```
HQLWW     = Trend growth rate of workweek
```
Defines:
  HQLWW, used in chunk 233.

61e ⟨*stdverEqs hqlww* 61e⟩≡                                           (254)
```
hqlww: hqlww - hqlww_aerr = y_hqlww(1) * hqlww(-1) + (1-y_hqlww(1)) * y_hqlww(2)
```

Defines:
  hqlww, used in chunks 57e, 59e, 61c, 69c, and 187b.
Uses y_hqlww 61f.

61f ⟨*stdver_Coeffs y_hqlww* 61f⟩≡                                     (263)
```
y_hqlww 2       .95,-0.3129029344874886
```
Defines:
  y_hqlww, used in chunk 61e.

### 2.5.14    e.6 LEP: Employment in business sector (employee and self-employed)

62a     ⟨*variable LEP* 62a⟩≡                                            (221)
```
LEP       = Employment in  business sector (employee and  self-employed)
```
Defines:
  LEP, used in chunks 68c and 233.

62b     ⟨*stdverEqs lep* 62b⟩≡                                           (254)
```
lep: lep - lep_aerr = lhp / lww
```

Defines:
  lep, used in chunk 63e.
Uses lhp 56e and lww 57e.

### 2.5.15    e.7 LEO: Difference between household and business sector payroll employment, less gov't emp.

62c     ⟨*variable LEO* 62c⟩≡                                            (221)
```
LEO       = Difference between household and business sector payroll employment, less
```
Defines:
  LEO, used in chunk 233.
Uses emp 41e.

62d     ⟨*stdverEqs leo* 62d⟩≡                                           (254)
```
leo: log(leo) - leo_aerr = log(qleor*qlf) + y_leo(1)*log(leo(-1)/(qleor(-1)*qlf(-1)))
                                           + y_leo(2)*xgap2(-1)
```

Defines:
  leo, used in chunk 63e.
Uses qleor 211g, qlf 66f, xgap2 59c, and y_leo 62e.

62e     ⟨*stdver_Coeffs y_leo* 62e⟩≡                                     (263)
```
y_leo    2       0.6995814979956745,-0.01620869768699893
```
Defines:
  y_leo, used in chunk 62d.

### 2.5.16    e.8 LEF: Federal civilian employment ex. gov. enterprise

62f     ⟨*variable LEF* 62f⟩≡                                            (221)
```
LEF       = Federal civilian employment ex. gov. enterprise
```
Defines:
  LEF, used in chunks 217a and 233.
Uses ex 39c.

63a       ⟨*stdverEqs lef* 63a⟩≡                                                                    (254)
```
lef: d( log(lef), 0, 1 ) - lef_aerr = d( log(ulef), 0, 1 )  _
                      + d( log(egfl), 0, 1 )  _
                - dglprd*(d( log(lprdt), 0, 1 ))
```

Defines:
  `lef`, used in chunks 63e and 67b.
Uses `dglprd` 207d, `egfl` 116a, `lprdt` 69a, and `ulef` 217a.


## 2.5.17  e.9 LES: S&L government employment ex. gov. enterprise

63b       ⟨*variable LES* 63b⟩≡                                                                    (221)
```
LES      = S&L government employment ex. gov. enterprise
```
Defines:
  `LES`, used in chunks 217b and 233.
Uses `ex` 39c.


63c       ⟨*stdverEqs les* 63c⟩≡                                                                    (254)
```
les: d( log(les), 0, 1 ) - les_aerr = d( log(ules), 0, 1 )  _
                      + d( log(egsl), 0, 1 )  _
                - dglprd*(d( log(lprdt), 0, 1 ))
```

Defines:
  `les`, used in chunks 63e and 67e.
Uses `dglprd` 207d, `egsl` 121b, `lprdt` 69a, and `ules` 217b.


## 2.5.18  e.10 LEH: Civilian employment (break adjusted)

63d       ⟨*variable LEH* 63d⟩≡                                                                    (221)
```
LEH      = Civilian employment (break adjusted)
```
Defines:
  `LEH`, used in chunk 233.


63e       ⟨*stdverEqs leh* 63e⟩≡                                                                    (254)
```
leh: leh - leh_aerr = lep + leo + les + lef
```

Defines:
  `leh`, used in chunk 65f.
Uses `lef` 63a, `leo` 62d, `lep` 62b, and `les` 63c.

### 2.5.19   e.11 LFPR: Labor force participation rate

64a      ⟨*variable LFPR* 64a⟩≡                                                  (221)
```
LFPR     = Labor force participation rate
```
Defines:
  LFPR, used in chunk 233.

64b      ⟨*stdverEqs lfpr* 64b⟩≡                                                 (254)
```
lfpr: d( lfpr, 0, 1)  - lfpr_aerr = hqlfpr _
                            + y_lfpr(1) * (qlfpr(-1) - lfpr(-1)) _
                            + y_lfpr(2) * (lur(-1) - lurnat(-1))
```

Defines:
  lfpr, used in chunk 65d.
Uses hqlfpr 65a, lur 65f, lurnat 69e, qlfpr 64e, and y_lfpr 64c.

64c      ⟨*stdver_Coeffs y_lfpr* 64c⟩≡                                           (263)
```
y_lfpr  2        0.5580285205989896,-0.0008755566736369085
```
Defines:
  y_lfpr, used in chunk 64b.

### 2.5.20   e.12 QLFPR: Trend labor force participation rate

64d      ⟨*variable QLFPR* 64d⟩≡                                                 (221)
```
QLFPR    = Trend labor force participation rate
```
Defines:
  QLFPR, used in chunks 64f and 233.

64e      ⟨*stdverEqs qlfpr* 64e⟩≡                                                (254)
```
qlfpr: qlfpr - qlfpr_aerr = qlfpr(-1) + hqlfpr
```

Defines:
  qlfpr, used in chunks 64b, 66f, and 68d.
Uses hqlfpr 65a.

### 2.5.21   e.13 HQLFPR: Drift component of change in QLFPR

64f      ⟨*variable HQLFPR* 64f⟩≡                                                (221)
```
HQLFPR   = Drift component of change in QLFPR
```
Defines:
  HQLFPR, used in chunk 233.
Uses QLFPR 64d.

65a      ⟨*stdverEqs hqlfpr* 65a⟩≡                                                      (254)

```
hqlfpr: hqlfpr - hqlfpr_aerr = y_hqlfpr(1) + y_hqlfpr(2)*hqlfpr(-1)
```

Defines:
   `hqlfpr`, used in chunks 64, 67, and 68d.
Uses `y_hqlfpr` 65b.

65b      ⟨*stdver_Coeffs y_hqlfpr* 65b⟩≡                                              (263)

```
y_hqlfpr        2         0.00,0.95
```

Defines:
   `y_hqlfpr`, used in chunk 65a.

## 2.5.22    e.14 LF: Civilian labor force (break adjusted)

65c      ⟨*variable LF* 65c⟩≡                                                       (221)

```
LF       = Civilian labor force (break adjusted)
```

Defines:
   `LF`, used in chunk 233.

65d      ⟨*stdverEqs lf* 65d⟩≡                                                     (254)

```
lf: lf - lf_aerr = lfpr * n16
```

Defines:
   `lf`, used in chunk 65f.
Uses `lfpr` 64b and `n16` 210h.

## 2.5.23    e.15 LUR: Civilian unemployment rate (break adjusted)

65e      ⟨*variable LUR* 65e⟩≡                                                 (221)

```
LUR       = Civilian unemployment rate (break adjusted)
```

Defines:
   `LUR`, used in chunk 233.

65f      ⟨*stdverEqs lur* 65f⟩≡                                                  (254)

```
lur: lur - lur_aerr = 100*(1 - leh/lf)
```

Defines:
   `lur`, used in chunks 64b, 66b, 87e, 139e, 141c, 143b, 181a, 182a, and 188–90.
Uses `leh` 63e and `lf` 65d.

### 2.5.24   e.16 LURBLS: Civilian unemployment rate (published)

66a        ⟨*variable LURBLS* 66a⟩≡                                            (221)
           LURBLS   = Civilian unemployment rate (published)
           Defines:
             LURBLS, used in chunk 233.

66b        ⟨*stdverEqs lurbls* 66b⟩≡                                          (254)
           lurbls: lurbls - lurbls_aerr = lur


           Defines:
             lurbls, never used.
           Uses lur 65f.


### 2.5.25   e.17 QLEP: Desired level of business employment

66c        ⟨*variable QLEP* 66c⟩≡                                             (221)
           QLEP     = Desired level of  business employment
           Defines:
             QLEP, used in chunk 233.

66d        ⟨*stdverEqs qlep* 66d⟩≡                                            (254)
           qlep: qlep - qlep_aerr = lhp / qlww


           Defines:
             qlep, never used.
           Uses lhp 56e and qlww 61c.


### 2.5.26   e.18 QLF: Desired level of civilian labor force

66e        ⟨*variable QLF* 66e⟩≡                                              (221)
           QLF      = Desired level of civilian labor force
           Defines:
             QLF, used in chunk 233.

66f        ⟨*stdverEqs qlf* 66f⟩≡                                             (254)
           qlf: qlf - qlf_aerr = qlfpr * n16


           Defines:
             qlf, used in chunks 62d and 68b.
           Uses n16 210h and qlfpr 64e.

### 2.5.27   e.19 LEFT: Federal civilian employment ex. gov. enterprise, trend

67a        ⟨*variable LEFT* 67a⟩≡                                                    (221)
           LEFT    = Federal civilian employment ex. gov. enterprise, trend
           Defines:
             LEFT, used in chunk 233.
           Uses ex 39c.

67b        ⟨*stdverEqs left* 67b⟩≡                                                  (254)
           left: left - left_aerr = y_left(1) * left(-1) * (hqlfpr+n16/n16(-1))   _
                           + y_left(2) * lef


           Defines:
             left, used in chunk 68.
           Uses hqlfpr 65a, lef 63a, n16 210h, and y_left 67c.

67c        ⟨*stdver_Coeffs y_left* 67c⟩≡                                            (263)
           y_left  2        0.90000000000000000E+00,0.10000000000000000E+00
           Defines:
             y_left, used in chunk 67b.

### 2.5.28   e.20 LEST: S&L government employment ex. gov. enterprise, trend

67d        ⟨*variable LEST* 67d⟩≡                                                   (221)
           LEST    = S&L government employment ex. gov. enterprise, trend
           Defines:
             LEST, used in chunk 233.
           Uses ex 39c.

67e        ⟨*stdverEqs lest* 67e⟩≡                                                  (254)
           lest: lest - lest_aerr = y_lest(1) * lest(-1) * (hqlfpr+n16/n16(-1))   _
                           + y_lest(2) * les


           Defines:
             lest, used in chunk 68.
           Uses hqlfpr 65a, les 63c, n16 210h, and y_lest 67f.

67f        ⟨*stdver_Coeffs y_lest* 67f⟩≡                                            (263)
           y_lest  2        0.90000000000000000E+00,0.10000000000000000E+00
           Defines:
             y_lest, used in chunk 67e.

### 2.5.29   e.21 LEPPOT: Potential employment in business sector

68a      ⟨*variable LEPPOT* 68a⟩≡                                                        (221)
```
LEPPOT   = Potential employment in  business sector
```
Defines:
   LEPPOT, used in chunk 233.

68b      ⟨*stdverEqs leppot* 68b⟩≡                                                      (254)
```
leppot: leppot - leppot_aerr = qlf*(1-.01*lurnat - qleor) - left - lest
```

Defines:
   leppot, used in chunks 52c, 68d, and 69a.
Uses left 67b, lest 67e, lurnat 69e, qleor 211g, and qlf 66f.

### 2.5.30   e.22 HLEPT: Trend growth rate of LEP (annual rate)

68c      ⟨*variable HLEPT* 68c⟩≡                                                         (221)
```
HLEPT    = Trend growth rate of LEP (annual rate)
```
Defines:
   HLEPT, used in chunk 233.
Uses LEP 62a.

68d      ⟨*stdverEqs hlept* 68d⟩≡                                                        (254)
```
hlept: hlept - hlept_aerr = (1-dmpstb) * 400 *  _
         (hqlfpr * n16 * (1-.01*lurnat-qleor) _
       + d( n16, 0, 1) * qlfpr * (1-.01*lurnat-qleor) _
       - d( left, 0, 1) _
       - d( lest, 0, 1) ) _
       /  ( leppot/2 +  leppot(-1)/2)  _
       + dmpstb * 400 * d( log(n16), 0, 1 )
```

Defines:
   hlept, used in chunks 57e, 59e, 69c, and 187b.
Uses dmpstb 208a, hqlfpr 65a, left 67b, leppot 68b, lest 67e, lurnat 69e, n16 210h,
   qleor 211g, and qlfpr 64e.

### 2.5.31   e.23 LPRDT: Trend labor productivity

68e      ⟨*variable LPRDT* 68e⟩≡                                                         (221)
```
LPRDT    = Trend labor productivity
```
Defines:
   LPRDT, used in chunk 233.

69a    ⟨*stdverEqs lprdt* 69a⟩≡                                              (254)
    `lprdt: log(lprdt) - lprdt_aerr  = log(xgpot) - log(leppot) - log(qlww)`

Defines:
    `lprdt`, used in chunks 57c, 63, 91e, 107, and 187b.
Uses `leppot` 68b, `qlww` 61c, and `xgpot` 52c.

### 2.5.32   e.24 HLPRDT: Trend growth rate of output per hour

69b    ⟨*variable HLPRDT* 69b⟩≡                                             (221)
    `HLPRDT   = Trend growth rate of output per hour`
Defines:
    `HLPRDT`, used in chunk 233.

69c    ⟨*stdverEqs hlprdt* 69c⟩≡                                            (254)
    `hlprdt: hlprdt - hlprdt_aerr = hgx - hlept - hqlww`

Defines:
    `hlprdt`, used in chunks 56e, 87e, 181a, and 182a.
Uses `hgx` 59e, `hlept` 68d, and `hqlww` 61e.

### 2.5.33   e.25 LURNAT: Natural rate of unemployment

69d    ⟨*variable LURNAT* 69d⟩≡                                             (221)
    `LURNAT   = Natural rate of unemployment`
Defines:
    `LURNAT`, used in chunk 233.

69e    ⟨*stdverEqs lurnat* 69e⟩≡                                            (254)
    `lurnat: lurnat - lurnat_aerr = lurnat(-1)`

Defines:
    `lurnat`, used in chunks 64b, 68, 87e, 139e, 141c, 181a, 182a, and 188–90.

## 2.6   Nominal Income

### 2.6.1   f.1 XPN: Final sales plus imports less government labor, current $

69f    ⟨*variable XPN* 69f⟩≡                                                (221)
    `XPN      = Final sales plus imports less government labor, current $`
Defines:
    `XPN`, used in chunk 233.

70a    ⟨*stdverEqs xpn* 70a⟩≡                                                        (254)
```
xpn: xpn - xpn_aerr = .01 * pxp * xp
```

Defines:
    xpn, used in chunks 51a, 70c, 88c, 92d, 93b, and 98a.
Uses pxp 93b and xp 51a.

### 2.6.2   f.2 XGDPN: GDP, current $

70b    ⟨*variable XGDPN* 70b⟩≡                                                       (221)
```
XGDPN     = GDP, current $
```
Defines:
    XGDPN, used in chunk 233.

70c    ⟨*stdverEqs xgdpn* 70c⟩≡                                                      (254)
```
xgdpn: xgdpn - xgdpn_aerr = xpn + ein - emn + egfln + egsln
```

Defines:
    xgdpn, used in chunks 47e, 49, 70, 71, 77b, 106f, 133d, 135e, and 163d.
Uses egfln 116d, egsln 121e, ein 36d, emn 42c, and xpn 70a.

### 2.6.3   f.3 XFSN: Final sales of gross domestic product, current $

70d    ⟨*variable XFSN* 70d⟩≡                                                        (221)
```
XFSN      = Final sales of gross domestic product, current $
```
Defines:
    XFSN, used in chunk 233.

70e    ⟨*stdverEqs xfsn* 70e⟩≡                                                       (254)
```
xfsn: xfsn - xfsn_aerr = xgdpn - ein
```

Defines:
    xfsn, used in chunks 48b and 49a.
Uses ein 36d and xgdpn 70c.

### 2.6.4   f.4 XGDEN: Nominal Absorption, current $

70f    ⟨*variable XGDEN* 70f⟩≡                                                       (221)
```
XGDEN     = Nominal Absorption, current $
```
Defines:
    XGDEN, used in chunks 214f and 233.

71a    ⟨*stdverEqs xgden* 71a⟩≡                                              (254)
```
xgden: xgden - xgden_aerr = xgdpn + emn - exn
```


Defines:
  xgden, used in chunks 40b and 49e.
Uses emn 42c, exn 39f, and xgdpn 70c.


## 2.6.5    f.5 XBN: Business output (BEA definition), current $

71b    ⟨*variable XBN* 71b⟩≡                                                (221)
```
XBN      = Business output (BEA definition), current $
```
Defines:
  XBN, used in chunk 233.


71c    ⟨*stdverEqs xbn* 71c⟩≡                                               (254)
```
xbn: xbn - xbn_aerr =  pxb/100*xbo + xgdpn -xgdo*pgdp/100
```


Defines:
  xbn, used in chunks 51c, 71e, 75b, and 128c.
Uses pgdp 106f, pxb 108d, xbo 50e, xgdo 56c, and xgdpn 70c.


## 2.6.6    f.6 XGN: Output of business sector plus oil imports, current $

71d    ⟨*variable XGN* 71d⟩≡                                                (221)
```
XGN      = Output of  business sector plus oil imports, current $
```
Defines:
  XGN, used in chunk 233.


71e    ⟨*stdverEqs xgn* 71e⟩≡                                               (254)
```
xgn: xgn - xgn_aerr = xbn + empn
```


Defines:
  xgn, used in chunks 92d and 108b.
Uses empn 42a and xbn 71c.


## 2.6.7    f.7 JCCACN: Consumption of fixed capital, corporate, current $

71f    ⟨*variable JCCACN* 71f⟩≡                                             (221)
```
JCCACN   = Consumption of fixed capital, corporate, current $
```
Defines:
  JCCACN, used in chunks 216c and 233.

72a    $\langle stdverEqs\ jccacn\ 72a\rangle \equiv$                                         (254)
```
jccacn: jccacn - jccacn_aerr = ujccac*(jccan - jygfgn - jygfen - jygsgn - jygsen _
                               -.01*jrh*phr(-1)*pxp(-1)*kh(-1))
```

Defines:
    jccacn, used in chunks 74b and 78d.
Uses jccan 72c, jrh 210a, jygfen 72e, jygfgn 73b, jygsen 73d, jygsgn 73f, kh 23a, phr 95d,
    pxp 93b, and ujccac 216c.

### 2.6.8    f.8 JCCAN: Consumption of fixed capital, current $

72b    $\langle variable\ JCCAN\ 72b\rangle \equiv$                                         (221)
```
JCCAN    = Consumption of fixed capital, current $
```
Defines:
    JCCAN, used in chunks 216b and 233.

72c    $\langle stdverEqs\ jccan\ 72c\rangle \equiv$                                         (254)
```
jccan: jccan - jccan_aerr = jygfgn + jygfen + jygsgn + jygsen + .01*ujcca*pxp(-1) _
               * (phr(-1)*kh(-1)*jrh + ppsr(-1)*kps(-1)*jrps _
                 + pkpdr(-1)*kpd(-1)*jrpd)
```

Defines:
    jccan, used in chunks 72a and 74.
Uses jrh 210a, jrpd 210b, jrps 210d, jygfen 72e, jygfgn 73b, jygsen 73d, jygsgn 73f,
    kh 23a, kpd 29g, kps 30d, phr 95d, pkpdr 107e, ppsr 96e, pxp 93b, and ujcca 216b.

### 2.6.9    f.9 JYGFEN: CFC, federal government enterprises, current $

72d    $\langle variable\ JYGFEN\ 72d\rangle \equiv$                                         (221)
```
JYGFEN   = CFC, federal government enterprises, current $
```
Defines:
    JYGFEN, used in chunks 216d and 233.

72e    $\langle stdverEqs\ jygfen\ 72e\rangle \equiv$                                         (254)
```
jygfen: jygfen - jygfen_aerr = ujygfe *  (.01 * pgdp * xgdpt)
```

Defines:
    jygfen, used in chunks 72, 74b, 124a, 133d, and 138b.
Uses pgdp 106f, ujygfe 216d, and xgdpt 55c.

### 2.6.10    f.10 JYGFGN: CFC, federal government, general, current \$

73a     ⟨*variable JYGFGN* 73a⟩≡                                      (221)

```
JYGFGN   = CFC, federal government, general, current $
```
Defines:
    JYGFGN, used in chunks 216e and 233.

73b     ⟨*stdverEqs jygfgn* 73b⟩≡                                    (254)

```
jygfgn: jygfgn - jygfgn_aerr = ujygfg *  (.01 * pgdp * xgdpt)
```

Defines:
    jygfgn, used in chunks 72, 74b, 124a, 133d, and 138b.
Uses pgdp 106f, ujygfg 216e, and xgdpt 55c.

### 2.6.11    f.11 JYGSEN: CFC, state and local government enterprises, current \$

73c     ⟨*variable JYGSEN* 73c⟩≡                                      (221)

```
JYGSEN   = CFC, state and local government enterprises, current $
```
Defines:
    JYGSEN, used in chunks 216f and 233.

73d     ⟨*stdverEqs jygsen* 73d⟩≡                                    (254)

```
jygsen: jygsen - jygsen_aerr = ujygse *  (.01 * pgdp * xgdpt)
```

Defines:
    jygsen, used in chunks 72, 74b, 128a, 135e, and 138d.
Uses pgdp 106f, ujygse 216f, and xgdpt 55c.

### 2.6.12    f.12 JYGSGN: CFC, state and local government, general, current \$

73e     ⟨*variable JYGSGN* 73e⟩≡                                      (221)

```
JYGSGN   = CFC, state and local government, general, current $
```
Defines:
    JYGSGN, used in chunks 216g and 233.

73f     ⟨*stdverEqs jygsgn* 73f⟩≡                                      (254)

```
jygsgn: jygsgn - jygsgn_aerr = ujygsg *  (.01 * pgdp * xgdpt)
```

Defines:
    jygsgn, used in chunks 72, 74b, 128a, 135e, and 138d.
Uses pgdp 106f, ujygsg 216g, and xgdpt 55c.

### 2.6.13   f.13 JYNCN: Noncorporate business CFC, current $

74a        ⟨*variable JYNCN* 74a⟩≡                                                    (221)
           JYNCN     = Noncorporate business CFC, current $
           Defines:
             JYNCN, used in chunk 233.

74b        ⟨*stdverEqs jyncn* 74b⟩≡                                                   (254)
           jyncn: jyncn - jyncn_aerr = jccan - jccacn - jygfgn - jygfen - jygsgn - jygsen


           Defines:
             jyncn, never used.
           Uses jccacn 72a, jccan 72c, jygfen 72e, jygfgn 73b, jygsen 73d, and jygsgn 73f.


### 2.6.14   f.14 YNIN: National income

74c        ⟨*variable YNIN* 74c⟩≡                                                     (221)
           YNIN      = National income
           Defines:
             YNIN, used in chunks 219h and 233.

74d        ⟨*stdverEqs ynin* 74d⟩≡                                                    (254)
           ynin: ynin - ynin_aerr = uyni*(xgdin+fynin-jccan)


           Defines:
             ynin, used in chunks 75d, 77b, and 86b.
           Uses fynin 44d, jccan 72c, uyni 219h, and xgdin 86e.


### 2.6.15   f.15 YNILN: Labor income (national income component)

74e        ⟨*variable YNILN* 74e⟩≡                                                    (221)
           YNILN     = Labor income (national income component)
           Defines:
             YNILN, used in chunk 233.

74f        ⟨*stdverEqs yniln* 74f⟩≡                                                   (254)
           yniln: yniln - yniln_aerr = 0.01 *  uyl * (pl*lhp + pgfl*egfl + pgsl*egsl)


           Defines:
             yniln, used in chunks 75d, 77b, 81f, 86b, 132a, and 137f.
           Uses egfl 116a, egsl 121b, lhp 56e, pgfl 107a, pgsl 107c, pl 90d, and uyl 219g.

### 2.6.16   f.16 YNISEN: Propprietors' income (national income component)

75a    ⟨*variable YNISEN* 75a⟩≡                                              (221)
```
YNISEN   = Propprietors' income (national income component)
```
Defines:
   YNISEN, used in chunk 233.

75b    ⟨*stdverEqs ynisen* 75b⟩≡                                            (254)
```
ynisen: ynisen - ynisen_aerr = uysen*xbn
```

Defines:
   ynisen, used in chunks 77b and 83e.
Uses uysen 220c and xbn 71c.


### 2.6.17   f.17 YNIIN: Net interest and rental income (national income component)

75c    ⟨*variable YNIIN* 75c⟩≡                                              (221)
```
YNIIN    = Net interest and rental income (national income component)
```
Defines:
   YNIIN, used in chunk 233.

75d    ⟨*stdverEqs yniin* 75d⟩≡                                             (254)
```
yniin: yniin/(ynin(-1)-yniln(-1)) - yniin_aerr   _
                = y_yniin(1) _
                + y_yniin(2) * (yniin(-1)/(ynin(-2)-yniln(-2))) _
                + y_yniin(3) * (.01*rrmet*.01*phr(-1)*pxp(-1)*kh(-1)/(ynin(-1)-yniln(-1))) _
                + y_yniin(4) * ((.01*rbbbe)*(wdnfcn(-1)/(ynin(-1)-yniln(-1)))) _
                + y_yniin(5) * (.01*d( rbbbe*(wdnfcn(-1)/(ynin(-1)-yniln(-1))), 0, 1 )) _
                + y_yniin(6) * (.01*fnin(-1)/(ynin(-1)-yniln(-1)))
```

Defines:
   yniin, used in chunks 77b and 81b.
Uses fnin 43e, kh 23a, phr 95d, pxp 93b, rbbbe 150f, rrmet 157f, wdnfcn 86b, y_yniin 75e,
   yniln 74f, and ynin 74d.

75e    ⟨*stdver_Coeffs y_yniin* 75e⟩≡                                       (263)
```
y_yniin 6        0.01335460515030035,0.8715712577633621,0.03107757397810296,0.1284287422366379,0
```
Defines:
   y_yniin, used in chunk 75d.

## 2.6.18   f.18 QYNIDN: Desired level of dividends

76a        ⟨*variable QYNIDN* 76a⟩≡                                                          (221)
           QYNIDN   = Desired level of dividends
           Defines:
             QYNIDN, used in chunk 233.

76b        ⟨*stdverEqs qynidn* 76b⟩≡                                                         (254)
           qynidn: log(qynidn) - qynidn_aerr = y_qynidn(1)   _
                                       + y_qynidn(2)*d79a   _
                                       + y_qynidn(3)*log((@recode((ynicpn-tfcin-tscin)>(.01),ynicp

           Defines:
             qynidn, used in chunks 76e and 199.
           Uses tfcin 131a, tscin 136f, y_qynidn 76c, and ynicpn 77b.

76c        ⟨*stdver_Coeffs y_qynidn* 76c⟩≡                                                   (263)
           y_qynidn        3         -0.9889159016018153,0.3614481909275686,1
           Defines:
             y_qynidn, used in chunk 76b.

## 2.6.19   f.19 YNIDN: Dividends (national income component)

76d        ⟨*variable YNIDN* 76d⟩≡                                                           (221)
           YNIDN    = Dividends (national income component)
           Defines:
             YNIDN, used in chunks 198e and 233.

76e        ⟨*stdverEqs ynidn* 76e⟩≡                                                          (254)
           ynidn: d( log((ynidn-ymsdn)/pxb), 0, 1 ) - ynidn_aerr =   _
                                   y_ynidn(1) * log(qynidn(-1)/(ynidn(-1)-ymsdn(-1)))  _
                                   + y_ynidn(2) * d( log((ynidn(-1)-ymsdn(-1))/pxb(-1)), 0, 1 )
                                   + y_ynidn(3) * zynid

           Defines:
             ynidn, used in chunks 78d and 83.
           Uses pxb 108d, qynidn 76b, y_ynidn 76f, ymsdn 220d, and zynid 199a 199c.

76f        ⟨*stdver_Coeffs y_ynidn* 76f⟩≡                                                    (263)
           y_ynidn 3        0.0903554997290158,-0.1364018197288298,1
           Defines:
             y_ynidn, used in chunk 76e.

## 2.6.20   f.20 YNICPN: Corporate profits (national income component)

77a       ⟨*variable YNICPN* 77a⟩≡                                              (221)
          YNICPN   = Corporate profits (national income component)
          Defines:
             YNICPN, used in chunks 220a and 233.

77b       ⟨*stdverEqs ynicpn* 77b⟩≡                                            (254)
          ynicpn: ynicpn - ynicpn_aerr = uynicp * (@recode((ynin-yniln-yniin-ynisen-tfibn-tsibn+gfsubn+gs


          Defines:
             ynicpn, used in chunks 44b, 76b, 78d, 83a, 131a, 132c, 136f, 153c, 198a, and 202f.
          Uses gfsubn 126d, gssubn 129b, tfcin 131a, tfibn 131c, tscin 136f, tsibn 137b,
             uynicp 220a, xgdpn 70c, yniin 75d, yniln 74f, ynin 74d, and ynisen 75b.

## 2.6.21   f.21 YPN: Personal income

77c       ⟨*variable YPN* 77c⟩≡                                                (221)
          YPN      = Personal income
          Defines:
             YPN, used in chunks 220b and 233.

77d       ⟨*stdverEqs ypn* 77d⟩≡                                               (254)
          ypn: ypn - ypn_aerr = uyp * (yhln + yhtn + yhptn)


          Defines:
             ypn, used in chunks 77f, 131e, and 137d.
          Uses uyp 220b, yhln 81f, yhptn 83e, and yhtn 85d.

## 2.6.22   f.22 YDN: Disposable income

77e       ⟨*variable YDN* 77e⟩≡                                                (221)
          YDN      = Disposable income
          Defines:
             YDN, used in chunks 219a and 233.

77f       ⟨*stdverEqs ydn* 77f⟩≡                                               (254)
          ydn: ydn - ydn_aerr = uyd * (ypn - tfpn - tspn)


          Defines:
             ydn, used in chunks 78b and 155a.
          Uses tfpn 131e, tspn 137d, uyd 219a, and ypn 77d.

### 2.6.23   f.23 RSPNIA: Personal saving rate

78a        ⟨*variable RSPNIA* 78a⟩≡                                          (221)
```
RSPNIA   = Personal saving rate
```
Defines:
  RSPNIA, used in chunk 233.

78b        ⟨*stdverEqs rspnia* 78b⟩≡                                        (254)
```
rspnia: rspnia - rspnia_aerr =  100 * yhsn / ydn
```

Defines:
  rspnia, never used.
Uses ydn 77f and yhsn 84d.

### 2.6.24   f.24 YCSN: Net corporate cash flow with IVA and CCA

78c        ⟨*variable YCSN* 78c⟩≡                                           (221)
```
YCSN     = Net corporate cash flow with IVA and CCA
```
Defines:
  YCSN, used in chunk 233.

78d        ⟨*stdverEqs ycsn* 78d⟩≡                                          (254)
```
ycsn: ycsn - ycsn_aerr = ynicpn - tfcin - tscin - ftcin - ynidn + jccacn
```

Defines:
  ycsn, never used.
Uses ftcin 44b, jccacn 72a, tfcin 131a, tscin 136f, ynicpn 77b, and ynidn 76e.

### 2.6.25   f.25 YKIN: Income from stock of inventories

78e        ⟨*variable YKIN* 78e⟩≡                                           (221)
```
YKIN     = Income from stock of inventories
```
Defines:
  YKIN, used in chunk 233.

78f        ⟨*stdverEqs ykin* 78f⟩≡                                          (254)
```
ykin: ykin - ykin_aerr = .01*rtinv*pxb* (ki + ki(-1)) /2
```

Defines:
  ykin, used in chunk 31a.
Uses ki 27b, pxb 108d, and rtinv 33b.

## 2.6.26   f.26 YKPDN: Income from stock of equipment

79a      ⟨*variable YKPDN* 79a⟩≡                                                (221)
     YKPDN    = Income from stock of equipment
    Defines:
      YKPDN, used in chunk 233.

79b      ⟨*stdverEqs ykpdn* 79b⟩≡                                              (254)
     ykpdn: ykpdn - ykpdn_aerr = .01*rtpd*pxb* ( kpd +  kpd(-1)) /2

    Defines:
      ykpdn, used in chunk 31a.
    Uses kpd 29g, pxb 108d, and rtpd 32a.

## 2.6.27   f.27 YKPSN: Income from stock of nonresidential structures

79c      ⟨*variable YKPSN* 79c⟩≡                                              (221)
     YKPSN    = Income from stock of nonresidential structures
    Defines:
      YKPSN, used in chunk 233.

79d      ⟨*stdverEqs ykpsn* 79d⟩≡                                             (254)
     ykpsn: ykpsn - ykpsn_aerr = .01*rtps*pxb* ( kps +  kps(-1)) /2

    Defines:
      ykpsn, used in chunk 31a.
    Uses kps 30d, pxb 108d, and rtps 32e.

## 2.6.28   f.28 YH: Income, household, total (real after-tax)

79e      ⟨*variable YH* 79e⟩≡                                                 (221)
     YH       = Income, household, total (real after-tax)
    Defines:
      YH, used in chunks 82c, 83b, 85, and 233.

79f      ⟨*stdverEqs yh* 79f⟩≡                                                (254)
     yh: yh - yh_aerr = yhl + yht + yhp

    Defines:
      yh, used in chunks 83–85 and 200c.
    Uses yhl 81d, yhp 82b, and yht 84f.

### 2.6.29    f.29 YHGAP: Income, household, total, ratio to XGDP, cyclical component (real after-tax)

80a    ⟨*variable YHGAP* 80a⟩≡                                               (221)
       YHGAP     = Income, household, total, ratio to XGDP, cyclical component (real after-ta

Defines:
    YHGAP, used in chunk 233.
Uses XGDP 48c.

80b    ⟨*stdverEqs yhgap* 80b⟩≡                                             (254)
       yhgap: yhgap - yhgap_aerr = 100*(yhshr/zyhst-1)

Defines:
    yhgap, used in chunks 183b, 184c, 186b, and 200–202.
Uses yhshr 84b and zyhst 167a.

### 2.6.30    f.30 YHIBN: Consumer interest payments to business

80c    ⟨*variable YHIBN* 80c⟩≡                                              (221)
       YHIBN     = Consumer interest payments to business

Defines:
    YHIBN, used in chunk 233.

80d    ⟨*stdverEqs yhibn* 80d⟩≡                                             (254)
       yhibn: d( log(yhibn), 0, 1 ) - yhibn_aerr _
                                 = y_yhibn(1) * ( picxfe/1600 +  picxfe(-1)/1600 +  picxfe(
                                 + y_yhibn(2)  _
                                 + y_yhibn(3) * log(ecnian(-1)/yhibn(-1)) _
                                 + y_yhibn(4) * (d( log(yhibn(-1)), 0, 1 ) -  ( picxfe(-1)/1
                                 + y_yhibn(5) * d79a _
                                 + y_yhibn(6) * rcar(-1) _
                                 + y_yhibn(7) * log(.01*pcdr(-1)*pcnia(-1)*ecd(-1)/ecnian(-1
                                 + y_yhibn(8) * d( rffe, 0, 1 )

Defines:
    yhibn, used in chunks 81b, 83a, 84d, and 155a.
Uses ecd 18b, ecnian 22a, pcdr 112f, pcnia 89b, picxfe 87b, rcar 151d, rffe 144e,
    and y_yhibn 80e.

80e    ⟨*stdver_Coeffs y_yhibn* 80e⟩≡                                       (263)
       y_yhibn 8        1,-0.1336307554530098,0.06545518537060361,0.2942182559897778,0.023569
Defines:
    y_yhibn, used in chunk 80d.

### 2.6.31   f.31 YHIN: Income, household, net interest and rent

81a   ⟨*variable YHIN* 81a⟩≡                                                      (221)
```
YHIN    = Income, household, net interest and rent
```
Defines:
   YHIN, used in chunks 219b and 233.

81b   ⟨*stdverEqs yhin* 81b⟩≡                                                    (254)
```
yhin: yhin - yhin_aerr = uyhi * (yniin + gfintn + gsintn + yhibn)
```

Defines:
   yhin, used in chunk 83e.
Uses gfintn 124c, gsintn 128c, uyhi 219b, yhibn 80d, and yniin 75d.

### 2.6.32   f.32 YHL: Income, household, labor compensation (real after-tax)

81c   ⟨*variable YHL* 81c⟩≡                                                      (221)
```
YHL     = Income, household, labor compensation (real after-tax)
```
Defines:
   YHL, used in chunk 233.

81d   ⟨*stdverEqs yhl* 81d⟩≡                                                     (254)
```
yhl: yhl - yhl_aerr = (1-tryh)*yhln/(.01*pcnia)
```

Defines:
   yhl, used in chunks 17b and 79f.
Uses pcnia 89b, tryh 138f, and yhln 81f.

### 2.6.33   f.33 YHLN: Income, household, labor compensation

81e   ⟨*variable YHLN* 81e⟩≡                                                     (221)
```
YHLN    = Income, household, labor compensation
```
Defines:
   YHLN, used in chunks 219c and 233.

81f   ⟨*stdverEqs yhln* 81f⟩≡                                                    (254)
```
yhln: yhln - yhln_aerr = uyhln * (yniln - tfsin - tssin)
```

Defines:
   yhln, used in chunks 77d, 81d, 84d, and 138f.
Uses tfsin 132a, tssin 137f, uyhln 219c, and yniln 74f.

### 2.6.34   f.34 YHP: Income, household, property (real after-tax)

82a      ⟨*variable YHP* 82a⟩≡                                               (221)
```
YHP       = Income, household, property (real after-tax)
```
Defines:
    YHP, used in chunk 233.

82b      ⟨*stdverEqs yhp* 82b⟩≡                                              (254)
```
yhp: yhp - yhp_aerr = ((1-tryh)*yhptn+yhpntn)/(.01*pcnia)
```

Defines:
    yhp, used in chunks 79f, 83c, and 201c.
Uses pcnia 89b, tryh 138f, yhpntn 83a, and yhptn 83e.

### 2.6.35   f.35 YHPGAP: Income, household, property, ratio to YH, cyclical component (real after-tax)

82c      ⟨*variable YHPGAP* 82c⟩≡                                            (221)
```
YHPGAP    = Income, household, property, ratio to YH, cyclical component (real after-t
```
Defines:
    YHPGAP, used in chunk 233.
Uses YH 79e.

82d      ⟨*stdverEqs yhpgap* 82d⟩≡                                           (254)
```
yhpgap: yhpgap - yhpgap_aerr = 100*(yhpshr/zyhpst-1)
```

Defines:
    yhpgap, used in chunks 183b, 184c, 186b, and 201a.
Uses yhpshr 83c and zyhpst 167d.

### 2.6.36   f.36 YHPNTN: Income, household, property, non-taxable component

82e      ⟨*variable YHPNTN* 82e⟩≡                                            (221)
```
YHPNTN    = Income, household, property, non-taxable component
```
Defines:
    YHPNTN, used in chunks 177e and 233.

83a      ⟨*stdverEqs yhpntn* 83a⟩≡                                         (254)
```
yhpntn: yhpntn - yhpntn_aerr = .01*pcnia*pcdr*yhpcd  _
                      - yhibn + ynicpn - tfcin - tscin - ynidn _
                      - .01 * zpi10 *(gfdbtn+gsdbtn)
```

Defines:
    yhpntn, used in chunk 82b.
Uses gfdbtn 124a, gsdbtn 128a, pcdr 112f, pcnia 89b, tfcin 131a, tscin 136f, yhibn 80d,
    yhpcd 24e, ynicpn 77b, ynidn 76e, and zpi10 178a.

## 2.6.37   f.37 YHPSHR: Income, household, property, ratio to YH (real after-tax)

83b      ⟨*variable YHPSHR* 83b⟩≡                                         (221)
```
YHPSHR   = Income, household, property, ratio to YH (real after-tax)
```
Defines:
    YHPSHR, used in chunk 233.
Uses YH 79e.

83c      ⟨*stdverEqs yhpshr* 83c⟩≡                                         (254)
```
yhpshr: yhpshr - yhpshr_aerr = yhp/yh
```

Defines:
    yhpshr, used in chunks 82d and 167d.
Uses yh 79f and yhp 82b.

## 2.6.38   f.38 YHPTN: Income, household, property, taxable component

83d      ⟨*variable YHPTN* 83d⟩≡                                         (221)
```
YHPTN    = Income, household, property, taxable component
```
Defines:
    YHPTN, used in chunks 219d and 233.

83e      ⟨*stdverEqs yhptn* 83e⟩≡                                         (254)
```
yhptn: yhptn - yhptn_aerr = uyhptn*(ynisen+yhin+ynidn)
```

Defines:
    yhptn, used in chunks 77d, 82b, 84d, and 138f.
Uses uyhptn 219d, yhin 81b, ynidn 76e, and ynisen 75b.

### 2.6.39   f.39 YHSHR: Income, household, total, ratio to XGDP (real after-tax)

84a        ⟨*variable YHSHR* 84a⟩≡                                              (221)
           ```
           YHSHR    = Income, household, total, ratio to XGDP (real after-tax)
           ```
           Defines:
               YHSHR, used in chunk 233.
           Uses XGDP 48c.

84b        ⟨*stdverEqs yhshr* 84b⟩≡                                            (254)
           ```
           yhshr: yhshr - yhshr_aerr = yh/xgdp
           ```

           Defines:
               yhshr, used in chunks 80b and 167a.
           Uses xgdp 49a and yh 79f.

### 2.6.40   f.40 YHSN: Personal saving

84c        ⟨*variable YHSN* 84c⟩≡                                              (221)
           ```
           YHSN     = Personal saving
           ```
           Defines:
               YHSN, used in chunk 233.

84d        ⟨*stdverEqs yhsn* 84d⟩≡                                             (254)
           ```
           yhsn: yhsn - yhsn_aerr = yhln + yhtn + yhptn - tfpn - tspn - ecnian - yhibn _
                           + uyhsn * xgdptn
           ```

           Defines:
               yhsn, used in chunk 78b.
           Uses ecnian 22a, tfpn 131e, tspn 137d, uyhsn 219e, xgdptn 61a, yhibn 80d, yhln 81f,
               yhptn 83e, and yhtn 85d.

### 2.6.41   f.41 YHT: Income, household, transfer (real after-tax), net basis

84e        ⟨*variable YHT* 84e⟩≡                                              (221)
           ```
           YHT      = Income, household, transfer (real after-tax), net basis
           ```
           Defines:
               YHT, used in chunk 233.

84f        ⟨*stdverEqs yht* 84f⟩≡                                             (254)
           ```
           yht: yht - yht_aerr = yhtn/(.01*pcnia)
           ```

           Defines:
               yht, used in chunks 17b, 79f, 85f, and 202c.
           Uses pcnia 89b and yhtn 85d.

### 2.6.42   f.42 YHTGAP: Income, household, transfer, ratio to YH, cyclical component (real after-tax)

85a      ⟨*variable YHTGAP* 85a⟩≡                                              (221)
         YHTGAP   = Income, household, transfer, ratio to YH, cyclical component (real after-tax)
         Defines:
           YHTGAP, used in chunk 233.
         Uses YH 79e.

85b      ⟨*stdverEqs yhtgap* 85b⟩≡                                            (254)
         yhtgap: yhtgap - yhtgap_aerr = 100*(yhtshr/zyhtst-1)


         Defines:
           yhtgap, used in chunks 183b, 184c, 186b, and 202a.
         Uses yhtshr 85f and zyhtst 168a.

### 2.6.43   f.43 YHTN: Income, household, transfer payments. net basis

85c      ⟨*variable YHTN* 85c⟩≡                                               (221)
         YHTN     = Income, household, transfer payments. net basis
         Defines:
           YHTN, used in chunks 219f and 233.

85d      ⟨*stdverEqs yhtn* 85d⟩≡                                              (254)
         yhtn: yhtn - yhtn_aerr = uyhtn*(gftn+gstn)


         Defines:
           yhtn, used in chunks 77d and 84.
         Uses gftn 127b, gstn 129d, and uyhtn 219f.

### 2.6.44   f.44 YHTSHR: Income, household, transfer, ratio to YH (real after-tax)

85e      ⟨*variable YHTSHR* 85e⟩≡                                             (221)
         YHTSHR   = Income, household, transfer, ratio to YH (real after-tax)
         Defines:
           YHTSHR, used in chunk 233.
         Uses YH 79e.

85f      ⟨*stdverEqs yhtshr* 85f⟩≡                                            (254)
         yhtshr: yhtshr - yhtshr_aerr = yht/yh


         Defines:
           yhtshr, used in chunks 85b and 168a.
         Uses yh 79f and yht 84f.

### 2.6.45   f.45 WDNFCN: Net financial liabilities, nonfinancial nonfarm corporations

86a        ⟨*variable WDNFCN* 86a⟩≡                                                    (221)
           WDNFCN   = Net financial liabilities, nonfinancial nonfarm corporations

           Defines:
             WDNFCN, used in chunk 233.

86b        ⟨*stdverEqs wdnfcn* 86b⟩≡                                                    (254)
           wdnfcn: d( log(wdnfcn), 0, 1) - wdnfcn_aerr  _
                          = y_wdnfcn(1) * log(wdnfcn(-1)/(ynin(-1)-yniln(-1))) _
                          + y_wdnfcn(2)  _
                          + y_wdnfcn(3) * d( log(wdnfcn(-1)), 0, 1) _
                          + y_wdnfcn(4) * d( log(wdnfcn(-2)), 0, 1) _
                          + y_wdnfcn(5) * xgap2


           Defines:
             wdnfcn, used in chunk 75d.
           Uses xgap2 59c, y_wdnfcn 86c, yniln 74f, and ynin 74d.

86c        ⟨*stdver_Coeffs y_wdnfcn* 86c⟩≡                                              (263)
           y_wdnfcn         5          -0.02207644135378071,0.01442097831747879,0.2375257265379373,0

           Defines:
             y_wdnfcn, used in chunk 86b.

### 2.6.46   f.46 XGDIN: Gross domestic income, current $

86d        ⟨*variable XGDIN* 86d⟩≡                                                      (221)
           XGDIN    = Gross domestic income, current $

           Defines:
             XGDIN, used in chunk 233.

86e        ⟨*stdverEqs xgdin* 86e⟩≡                                                     (254)
           xgdin: xgdin - xgdin_aerr = xgdi *(pgdp/100)


           Defines:
             xgdin, used in chunk 74d.
           Uses pgdp 106f and xgdi 56a.

## 2.7   Wages and Prices

### 2.7.1   g.1 PICXFE: Inflation rate, personal consumption expenditures, ex. food and energy, cw

87a       $\langle$*variable PICXFE* 87a$\rangle\equiv$                                                  (221)

    PICXFE   = Inflation rate, personal consumption expenditures, ex. food and energy, cw

Defines:
    PICXFE, used in chunk 233.
Uses ex 39c.

87b       $\langle$*stdverEqs picxfe* 87b$\rangle\equiv$                                             (254)

    picxfe: picxfe - picxfe_aerr = (y_picxfe(1)*picxfe(-1) _
                        + y_picxfe(3)*zpicxfe _
                        + (1-y_picxfe(3))*(1-y_picxfe(1))*ptr(-1) _
                        + y_picxfe(2)*400*log(qpcnia(-1)/pcnia(-1))) / (1+y_picxfe(1)*y_picxfe(3))

Defines:
    picxfe, used in chunks 80d, 88f, 101d, 139–42, 145e, 168d, 180–82, and 233.
Uses pcnia 89b, ptr 168d, qpcnia 92f, y_picxfe 87c, and zpicxfe 181a 181c.

87c       $\langle$*stdver_Coeffs y_picxfe* 87c$\rangle\equiv$                                         (263)

    y_picxfe         3         0.644974342322,0.00373609153735,0.98

Defines:
    y_picxfe, used in chunk 87b.

### 2.7.2   g.2 PIECI: Annualized rate of growth of EI hourly compensation

87d       $\langle$*variable PIECI* 87d$\rangle\equiv$                                                  (221)

    PIECI    = Annualized rate of growth of EI hourly compensation

Defines:
    PIECI, used in chunk 233.
Uses EI 27d.

87e       $\langle$*stdverEqs pieci* 87e$\rangle\equiv$                                              (254)

    pieci: pieci - pieci_aerr = (.25*y_pieci(1)*((1-y_pieci(4))*(pieci(-1)+pieci(-2)+pieci(-3)) + p
                        + y_pieci(4)*zpieci _
                        + (1-y_pieci(4))*(1-y_pieci(1))*(ptr(-1) + hlprdt(-1) - 400*huqpct(-1)) _
                        + y_pieci(2)*(lur(-1)-lurnat(-1)) _
                        + y_pieci(3)*400*log(qpl(-1)/pl(-1))) / (1+.25*y_pieci(1)*y_pieci(4))

Defines:
    pieci, used in chunks 90b, 181, 182, and 233.
Uses hlprdt 69c, huqpct 100d, lur 65f, lurnat 69e, pl 90d, ptr 168d, qpl 92a, y_pieci 88a,
    and zpieci 182a 182c.

88a    ⟨*stdver_Coeffs y_pieci* 88a⟩≡                                              (263)
       y_pieci 4        0.811777544324,-0.0148780773818,0.00186804576867,0.98
       Defines:
         y_pieci, used in chunk 87e.


### 2.7.3   g.3 PIPXNC: Inflation rate, price of adjusted final sales excluding consumption (annual rate)

88b    ⟨*variable PIPXNC* 88b⟩≡                                                    (221)
       PIPXNC   = Inflation rate, price of adjusted final sales excluding consumption (annua
       Defines:
         PIPXNC, used in chunk 233.

88c    ⟨*stdverEqs pipxnc* 88c⟩≡                                                   (254)
       pipxnc: pipxnc - pipxnc_aerr = picnia - 1.99 * 400 * huqpct _
                            + y_pipxnc(1) * (pipxnc(-1) - picnia(-1) + 1.99 * 400 * huqpct(-
                            + y_pipxnc(2) * (pipxnc(-2) - picnia(-2) + 1.99 * 400 * huqpct(-
                            + y_pipxnc(3) * .5 * ( ( (emon/xpn) +  (emon(-1)/xpn(-1))) ) * 4

       Defines:
         pipxnc, used in chunks 90f, 93–98, and 182e.
       Uses emon 40e, fpxr 163d, huqpct 100d, picnia 88f, xpn 70a, and y_pipxnc 88d.

88d    ⟨*stdver_Coeffs y_pipxnc* 88d⟩≡                                             (263)
       y_pipxnc        3         .462801,.229745,-.284477
       Defines:
         y_pipxnc, used in chunk 88c.


### 2.7.4   g.4 PICNIA: Inflation rate, personal consumption expenditures, cw

88e    ⟨*variable PICNIA* 88e⟩≡                                                    (221)
       PICNIA   = Inflation rate, personal consumption expenditures, cw
       Defines:
         PICNIA, used in chunk 233.

88f    ⟨*stdverEqs picnia* 88f⟩≡                                                   (254)
       picnia: picnia - picnia_aerr = picxfe _
                            + ( ( ucfs +  ucfs(-1)) /2) * 400 * d(log(pcfr), 0, 1) _
                            + ( ( uces +  uces(-1)) /2) * 400 * d(log(pcer), 0, 1)

       Defines:
         picnia, used in chunks 88c, 89b, 132c, 141c, 170–80, 183–91, and 193–202.
       Uses pcer 103c, pcfr 104a, picxfe 87b, uces 104d, and ucfs 105b.

### 2.7.5   g.5 PCNIA: Price index for personal consumption expenditures, cw (NIPA definition)

89a      $\langle variable\ PCNIA\ 89a\rangle \equiv$                                                           (221)
    PCNIA     = Price index for personal consumption expenditures, cw (NIPA definition)

Defines:
    PCNIA, used in chunks 99f, 100c, 111, 112e, 209f, and 233.

89b      $\langle stdverEqs\ pcnia\ 89b\rangle \equiv$                                                          (254)
    pcnia: d( log(pcnia), 0, 1 ) - pcnia_aerr = picnia / 400

Defines:
    pcnia, used in chunks 21, 22a, 24c, 80–84, 87b, 89d, 93b, 99d, 111c, 113c, 141c, 153–56,
       181a, 182a, and 188–90.
Uses picnia 88f.

### 2.7.6   g.6 PCPI: Consumer price index,total

89c      $\langle variable\ PCPI\ 89c\rangle \equiv$                                                            (221)
    PCPI      = Consumer price index,total

Defines:
    PCPI, used in chunks 217c and 233.

89d      $\langle stdverEqs\ pcpi\ 89d\rangle \equiv$                                                           (254)
    pcpi: pcpi - pcpi_aerr = upcpi * exp(.025*log(pcer)) * pcnia

Defines:
    pcpi, used in chunk 164d.
Uses pcer 103c, pcnia 89b, and upcpi 217c.

### 2.7.7   g.7 PCPIX: Consumer price index,excluding food and energy

89e      $\langle variable\ PCPIX\ 89e\rangle \equiv$                                                           (221)
    PCPIX     = Consumer price index,excluding food and energy

Defines:
    PCPIX, used in chunks 217d and 233.

89f      $\langle stdverEqs\ pcpix\ 89f\rangle \equiv$                                                          (254)
    pcpix: pcpix - pcpix_aerr = upcpix * pcxfe

Defines:
    pcpix, never used.
Uses pcxfe 101d and upcpix 217d.

### 2.7.8    g.8 PIPL: Rate of growth of PL

90a    ⟨*variable PIPL* 90a⟩≡                                                  (221)
```
PIPL    = Rate of growth of PL
```
Defines:
  PIPL, used in chunk 233.
Uses PL 90c.

90b    ⟨*stdverEqs pipl* 90b⟩≡                                                (254)
```
pipl: pipl - pipl_aerr = pieci
```

Defines:
  pipl, used in chunks 90d, 182d, and 188–90.
Uses pieci 87e.

### 2.7.9    g.9 PL: Compensation per hour, business

90c    ⟨*variable PL* 90c⟩≡                                                   (221)
```
PL      = Compensation per hour,  business
```
Defines:
  PL, used in chunks 90a and 233.

90d    ⟨*stdverEqs pl* 90d⟩≡                                                  (254)
```
pl: log(pl) - pl_aerr = log(pl(-1)) + pipl/400
```

Defines:
  pl, used in chunks 74f, 87e, 91e, 92a, 99b, 107, 181a, and 182a.
Uses pipl 90b.

### 2.7.10    g.10 PXNC: Price of adjusted final sales excluding consumption

90e    ⟨*variable PXNC* 90e⟩≡                                                 (221)
```
PXNC     = Price of adjusted final sales excluding consumption
```
Defines:
  PXNC, used in chunk 233.

90f    ⟨*stdverEqs pxnc* 90f⟩≡                                                (254)
```
pxnc: d( log(pxnc), 0, 1 ) - pxnc_aerr = pipxnc/400
```

Defines:
  pxnc, used in chunks 93b, 99d, and 188–90.
Uses pipxnc 88c.

### 2.7.11    g.11 PWSTAR: Equilibrium business sector price markup

91a        ⟨*variable PWSTAR* 91a⟩≡                                                  (221)
           ```
           PWSTAR   = Equilibrium NFB price markup
           ```
           Defines:
              PWSTAR, used in chunk 233.

91b        ⟨*stdverEqs pwstar* 91b⟩≡                                                 (254)
           ```
           pwstar: pwstar - pwstar_aerr = y_pwstar(1) + y_pwstar(2)*pwstar(-1)
           ```

           Defines:
              pwstr, never used.
           Uses y_pwstar 91c.

91c        ⟨*stdver_Coeffs y_pwstar* 91c⟩≡                                           (263)
           ```
           y_pwstar        2          0.00,1.00
           ```
           Defines:
              y_pwstar, used in chunk 91b.

### 2.7.12    g.12 QPXG: Desired price level of private output ex. energy, housing, and farm

91d        ⟨*variable QPXG* 91d⟩≡                                                    (221)
           ```
           QPXG      = Desired price level of private output ex. energy, housing, and farm
           ```
           Defines:
              QPXG, used in chunk 233.
           Uses ex 39c.

91e        ⟨*stdverEqs qpxg* 91e⟩≡                                                   (254)
           ```
           qpxg: log(qpxg) - qpxg_aerr = log(pwstar) + y_qpxg(1) + y_qpxg(2)*log(pl/lprdt)
           ```

           Defines:
              qpxg, used in chunk 92.
           Uses lprdt 69a, pl 90d, and y_qpxg 91f.

91f        ⟨*stdver_Coeffs y_qpxg* 91f⟩≡                                             (263)
           ```
           y_qpxg  2        0.0,1
           ```
           Defines:
              y_qpxg, used in chunk 91e.

### 2.7.13    g.13 QPL: Desired level of compensation per hour, trending component

91g        ⟨*variable QPL* 91g⟩≡                                                     (221)
           ```
           QPL       = Desired level of compensation per hour, trending component
           ```
           Defines:
              QPL, used in chunk 233.

92a        ⟨*stdverEqs qpl* 92a⟩≡                                              (254)
           qpl: log(qpl) - qpl_aerr = log(pl) + y_qpl(1) * log(pxg/qpxg)


           Defines:
             qpl, used in chunks 87e, 181a, and 182a.
           Uses pl 90d, pxg 108b, qpxg 91e, and y_qpl 92b.

92b        ⟨*stdver_Coeffs y_qpl* 92b⟩≡                                        (263)
             y_qpl    1          1.0
           Defines:
             y_qpl, used in chunk 92a.


### 2.7.14    g.14 QPXP: Desired price level of adjusted final sales

92c        ⟨*variable QPXP* 92c⟩≡                                             (221)
           QPXP      = Desired price level of adjusted final sales
           Defines:
             QPXP, used in chunk 233.

92d        ⟨*stdverEqs qpxp* 92d⟩≡                                            (254)
           qpxp: qpxp - qpxp_aerr = 100*(xpn + (.01*qpxg*xg-xgn))/xp


           Defines:
             qpxp, used in chunks 92f and 99d.
           Uses qpxg 91e, xg 52a, xgn 71e, xp 51a, and xpn 70a.


### 2.7.15    g.15 QPCNIA: Desired level of consumption price

92e        ⟨*variable QPCNIA* 92e⟩≡                                           (221)
           QPCNIA    = Desired level of consumption price
           Defines:
             QPCNIA, used in chunk 233.

92f        ⟨*stdverEqs qpcnia* 92f⟩≡                                          (254)
           qpcnia: log(qpcnia) - qpcnia_aerr = log(qpxp) + log(uqpct)


           Defines:
             qpcnia, used in chunks 87b, 99d, 181a, 182a, and 188–90.
           Uses qpxp 92d and uqpct 100a.

### 2.7.16   g.16 PXP: Price index for final sales plus imports less gov. labor

93a      ⟨*variable PXP* 93a⟩≡                                                    (221)
```
PXP       = Price index for final sales plus imports less gov. labor
```
Defines:
   PXP, used in chunks 93–97, 99f, 100c, 107d, 211d, and 233.

93b      ⟨*stdverEqs pxp* 93b⟩≡                                                   (254)
```
pxp: d( log(pxp), 0, 1 ) - pxp_aerr =  _
        .5*( ecnian/xpn + ecnian(-1)/xpn(-1)) * d( log(pcnia), 0, 1) _
      + .5*( (xpn-ecnian)/xpn + (xpn(-1)-ecnian(-1))/xpn(-1)) * d( log(pxnc), 0, 1)
```

Defines:
   pxp, used in chunks 21a, 22c, 32, 33b, 35, 36, 39, 49a, 70a, 72, 75d, 93–99, 110e, 115, 118,
      120, 123, 132c, and 188–90.
Uses ecnian 22a, pcnia 89b, pxnc 90f, and xpn 70a.

### 2.7.17   g.17 PGFIR: Price index for federal gov. investment, cw (relative to PXP)

93c      ⟨*variable PGFIR* 93c⟩≡                                                  (221)
```
PGFIR     = Price index for federal gov. investment, cw (relative to PXP)
```
Defines:
   PGFIR, used in chunk 233.
Uses PXP 93a.

93d      ⟨*stdverEqs pgfir* 93d⟩≡                                                 (254)
```
pgfir: log(pgfir) - pgfir_aerr - log(pgfir(-1)) = y_pgfir(1) + pipxnc/400 + dpadj - d(log(pxp),
```

Defines:
   pgfir, used in chunks 98a and 115.
Uses dpadj 98c, pipxnc 88c, pxp 93b, and y_pgfir 93e.

93e      ⟨*stdver_Coeffs y_pgfir* 93e⟩≡                                           (263)
```
y_pgfir 1         0.0
```
Defines:
   y_pgfir, used in chunk 93d.

### 2.7.18   g.18 PGFOR: Price index for federal governemnt consumption ex. emp. comp., cw (relative to PXP)

93f      ⟨*variable PGFOR* 93f⟩≡                                                  (221)
```
PGFOR     = Price index for federal governemnt consumption ex. emp. comp., cw (relative to PXP)
```
Defines:
   PGFOR, used in chunk 233.
Uses emp 41e, ex 39c, and PXP 93a.

94a        ⟨*stdverEqs pgfor* 94a⟩≡                                                      (254)
           pgfor: log(pgfor) - pgfor_aerr - log(pgfor(-1)) = y_pgfor(1) + pipxnc/400 + dpadj - d

Defines:
  pgfor, used in chunks 98a and 118.
Uses dpadj 98c, pipxnc 88c, pxp 93b, and y_pgfor 94b.

94b        ⟨*stdver_Coeffs y_pgfor* 94b⟩≡                                                (263)
           y_pgfor 1          0.0
Defines:
  y_pgfor, used in chunk 94a.


## 2.7.19    g.19 PGSIR: Price index for S&L government investment (relative to PXP)

94c        ⟨*variable PGSIR* 94c⟩≡                                                       (221)
           PGSIR     = Price index for S&L government investment (relative to PXP)
Defines:
  PGSIR, used in chunk 233.
Uses PXP 93a.

94d        ⟨*stdverEqs pgsir* 94d⟩≡                                                      (254)
           pgsir: log(pgsir) - pgsir_aerr - log(pgsir(-1)) = y_pgsir(1) + pipxnc/400 + dpadj - d

Defines:
  pgsir, used in chunks 98a and 120.
Uses dpadj 98c, pipxnc 88c, pxp 93b, and y_pgsir 94e.

94e        ⟨*stdver_Coeffs y_pgsir* 94e⟩≡                                                (263)
           y_pgsir 1          0.0
Defines:
  y_pgsir, used in chunk 94d.


## 2.7.20    g.20 PGSOR: Price index for S&L government consumption ex. emp. comp., cw (relative to PXP)

94f        ⟨*variable PGSOR* 94f⟩≡                                                       (221)
           PGSOR     = Price index for S&L government consumption ex. emp. comp., cw (relative to
Defines:
  PGSOR, used in chunk 233.
Uses emp 41e, ex 39c, and PXP 93a.

95a     ⟨*stdverEqs pgsor* 95a⟩≡                                                                   (254)
        pgsor: log(pgsor) - pgsor_aerr - log(pgsor(-1)) = y_pgsor(1) + pipxnc/400 + dpadj - d(log(pxp),

        Defines:
           pgsor, used in chunks 98a and 123.
        Uses dpadj 98c, pipxnc 88c, pxp 93b, and y_pgsor 95b.

95b     ⟨*stdver_Coeffs y_pgsor* 95b⟩≡                                                             (263)
        y_pgsor 1          0.0
        Defines:
           y_pgsor, used in chunk 95a.


### 2.7.21   g.21 PHR: Price index for residential investment, cw (relative to PXP)

95c     ⟨*variable PHR* 95c⟩≡                                                                      (221)
        PHR       = Price index for residential investment, cw (relative to PXP)
        Defines:
           PHR, used in chunk 233.
        Uses PXP 93a.

95d     ⟨*stdverEqs phr* 95d⟩≡                                                                     (254)
        phr: log(phr) - phr_aerr - log(phr(-1)) = y_phr(1) + pipxnc/400 + dpadj - d(log(pxp), 0, 1)

        Defines:
           phr, used in chunks 21a, 22c, 72, 75d, and 98a.
        Uses dpadj 98c, pipxnc 88c, pxp 93b, and y_phr 95e.

95e     ⟨*stdver_Coeffs y_phr* 95e⟩≡                                                               (263)
        y_phr    1          0.0
        Defines:
           y_phr, used in chunk 95d.


### 2.7.22   g.22 PPDR: Price level of EPD compared to PXP

95f     ⟨*variable PPDR* 95f⟩≡                                                                     (221)
        PPDR      = Price level of EPD compared to PXP
        Defines:
           PPDR, used in chunks 108e and 233.
        Uses EPD 25b and PXP 93a.

95g     ⟨*stdverEqs ppdr* 95g⟩≡                                                                    (254)
        ppdr: log(ppdr) - ppdr_aerr - log(ppdr(-1)) = y_ppdr(1) + pipxnc/400 + dpadj - d(log(pxp), 0, 1

        Defines:
           ppdr, used in chunks 33d, 35d, 98a, 107e, 108f, and 132c.
        Uses dpadj 98c, pipxnc 88c, pxp 93b, and y_ppdr 96a.

96a       ⟨*stdver_Coeffs y_ppdr* 96a⟩≡                                        (263)
          y_ppdr   1        0.0
          Defines:
             y_ppdr, used in chunk 95g.


### 2.7.23   g.23 PPIR: Price level of EPI compared to PXP

96b       ⟨*variable PPIR* 96b⟩≡                                              (221)
          PPIR     = Price level of EPI compared to PXP
          Defines:
             PPIR, used in chunks 109b and 233.
          Uses EPI 25e and PXP 93a.


96c       ⟨*stdverEqs ppir* 96c⟩≡                                            (254)
          ppir: log(ppir) - ppir_aerr - log(ppir(-1))  = pipxnc/400 + dpadj - d(log(pxp), 0, 1)



          Defines:
             ppir, used in chunks 32c, 35f, 98a, and 109c.
          Uses dpadj 98c, pipxnc 88c, and pxp 93b.


### 2.7.24   g.24 PPSR: Price index for nonresidential structures, cw (relative to PXP)

96d       ⟨*variable PPSR* 96d⟩≡                                             (221)
          PPSR     = Price index for nonresidential structures, cw (relative to PXP)
          Defines:
             PPSR, used in chunks 110a and 233.
          Uses PXP 93a.


96e       ⟨*stdverEqs ppsr* 96e⟩≡                                            (254)
          ppsr: log(ppsr) - ppsr_aerr - log(ppsr(-1)) = y_ppsr(1) + pipxnc/400 + dpadj - d(log(



          Defines:
             ppsr, used in chunks 32e, 36b, 72c, 98a, and 110b.
          Uses dpadj 98c, pipxnc 88c, pxp 93b, and y_ppsr 96f.


96f       ⟨*stdver_Coeffs y_ppsr* 96f⟩≡                                      (263)
          y_ppsr   1        0.0
          Defines:
             y_ppsr, used in chunk 96e.

## 2.7.25    g.25 PXR: Price index for exports, cw (relative to PXP)

97a     ⟨*variable PXR* 97a⟩≡                                                    (221)

       PXR       = Price index for exports, cw (relative to PXP)

Defines:
   PXR, used in chunk 233.
Uses PXP 93a.

97b     ⟨*stdverEqs pxr* 97b⟩≡                                                  (254)

       pxr: log(pxr) - pxr_aerr - log(pxr(-1)) = y_pxr(1) + pipxnc/400 + dpadj - d(log(pxp), 0, 1)

Defines:
   pxr, used in chunks 39 and 98a.
Uses dpadj 98c, pipxnc 88c, pxp 93b, and y_pxr 97c.

97c     ⟨*stdver_Coeffs y_pxr* 97c⟩≡                                             (263)

       y_pxr     1         0.0

Defines:
   y_pxr, used in chunk 97b.

## 2.7.26    g.26 DPGAP: Price inflation aggregation discrepancy

97d     ⟨*variable DPGAP* 97d⟩≡                                                 (221)

       DPGAP     = Price inflation aggregation discrepancy

Defines:
   DPGAP, used in chunk 233.

98a      ⟨*stdverEqs dpgap* 98a⟩≡                                                    (254)
```
dpgap: dpgap - dpgap_aerr =  pipxnc/400 - ( _
        .5 * (ehn/(xpn - ecnian)+ ehn(-1)/(xpn(-1) - ecnian(-1))) _
            * d(log(phr*pxp), 0, 1) _
      + .5 * (epdn/(xpn - ecnian)+ epdn(-1)/(xpn(-1) - ecnian(-1))) _
            * d(log(ppdr*pxp), 0, 1) _
      + .5 * (epin/(xpn - ecnian)+ epin(-1)/(xpn(-1) - ecnian(-1))) _
            * d(log(ppir*pxp), 0, 1) _
      + .5 * (epsn/(xpn - ecnian)+ epsn(-1)/(xpn(-1) - ecnian(-1))) _
            * d(log(ppsr*pxp), 0, 1) _
      + .5 * (egfon/(xpn - ecnian)+ egfon(-1)/(xpn(-1) - ecnian(-1))) _
            * d(log(pgfor*pxp), 0, 1) _
      + .5 * (egfin/(xpn - ecnian)+ egfin(-1)/(xpn(-1) - ecnian(-1))) _
            * d(log(pgfir*pxp), 0, 1) _
      + .5 * (egson/(xpn - ecnian)+ egson(-1)/(xpn(-1) - ecnian(-1))) _
            * d(log(pgsor*pxp), 0, 1) _
      + .5 * (egsin/(xpn - ecnian)+ egsin(-1)/(xpn(-1) - ecnian(-1))) _
            * d(log(pgsir*pxp), 0, 1) _
      + .5 * (exn/(xpn - ecnian)+ exn(-1)/(xpn(-1) - ecnian(-1))) _
            * d(log(pxr*pxp), 0, 1))
```

Defines:
   dpgap, used in chunk 98c.
Uses ecnian 22a, egfin 115a, egfon 118b, egsin 120c, egson 123b, ehn 22c, epdn 35d,
   epin 35f, epsn 36b, exn 39f, pgfir 93d, pgfor 94a, pgsir 94d, pgsor 95a, phr 95d,
   pipxnc 88c, ppdr 95g, ppir 96c, ppsr 96e, pxp 93b, pxr 97b, and xpn 70a.

## 2.7.27   g.27 DPADJ: Price inflation aggregation adjustment

98b      ⟨*variable DPADJ* 98b⟩≡                                                    (221)
```
DPADJ    = Price inflation aggregation adjustment
```
Defines:
   DPADJ, used in chunk 233.

98c      ⟨*stdverEqs dpadj* 98c⟩≡                                                    (254)
```
dpadj: dpadj - dpadj_aerr - dpadj(-1) = y_dpadj(1) * dpgap(-1)
```

Defines:
   dpadj, used in chunks 93–97.
Uses dpgap 98a and y_dpadj 98d.

98d      ⟨*stdver_Coeffs y_dpadj* 98d⟩≡                                              (263)
```
y_dpadj 1        1.0000
```
Defines:
   y_dpadj, used in chunk 98c.

### 2.7.28    g.28 PLMIN: Minimum wage

99a       ⟨*variable PLMIN* 99a⟩≡                                               (221)
          ```
          PLMIN    = Minimum wage
          ```
          Defines:
              PLMIN, used in chunk 233.

99b       ⟨*stdverEqs plmin* 99b⟩≡                                             (254)
          ```
          plmin: plmin - plmin_aerr = plminr*.01*pl
          ```

          Defines:
              plmin, never used.
          Uses pl 90d and plminr 211e.

### 2.7.29    g.29 QPXNC: Desired level of nonconsumption price

99c       ⟨*variable QPXNC* 99c⟩≡                                              (221)
          ```
          QPXNC    = Desired level of nonconsumption price
          ```
          Defines:
              QPXNC, used in chunk 233.

99d       ⟨*stdverEqs qpxnc* 99d⟩≡                                             (254)
          ```
          qpxnc: log(qpxnc) - qpxnc_aerr = log(pxnc)   _
                              + y_qpxnc(1) * log(qpxp/pxp)   _
                              + y_qpxnc(2) * log(qpcnia/pcnia)
          ```

          Defines:
              qpxnc, used in chunks 188–90.
          Uses pcnia 89b, pxnc 90f, pxp 93b, qpcnia 92f, qpxp 92d, and y_qpxnc 99e.

99e       ⟨*stdver_Coeffs y_qpxnc* 99e⟩≡                                       (263)
          ```
          y_qpxnc 2        2.98507462687,-1.98507462687
          ```
          Defines:
              y_qpxnc, used in chunk 99d.

### 2.7.30    g.30 UQPCT: Stochastic component of trend ratio of PCNIA to PXP

99f       ⟨*variable UQPCT* 99f⟩≡                                              (221)
          ```
          UQPCT    = Stochastic component of trend ratio of PCNIA to PXP
          ```
          Defines:
              UQPCT, used in chunk 233.
          Uses PCNIA 89a and PXP 93a.

100a     ⟨*stdverEqs uqpct* 100a⟩≡                                              (254)
         `uqpct: log(uqpct) - uqpct_aerr = y_uqpct(1) + log(uqpct(-1)) + huqpct`

Defines:
  `uqpct`, used in chunk 92f.
Uses `huqpct` 100d and `y_uqpct` 100b.

100b     ⟨*stdver_Coeffs y_uqpct* 100b⟩≡                                        (263)
         `y_uqpct 1        0.0`
Defines:
  `y_uqpct`, used in chunk 100a.

### 2.7.31   g.31 HUQPCT: Drift term in stochastic component of trend ratio of PCNIA to PXP

100c     ⟨*variable HUQPCT* 100c⟩≡                                              (221)
         `HUQPCT   = Drift term in stochastic component of trend ratio of PCNIA to PXP`
Defines:
  `HUQPCT`, used in chunk 233.
Uses `PCNIA` 89a and `PXP` 93a.

100d     ⟨*stdverEqs huqpct* 100d⟩≡                                             (254)
         `huqpct: huqpct - huqpct_aerr = y_huqpct(1) + y_huqpct(2)*huqpct(-1)`

Defines:
  `huqpct`, used in chunks 87e, 88c, 100a, 181a, 182a, and 188–90.
Uses `y_huqpct` 100e.

100e     ⟨*stdver_Coeffs y_huqpct* 100e⟩≡                                       (263)
         `y_huqpct        2        0.00,0.95`
Defines:
  `y_huqpct`, used in chunk 100d.

### 2.7.32   g.32 POILR: Price of imported oil, relative to price index for bus. sector output

100f     ⟨*variable POILR* 100f⟩≡                                               (221)
         `POILR    = Price of imported oil, relative to price index for bus. sector output`
Defines:
  `POILR`, used in chunk 233.

101a     $\langle$ *stdverEqs poilr* 101a$\rangle\equiv$                                    (254)

```
poilr: d( log(poilr), 0, 1 ) - poilr_aerr _
                   = y_poilr(1) * log(poilr(-1)/poilrt(-1)) _
                   + y_poilr(2) _
                   + y_poilr(3) * d( log(poilr(-1)), 0, 1 ) _
                   + y_poilr(4) * d( log(poilrt), 0, 1 )
```

Defines:
   poilr, used in chunks 101f, 102d, and 159e.
Uses poilrt 211f and y_poilr 101b.

101b     $\langle$ *stdver_Coeffs y_poilr* 101b$\rangle\equiv$                              (263)

```
y_poilr 4        -0.2386347615324657,-0.003817963307816998,0.3988973185364578,0.2246596594065311
```

Defines:
   y_poilr, used in chunk 101a.

### 2.7.33   g.33 PCXFE: Price index for personal consumption expendits ex. food and energy, cw (NIPA definition)

101c     $\langle$ *variable PCXFE* 101c$\rangle\equiv$                                     (221)

```
PCXFE    = Price index for personal consumption expendits ex. food and energy, cw (NIPA definit
```

Defines:
   PCXFE, used in chunks 103 and 233.
Uses ex 39c.

101d     $\langle$ *stdverEqs pcxfe* 101d$\rangle\equiv$                                    (254)

```
pcxfe: d(log(pcxfe), 0, 1) - pcxfe_aerr = picxfe/400
```

Defines:
   pcxfe, used in chunks 89f, 103c, and 112d.
Uses picxfe 87b.

### 2.7.34   g.34 POIL: Price of imported oil ($ per barrel)

101e     $\langle$ *variable POIL* 101e$\rangle\equiv$                                      (221)

```
POIL     = Price of imported oil ($ per barrel)
```

Defines:
   POIL, used in chunk 233.

101f     $\langle$ *stdverEqs poil* 101f$\rangle\equiv$                                     (254)

```
poil: poil - poil_aerr = poilr*pxb
```

Defines:
   poil, used in chunk 102b.
Uses poilr 101a and pxb 108d.

### 2.7.35   g.35 PMP: Price index for petroleum imports

102a        ⟨*variable PMP* 102a⟩≡                                          (221)
            PMP      = Price index for petroleum imports
            Defines:
              PMP, used in chunks 218a and 233.

102b        ⟨*stdverEqs pmp* 102b⟩≡                                         (254)
            pmp: pmp - pmp_aerr = upmp*poil


            Defines:
              pmp, used in chunk 42a.
            Uses `poil` 101f and `upmp` 218a.

### 2.7.36   g.36 PCENGR: Price index for aggregate energy consumption (relative to PXB )

102c        ⟨*variable PCENGR* 102c⟩≡                                       (221)
            PCENGR   = Price index for aggregate energy consumption (relative to PXB  )
            Defines:
              PCENGR, used in chunk 233.
            Uses `PXB` 108c.

102d        ⟨*stdverEqs pcengr* 102d⟩≡                                      (254)
            pcengr: d( log(pcengr), 0, 1 ) - pcengr_aerr _
                              = y_pcengr(1) _
                              + y_pcengr(2) * d( log(pcengr(-1)), 0, 1 ) _
                              + y_pcengr(3) * log(pcengr(-1)) _
                              + y_pcengr(4) * log(poilr(-1)) _
                              + y_pcengr(5) * d( log(poilr), 0, 1 )


            Defines:
              pcengr, used in chunk 103a.
            Uses `poilr` 101a and `y_pcengr` 102e.

102e        ⟨*stdver_Coeffs y_pcengr* 102e⟩≡                                (263)
            y_pcengr       5        0.04621048926220116,-0.01053548206463643,-0.0961735014875454
            Defines:
              y_pcengr, used in chunk 102d.

### 2.7.37   g.37 PCENG: Price index for aggregate energy consumption

102f        ⟨*variable PCENG* 102f⟩≡                                        (221)
            PCENG    = Price index for aggregate energy consumption
            Defines:
              PCENG, used in chunk 233.

103a  $\langle stdverEqs\ pceng\ 103a\rangle\equiv$ (254)
```
pceng: pceng - pceng_aerr = pcengr*pxb
```

Defines:
  pceng, used in chunks 52a, 53f, 55a, 60b, 103c, and 110e.
Uses pcengr 102d and pxb 108d.


## 2.7.38  g.38 PCER: Price index for personal consumption expenditures on energy (relative to PCXFE)

103b  $\langle variable\ PCER\ 103b\rangle\equiv$ (221)
```
PCER    = Price index for personal consumption expenditures on energy (relative to PCXFE)
```
Defines:
  PCER, used in chunk 233.
Uses PCXFE 101c.

103c  $\langle stdverEqs\ pcer\ 103c\rangle\equiv$ (254)
```
pcer: d( log(pcer), 0, 1 ) - pcer_aerr _
                    = y_pcer(1) * log((y_pcer(2) *pceng(-1) + (1-y_pcer(2))*pcxfe(-1))/(pcer(-1)
                    + y_pcer(3) * d( log((y_pcer(2) *pceng + (1-y_pcer(2))*pcxfe)/pcxfe), 0, 1 )
                    + y_pcer(4) * d( log((y_pcer(2) *pceng(-1) + (1-y_pcer(2))*pcxfe(-1))/pcxfe(
```

Defines:
  pcer, used in chunks 88f, 89d, 104d, and 188–90.
Uses pceng 103a, pcxfe 101d, and y_pcer 103d.

103d  $\langle stdver\_Coeffs\ y\_pcer\ 103d\rangle\equiv$ (263)
```
y_pcer  4       0.1050137345817281,0.5632388610140522,0.6858569548199248,0.04030768373454912
```
Defines:
  y_pcer, used in chunk 103c.


## 2.7.39  g.39 PCFR: Price index for personal consumption expenditures on food (relative to PCXFE)

103e  $\langle variable\ PCFR\ 103e\rangle\equiv$ (221)
```
PCFR    = Price index for personal consumption expenditures on food (relative to PCXFE)
```
Defines:
  PCFR, used in chunk 233.
Uses PCXFE 101c.

104a    ⟨*stdverEqs pcfr* 104a⟩≡                                                        (254)
```
pcfr: d( log(pcfr), 0, 1 ) - pcfr_aerr _
                    = y_pcfr(1) * log(pcfr(-1)/pcfrt(-1)) _
                    + y_pcfr(2) _
                    + ( y_pcfr(3) *  d( log(pcfr(-1)), 0, 1 ) +  y_pcfr(4) *  d( log
                    + y_pcfr(6) * d( log(pcfrt), 0, 1 )
```

Defines:
  pcfr, used in chunks 88f, 105b, and 188–90.
Uses pcfrt 210i and y_pcfr 104b.

104b    ⟨*stdver_Coeffs y_pcfr* 104b⟩≡                                                  (263)
```
y_pcfr  6        -0.1757649679968763,-7.899990101672884e-05,0.3777936884215714,0.02349
```
Defines:
  y_pcfr, used in chunk 104a.

## 2.7.40   g.40 UCES: Energy share of nominal consumption expenditures

104c    ⟨*variable UCES* 104c⟩≡                                                         (221)
```
UCES     = Energy share of nominal consumption expenditures
```
Defines:
  UCES, used in chunk 233.

104d    ⟨*stdverEqs uces* 104d⟩≡                                                        (254)
```
uces: d( log(uces), 0, 1 ) - uces_aerr _
                    = y_uces(1) * log(uces(-1)) _
                    + y_uces(2) * log(pcer(-1)) _
                    + y_uces(3) * log(ceng(-1)/xg(-1)) _
                    + y_uces(4) * t47 _
                    + y_uces(5) _
                    + y_uces(6) * d( log(uces(-1)), 0, 1 ) _
                    + y_uces(7) * d( log(pcer), 0, 1 ) _
                    + y_uces(8) * d( log(ceng/xg), 0, 1 )
```

Defines:
  uces, used in chunks 88f and 188–90.
Uses ceng 41b, pcer 103c, t47 212e, xg 52a, and y_uces 104e.

104e    ⟨*stdver_Coeffs y_uces* 104e⟩≡                                                  (263)
```
y_uces  8        -0.1834529206587357,0.1554187181683198,0.08000391518229149,-0.0004411
```
Defines:
  y_uces, used in chunk 104d.

### 2.7.41  g.41 UCFS: Food share of nominal consumption expenditures

105a   ⟨*variable UCFS* 105a⟩≡                                                   (221)
       ```
       UCFS     = Food share of nominal consumption expenditures
       ```
       Defines:
          UCFS, used in chunk 233.

105b   ⟨*stdverEqs ucfs* 105b⟩≡                                                 (254)
       ```
       ucfs: d( log(ucfs), 0, 1 ) - ucfs_aerr  _
                         = y_ucfs(1) * log(ucfs(-1)) _
                         + y_ucfs(2) * log(pcfr(-1)) _
                         + y_ucfs(3) * t47 _
                         + y_ucfs(4) _
                         + y_ucfs(5) * d( log(ucfs(-1)), 0, 1 ) _
                         + y_ucfs(6) * d( log(pcfrt), 0, 1 ) _
                         + y_ucfs(7) * d( log(pcfr/pcfrt), 0, 1 )
       ```
       Defines:
          ucfs, used in chunks 88f and 188–90.
       Uses pcfr 104a, pcfrt 210i, t47 212e, and y_ucfs 105c.

105c   ⟨*stdver_Coeffs y_ucfs* 105c⟩≡                                           (263)
       ```
       y_ucfs  7        -0.03523462021069426,0.0453107908363,-0.0001497160154925362,-0.0564600435216084
       ```
       Defines:
          y_ucfs, used in chunk 105b.

### 2.7.42  g.42 PMO: Price index for imports ex. petroleum, cw

105d   ⟨*variable PMO* 105d⟩≡                                                   (221)
       ```
       PMO      = Price index for imports ex. petroleum, cw
       ```
       Defines:
          PMO, used in chunk 233.
       Uses ex 39c.

105e   ⟨*stdverEqs pmo* 105e⟩≡                                                  (254)
       ```
       pmo: d( log(pmo), 0, 1 ) - pmo_aerr = y_pmo(1) _
                         + y_pmo(2) * (log(qpmo) + .64*log(fpcm(-1)/fpxm(-1)) + .36*log(pxb(-1)) _
                                    - log(pmo(-1))) _
                         + y_pmo(3) * d( log(fpcm/fpxm), 0, 1 ) _
                         + y_pmo(4) * d( log(pxb), 0, 1 )
       ```
       Defines:
          pmo, used in chunk 40.
       Uses fpcm 161d, fpxm 164f, pxb 108d, qpmo 106c, and y_pmo 106a.

106a    ⟨*stdver_Coeffs y_pmo* 106a⟩≡                                                    (263)
```
y_pmo    4        -0.003166815111887241,0.4492916534287926,0.2944651755345454,0.7055348
```
Defines:
   y_pmo, used in chunk 105e.

### 2.7.43   g.43 QPMO: Random walk component of non-oil import prices

106b    ⟨*variable QPMO* 106b⟩≡                                                          (221)
```
QPMO     = Random walk component of non-oil import prices
```
Defines:
   QPMO, used in chunk 233.

106c    ⟨*stdverEqs qpmo* 106c⟩≡                                                         (254)
```
qpmo: log(qpmo) - qpmo_aerr = log(qpmo(-1)) + y_qpmo(1)
```

Defines:
   qpmo, used in chunk 105e.
Uses y_qpmo 106d.

106d    ⟨*stdver_Coeffs y_qpmo* 106d⟩≡                                                   (263)
```
y_qpmo   1        -.003347
```
Defines:
   y_qpmo, used in chunk 106c.

### 2.7.44   g.44 PGDP: Price index for GDP, cw

106e    ⟨*variable PGDP* 106e⟩≡                                                          (221)
```
PGDP     = Price index for GDP, cw
```
Defines:
   PGDP, used in chunks 124–26, 129e, 130d, and 233.

106f    ⟨*stdverEqs pgdp* 106f⟩≡                                                         (254)
```
pgdp: pgdp - pgdp_aerr = 100*xgdpn/xgdp
```

Defines:
   pgdp, used in chunks 43e, 61a, 71–73, 86e, 108d, 111a, 125–27, and 129.
Uses xgdp 49a and xgdpn 70c.

### 2.7.45   g.45 PGFL: Price index for federal government employee compensation, cw

106g    ⟨*variable PGFL* 106g⟩≡                                                          (221)
```
PGFL     = Price index for federal government employee compensation, cw
```
Defines:
   PGFL, used in chunks 217e and 233.

107a  $\langle stdverEqs\ pgfl\ 107a\rangle\equiv$                                          (254)
```
pgfl: d( log(pgfl), 0, 1 ) - pgfl_aerr = d( log(upgfl), 0, 1 )  _
                         + d( log(pl), 0, 1 )   _
                  - dglprd*(d( log(lprdt), 0, 1 ))
```

Defines:
  pgfl, used in chunks 74f, 116d, and 117a.
Uses dglprd 207d, lprdt 69a, pl 90d, and upgfl 217e.

## 2.7.46   g.46 PGSL: Price index for S&L government employee compensation, cw

107b  $\langle variable\ PGSL\ 107b\rangle\equiv$                                          (221)
```
PGSL     = Price index for S&L government employee compensation, cw
```
Defines:
  PGSL, used in chunks 217f and 233.

107c  $\langle stdverEqs\ pgsl\ 107c\rangle\equiv$                                          (254)
```
pgsl: d( log(pgsl), 0, 1 ) - pgsl_aerr = d( log(upgsl), 0, 1 )  _
                         + d( log(pl), 0, 1 )   _
                  - dglprd*(d( log(lprdt), 0, 1 ))
```

Defines:
  pgsl, used in chunks 74f, 121e, and 122a.
Uses dglprd 207d, lprdt 69a, pl 90d, and upgsl 217f.

## 2.7.47   g.47 PKPDR: Ratio of price of equipment stock (KPD) to PXP

107d  $\langle variable\ PKPDR\ 107d\rangle\equiv$                                          (221)
```
PKPDR    = Ratio of price of equipment stock (KPD) to PXP
```
Defines:
  PKPDR, used in chunks 217g and 233.
Uses KPD 29f and PXP 93a.

107e  $\langle stdverEqs\ pkpdr\ 107e\rangle\equiv$                                          (254)
```
pkpdr: pkpdr - pkpdr_aerr = upkpd * ppdr
```

Defines:
  pkpdr, used in chunks 32a, 33d, and 72c.
Uses ppdr 95g and upkpd 217g.

## 2.7.48   g.48 PXG: Price index for business output plus oil imports

108a    ⟨*variable PXG* 108a⟩≡                                         (221)
```
PXG     = Price index for  business output plus oil imports
```
Defines:
   `PXG`, used in chunk 233.

108b    ⟨*stdverEqs pxg* 108b⟩≡                                        (254)
```
pxg: pxg - pxg_aerr = 100*xgn/xg
```

Defines:
   `pxg`, used in chunks 43c, 92a, 188–90, 198a, 199c, and 202f.
Uses `xg` 52a and `xgn` 71e.

## 2.7.49   g.49 PXB: Price index for business sector output

108c    ⟨*variable PXB* 108c⟩≡                                         (221)
```
PXB     = Price index for NFB output
```
Defines:
   `PXB`, used in chunks 102c, 218b, and 233.

108d    ⟨*stdverEqs pxb* 108d⟩≡                                        (254)
```
pxb: pxb - pxb_aerr = upxb*pgdp
```

Defines:
   `pxb`, used in chunks 32, 33b, 51c, 53f, 71c, 76e, 78, 79, 101f, 103a, 105e, 177, and 199a.
Uses `pgdp` 106f and `upxb` 218b.

## 2.7.50   g.50 HGPDR: Trend Price Growth of PPDR

108e    ⟨*variable HGPDR* 108e⟩≡                                       (221)
```
HGPDR    = Trend Price Growth of PPDR
```
Defines:
   `HGPDR`, used in chunk 233.
Uses `PPDR` 95f.

108f    ⟨*stdverEqs hgpdr* 108f⟩≡                                      (254)
```
hgpdr: hgpdr - hgpdr_aerr = y_hgpdr(1) * hgpdr(-1) _
                    + y_hgpdr(2) * 400*log(ppdr/ppdr(-1))
```

Defines:
   `hgpdr`, used in chunk 32a.
Uses `ppdr` 95g and `y_hgpdr` 109a.

109a      ⟨*stdver_Coeffs y_hgpdr* 109a⟩≡                                                    (263)
          y_hgpdr 2          .9,.1
          Defines:
             y_hgpdr, used in chunk 108f.


## 2.7.51   g.51 HGPIR: Trend Price Growth of PPIR

109b      ⟨*variable HGPIR* 109b⟩≡                                                          (221)
          HGPIR    = Trend Price Growth of PPIR
          Defines:
             HGPIR, used in chunk 233.
          Uses PPIR 96b.

109c      ⟨*stdverEqs hgpir* 109c⟩≡                                                         (254)
          hgpir: hgpir - hgpir_aerr = y_hgpir(1) * hgpir(-1) _
                             + y_hgpir(2) * 400*log(ppir/ppir(-1))


          Defines:
             hgpir, used in chunk 32c.
          Uses ppir 96c and y_hgpir 109d.

109d      ⟨*stdver_Coeffs y_hgpir* 109d⟩≡                                                   (263)
          y_hgpir 2          .9,.1
          Defines:
             y_hgpir, used in chunk 109c.


## 2.7.52   g.52 HGPKIR: Trend growth rate of PKIR

109e      ⟨*variable HGPKIR* 109e⟩≡                                                         (221)
          HGPKIR   = Trend growth rate of PKIR
          Defines:
             HGPKIR, used in chunk 233.
          Uses PKIR 211d.

109f      ⟨*stdverEqs hgpkir* 109f⟩≡                                                        (254)
          hgpkir: hgpkir - hgpkir_aerr = y_hgpkir(1) * hgpkir(-1) _
                             + y_hgpkir(2) * 400*log(pkir/pkir(-1))


          Defines:
             hgpkir, used in chunk 33b.
          Uses pkir 211d and y_hgpkir 109g.

109g      ⟨*stdver_Coeffs y_hgpkir* 109g⟩≡                                                  (263)
          y_hgpkir        2          .9,.1
          Defines:
             y_hgpkir, used in chunk 109f.

### 2.7.53   g.53 HGPPSR: Trend growth rate of PPSR

110a      ⟨*variable HGPPSR* 110a⟩≡                                              (221)
          HGPPSR   = Trend growth rate of PPSR
          Defines:
            HGPPSR, used in chunk 233.
          Uses PPSR 96d.

110b      ⟨*stdverEqs hgppsr* 110b⟩≡                                            (254)
          hgppsr: hgppsr - hgppsr_aerr = y_hgppsr(1) * hgppsr(-1) _
                             + y_hgppsr(2) * 400*log(ppsr/ppsr(-1))


          Defines:
            hgppsr, used in chunk 32e.
          Uses ppsr 96e and y_hgppsr 110c.

110c      ⟨*stdver_Coeffs y_hgppsr* 110c⟩≡                                      (263)
          y_hgppsr        2         .9,.1
          Defines:
            y_hgppsr, used in chunk 110b.


### 2.7.54   g.54 PICNGR: Weighted growth rate of relative energy price

110d      ⟨*variable PICNGR* 110d⟩≡                                            (221)
          PICNGR   = Weighted growth rate of relative energy price
          Defines:
            PICNGR, used in chunk 233.

110e      ⟨*stdverEqs picngr* 110e⟩≡                                           (254)
          picngr: picngr - picngr_aerr = (d( log(pceng/pxp(-1)), 0, 1 ) * _
                         ( pceng*ceng/(pxp*xp) +  pceng(-1)*ceng(-1)/(pxp(-1)*xp(-1)))


          Defines:
            picngr, never used.
          Uses ceng 41b, pceng 103a, pxp 93b, and xp 51a.


### 2.7.55   g.55 PIGDP: Inflation rate, GDP, cw

110f      ⟨*variable PIGDP* 110f⟩≡                                             (221)
          PIGDP    = Inflation rate, GDP, cw
          Defines:
            PIGDP, used in chunk 233.

111a     ⟨*stdverEqs pigdp* 111a⟩≡                                                                      (254)
         ```
         pigdp: pigdp - pigdp_aerr = 400*d( log(pgdp), 0, 1 )
         ```

         Defines:
           `pigdp`, never used.
         Uses `pgdp` 106f.


### 2.7.56    g.56 PCOR: Price index for non-durable goods and non-housing services, cw (relative to to PCNIA)

111b     ⟨*variable PCOR* 111b⟩≡                                                                      (221)
         ```
         PCOR      = Price index for non-durable goods and non-housing services, cw (relative to to PCNIA
         ```
         Defines:
           `PCOR`, used in chunk 233.
         Uses `PCNIA` 89a.

111c     ⟨*stdverEqs pcor* 111c⟩≡                                                                      (254)
         ```
         pcor: log(pcor) - log(pcor(-1)) - pcor_aerr =    _
                   (- .5 * .01 * (pcdr*pcnia*ecd/ecnian   _
                 + pcdr(-1)*pcnia(-1)*ecd(-1)/ecnian(-1)))   _
                 / (.5 * .01 * (pcor*pcnia*eco/ecnian   _
                 + pcor(-1)*pcnia(-1)*eco(-1)/ecnian(-1))) _
                   * d(log(pcdr), 0, 1) _
               - .5 * .01 * (pchr*pcnia*ech/ecnian   _
                 + pchr(-1)*pcnia(-1)*ech(-1)/ecnian(-1))   _
                   * d(log(pchr), 0, 1) _
               / (.5 * .01 * (pcor*pcnia*eco/ecnian   _
                 + pcor(-1)*pcnia(-1)*eco(-1)/ecnian(-1)))
         ```

         Defines:
           `pcor`, used in chunks 20b, 21d, 24c, and 183d.
         Uses `ecd` 18b, `ech` 19b, `ecnian` 22a, `eco` 17b, `pcdr` 112f, `pchr` 112a, and `pcnia` 89b.


### 2.7.57    g.57 PCHR: Price index for housing services, cw (relative to to PCNIA)

111d     ⟨*variable PCHR* 111d⟩≡                                                                      (221)
         ```
         PCHR      = Price index for housing services, cw (relative to to PCNIA)
         ```
         Defines:
           `PCHR`, used in chunk 233.
         Uses `PCNIA` 89a.

112a       ⟨*stdverEqs pchr* 112a⟩≡                                                    (254)
```
pchr: d(log(pchr), 0, 1) - pchr_aerr = y_pchr(1) _
                              + y_pchr(2)*d(log(pchr(-1)), 0, 1)
```

Defines:
  pchr, used in chunks 21d, 24c, 111c, and 154d.
Uses y_pchr 112b.

112b       ⟨*stdver_Coeffs y_pchr* 112b⟩≡                                              (263)
```
y_pchr  2        0.0005315862255843622,0.5948038682986249
```
Defines:
  y_pchr, used in chunk 112a.

### 2.7.58    g.58 PICX4: Four-quarter percent change core in PCE prices

112c       ⟨*variable PICX4* 112c⟩≡                                                    (221)
```
PICX4    = Four-quarter percent change core in PCE prices
```
Defines:
  PICX4, used in chunk 233.

112d       ⟨*stdverEqs picx4* 112d⟩≡                                                   (254)
```
picx4:           picx4 - picx4_aerr = 100*(pcxfe/pcxfe(-4) - 1)
```

Defines:
  picx4, used in chunk 154a.
Uses pcxfe 101d.

### 2.7.59    g.59 PCDR: Price index for consumer durables, cw (relative to to PCNIA)

112e       ⟨*variable PCDR* 112e⟩≡                                                     (221)
```
PCDR     = Price index for consumer durables, cw (relative to to PCNIA)
```
Defines:
  PCDR, used in chunk 233.
Uses PCNIA 89a.

112f       ⟨*stdverEqs pcdr* 112f⟩≡                                                    (254)
```
pcdr: d(log(pcdr), 0, 1) - pcdr_aerr = y_pcdr(1) _
                              + y_pcdr(2)*d(log(pcdr(-1)), 0, 1)
```

Defines:
  pcdr, used in chunks 20e, 21d, 24c, 80d, 83a, 111c, and 155a.
Uses y_pcdr 113a.

113a      ⟨*stdver_Coeffs y_pcdr* 113a⟩≡                                          (263)
          ```
          y_pcdr  2        -0.003205436686618677,0.5065758198036935
          ```
          Defines:
            y_pcdr, used in chunk 112f.

## 2.7.60   g.60 PIC4: Four-quarter percent change in PCE prices

113b      ⟨*variable PIC4* 113b⟩≡                                               (221)
          ```
          PIC4      = Four-quarter percent change in PCE prices
          ```
          Defines:
            PIC4, used in chunk 233.

113c      ⟨*stdverEqs pic4* 113c⟩≡                                              (254)
          ```
          pic4:              pic4 - pic4_aerr = 100*(pcnia/pcnia(-4) - 1)
          ```

          Defines:
            pic4, used in chunk 180e.
          Uses pcnia 89b.

## 2.8   Government

### 2.8.1   h.1 EGF: Federal government consumption and gross investment, cw 2009$

113d      ⟨*variable EGF* 113d⟩≡                                               (221)
          ```
          EGF       = Federal government consumption and gross investment, cw 2009$
          ```
          Defines:
            EGF, used in chunk 233.

113e      ⟨*stdverEqs egf* 113e⟩≡                                              (254)
          ```
          egf: log(egf) - egf_aerr = log(egf(-1)) _
               + .5 * (egfon/egfn + egfon(-1)/egfn(-1)) * d(log(egfo), 0, 1) _
               + .5 * (egfin/egfn + egfin(-1)/egfn(-1)) * d(log(egfi), 0, 1) _
               + .5 * (egfln/egfn + egfln(-1)/egfn(-1)) * d(log(egfl), 0, 1)
          ```

          Defines:
            egf, never used.
          Uses egfi 114d, egfin 115a, egfl 116a, egfln 116d, egfn 114b, egfo 117d, and egfon 118b.

### 2.8.2   h.2 EGFN: Federal government consumption and gross investment, current \$

114a      ⟨*variable EGFN* 114a⟩≡                                      (221)
```
EGFN      = Federal government consumption and gross investment, current $
```
Defines:
  EGFN, used in chunk 233.

114b      ⟨*stdverEqs egfn* 114b⟩≡                                      (254)
```
egfn: egfn - egfn_aerr = egfln + egfin + egfon
```

Defines:
  egfn, used in chunk 113e.
Uses `egfin` 115a, `egfln` 116d, and `egfon` 118b.

### 2.8.3   h.3 EGFI: Federal government gross investment, cw 2009\$

114c      ⟨*variable EGFI* 114c⟩≡                                      (221)
```
EGFI      = Federal government gross investment, cw 2009$
```
Defines:
  EGFI, used in chunk 233.

114d      ⟨*stdverEqs egfi* 114d⟩≡                                      (254)
```
egfi: d( log(egfi), 0, 1 ) - egfi_aerr  _
                 = y_egfi(1) _
                 + y_egfi(2) * log(egfi(-1)/egfit(-1)) _
                 + ( y_egfi(3) *  d( log(egfi(-1)), 0, 1 ) +  y_egfi(4) *  d( log(
                 + y_egfi(5) * d( log(egfit), 0, 1 ) _
                 + ( y_egfi(6) *  xgap2 +  y_egfi(7) *  xgap2(-1))
```

Defines:
  egfi, used in chunks 48b, 51a, 113e, and 115a.
Uses `egfit` 115c, `xgap2` 59c, and `y_egfi` 114e.

114e      ⟨*stdver_Coeffs y_egfi* 114e⟩≡                                      (263)
```
y_egfi  7       -0.001620944144695763,-0.1243761665741676,-0.1946254304372423,-0.1028
```
Defines:
  y_egfi, used in chunk 114d.

### 2.8.4   h.4 EGFIN: Federal government gross investment, current \$

114f      ⟨*variable EGFIN* 114f⟩≡                                      (221)
```
EGFIN     = Federal government gross investment, current $
```
Defines:
  EGFIN, used in chunk 233.

115a      ⟨*stdverEqs egfin* 115a⟩≡                                                          (254)
          ```
          egfin: egfin - egfin_aerr = .01 * pxp * pgfir * egfi
          ```


          Defines:
              egfin, used in chunks 48b, 51a, 98a, 113e, 114b, 124a, and 133d.
          Uses egfi 114d, pgfir 93d, and pxp 93b.


### 2.8.5   h.5 EGFIT: Federal government gross investment, cw 2009$, trend

115b      ⟨*variable EGFIT* 115b⟩≡                                                         (221)
          ```
          EGFIT    = Federal government gross investment, cw 2009$, trend
          ```
          Defines:
              EGFIT, used in chunk 233.

115c      ⟨*stdverEqs egfit* 115c⟩≡                                                        (254)
          ```
          egfit: d( log(egfit), 0, 1 ) - egfit_aerr  _
                             = y_egfit(1) _
                             + y_egfit(2) * log(.01*pgfir(-1)*pxp(-1)*egfit(-1)/xgdptn(-1)) _
                             + y_egfit(3) * (hggdpt+hggdpt(-1)+hggdpt(-2)+hggdpt(-3)) / 1600
          ```


          Defines:
              egfit, used in chunk 114d.
          Uses hggdpt 60d, pgfir 93d, pxp 93b, xgdptn 61a, and y_egfit 115d.

115d      ⟨*stdver_Coeffs y_egfit* 115d⟩≡                                                  (263)
          ```
          y_egfit 3          -.4027,-.1,1.0
          ```
          Defines:
              y_egfit, used in chunk 115c.


### 2.8.6   h.6 EGFL: Federal government employee compensation, cw 2009$

115e      ⟨*variable EGFL* 115e⟩≡                                                          (221)
          ```
          EGFL     = Federal government employee compensation, cw 2009$
          ```
          Defines:
              EGFL, used in chunk 233.

116a    ⟨*stdverEqs egfl* 116a⟩≡                                                    (254)

```
egfl: d( log(egfl), 0, 1 ) - egfl_aerr  _
                  = y_egfl(1) _
                  + y_egfl(2) * log(egfl(-1)/egflt(-1)) _
                  + ( y_egfl(3) *  d( log(egfl(-1)), 0, 1 ) +  y_egfl(4) *  d( log
                  + y_egfl(5) * d( log(egflt), 0, 1 ) _
                  + ( y_egfl(6) *  xgap2 +  y_egfl(7) *  xgap2(-1))
```

Defines:
  egfl, used in chunks 48b, 63a, 74f, 113e, and 116d.
Uses egflt 117a, xgap2 59c, and y_egfl 116b.

116b    ⟨*stdver_Coeffs y_egfl* 116b⟩≡                                              (263)

```
y_egfl  7       -6.057249900438316e-05,-0.06931736294593471,0.3048866347485139,-0.049
```

Defines:
  y_egfl, used in chunk 116a.


### 2.8.7    h.7 EGFLN: Federal government employee compensation, current $

116c    ⟨*variable EGFLN* 116c⟩≡                                                    (221)

```
EGFLN    = Federal government employee compensation, current $
```

Defines:
  EGFLN, used in chunk 233.

116d    ⟨*stdverEqs egfln* 116d⟩≡                                                   (254)

```
egfln: egfln - egfln_aerr = .01 * pgfl * egfl
```

Defines:
  egfln, used in chunks 48b, 70c, 113e, 114b, and 125d.
Uses egfl 116a and pgfl 107a.


### 2.8.8    h.8 EGFLT: Federal government employee compensation, cw 2009$, trend

116e    ⟨*variable EGFLT* 116e⟩≡                                                    (221)

```
EGFLT    = Federal government employee compensation, cw 2009$, trend
```

Defines:
  EGFLT, used in chunk 233.

117a      ⟨*stdverEqs egflt* 117a⟩≡                                         (254)

```
egflt: d( log(egflt), 0, 1 ) - egflt_aerr  _
                     = y_egflt(1) _
                     + y_egflt(2) * log(.01*pgfl(-1)*egflt(-1)/xgdptn(-1)) _
                     + y_egflt(3) * (hggdpt+hggdpt(-1)+hggdpt(-2)+hggdpt(-3)) / 1600
```

Defines:
     `egflt`, used in chunk 116a.
Uses `hggdpt` 60d, `pgfl` 107a, `xgdptn` 61a, and `y_egflt` 117b.

117b      ⟨*stdver_Coeffs y_egflt* 117b⟩≡                                      (263)

```
y_egflt 3        -.375978,-.1,1.0
```
Defines:
     `y_egflt`, used in chunk 117a.

### 2.8.9    h.9 EGFO: Federal government consumption ex. employee comp., cw 2009$

117c      ⟨*variable EGFO* 117c⟩≡                                           (221)

```
EGFO     = Federal government consumption ex. employee comp., cw 2009$
```
Defines:
     `EGFO`, used in chunk 233.
Uses `ex` 39c.

117d      ⟨*stdverEqs egfo* 117d⟩≡                                           (254)

```
egfo: d( log(egfo), 0, 1 ) - egfo_aerr _
                     = y_egfo(1) _
                     + y_egfo(2) * log(egfo(-1)/egfot(-1)) _
                     + ( y_egfo(3) * d( log(egfo(-1)), 0, 1 ) + y_egfo(4) *  d( log(egfo(-2)),
                     + y_egfo(5) * d( log(egfot), 0, 1 ) _
                     + ( y_egfo(6) *  xgap2 + y_egfo(7) *  xgap2(-1))
```

Defines:
     `egfo`, used in chunks 48b, 51a, 113e, and 118b.
Uses `egfot` 118d, `xgap2` 59c, and `y_egfo` 117e.

117e      ⟨*stdver_Coeffs y_egfo* 117e⟩≡                                       (263)

```
y_egfo  7        -0.00272437480660757,-0.165188738562342,-0.2655033775214354,-0.1381332991300448
```
Defines:
     `y_egfo`, used in chunk 117d.

### 2.8.10    h.10 EGFON: Federal government consumption ex. employee comp., current \$

118a    ⟨*variable EGFON* 118a⟩≡                                          (221)
```
EGFON    = Federal government consumption ex. employee comp., current $
```
Defines:
  EGFON, used in chunk 233.
Uses **ex** 39c.

118b    ⟨*stdverEqs egfon* 118b⟩≡                                          (254)
```
egfon: egfon - egfon_aerr = .01 * pxp * pgfor * egfo
```

Defines:
  egfon, used in chunks 48b, 51a, 98a, 113e, 114b, and 125d.
Uses **egfo** 117d, **pgfor** 94a, and **pxp** 93b.

### 2.8.11    h.11 EGFOT: Federal government consumption ex. employee comp., cw 2009\$, trend

118c    ⟨*variable EGFOT* 118c⟩≡                                          (221)
```
EGFOT    = Federal government consumption ex. employee comp., cw 2009$, trend
```
Defines:
  EGFOT, used in chunk 233.
Uses **ex** 39c.

118d    ⟨*stdverEqs egfot* 118d⟩≡                                          (254)
```
egfot: d( log(egfot), 0, 1 ) - egfot_aerr  _
                  = y_egfot(1) _
                  + y_egfot(2) * log(.01*pgfor(-1)*pxp(-1)*egfot(-1)/xgdptn(-1)) _
                  + y_egfot(3) * (hggdpt+hggdpt(-1)+hggdpt(-2)+hggdpt(-3)) / 1600
```

Defines:
  egfot, used in chunk 117d.
Uses **hggdpt** 60d, **pgfor** 94a, **pxp** 93b, **xgdptn** 61a, and **y_egfot** 118e.

118e    ⟨*stdver_Coeffs y_egfot* 118e⟩≡                                          (263)
```
y_egfot 3        -.342813,-.1,1.0
```
Defines:
  y_egfot, used in chunk 118d.

### 2.8.12    h.12 EGS: S&L government consumption and gross investment, cw 2009\$

118f    ⟨*variable EGS* 118f⟩≡                                          (221)
```
EGS      = S&L government consumption and gross investment, cw 2009$
```
Defines:
  EGS, used in chunk 233.

119a    ⟨*stdverEqs egs* 119a⟩≡                                                    (254)
```
egs: log(egs) - egs_aerr = log(egs(-1)) _
      + .5 * (egson/egsn + egson(-1)/egsn(-1)) * d(log(egso), 0, 1) _
      + .5 * (egsin/egsn + egsin(-1)/egsn(-1)) * d(log(egsi), 0, 1) _
      + .5 * (egsln/egsn + egsln(-1)/egsn(-1)) * d(log(egsl), 0, 1)
```

Defines:
  `egs`, never used.
Uses `egsi` 119e, `egsin` 120c, `egsl` 121b, `egsln` 121e, `egsn` 119c, `egso` 122d, and `egson` 123b.


## 2.8.13    h.13 EGSN: S&L government consumption and gross investment, current $

119b    ⟨*variable EGSN* 119b⟩≡                                                    (221)
```
EGSN    = S&L government consumption and gross investment, current $
```
Defines:
  `EGSN`, used in chunk 233.

119c    ⟨*stdverEqs egsn* 119c⟩≡                                                   (254)
```
egsn: egsn - egsn_aerr = egsln + egsin + egson
```

Defines:
  `egsn`, used in chunk 119a.
Uses `egsin` 120c, `egsln` 121e, and `egson` 123b.


## 2.8.14    h.14 EGSI: S&L government gross investment, cw 2009$

119d    ⟨*variable EGSI* 119d⟩≡                                                    (221)
```
EGSI    = S&L government gross investment, cw 2009$
```
Defines:
  `EGSI`, used in chunk 233.

119e    ⟨*stdverEqs egsi* 119e⟩≡                                                   (254)
```
egsi: d( log(egsi), 0, 1 ) - egsi_aerr _
                    = y_egsi(1) _
                    + y_egsi(2) * log(egsi(-1)/egsit(-1)) _
                    + ( y_egsi(3) *  d( log(egsi(-1)), 0, 1 ) +  y_egsi(4) *  d( log(egsi(-2)),
                    + y_egsi(5) * d( log(egsit), 0, 1 ) _
                    + ( y_egsi(6) *  xgap2 +  y_egsi(7) *  xgap2(-1))
```

Defines:
  `egsi`, used in chunks 48b, 51a, 119a, and 120c.
Uses `egsit` 120e, `xgap2` 59c, and `y_egsi` 120a.

120a    ⟨*stdver_Coeffs y_egsi* 120a⟩≡                                                    (263)
```
y_egsi  7        -1.405740361028989e-05,-0.2020609033108234,0.05134522874864941,-0.080
```
Defines:
y_egsi, used in chunk 119e.


### 2.8.15    h.15 EGSIN: S&L government gross investment, current $

120b    ⟨*variable EGSIN* 120b⟩≡                                                    (221)
```
EGSIN    = S&L government gross investment, current $
```
Defines:
EGSIN, used in chunk 233.


120c    ⟨*stdverEqs egsin* 120c⟩≡                                                    (254)
```
egsin: egsin - egsin_aerr = .01 * pxp * pgsir * egsi
```

Defines:
egsin, used in chunks 48b, 51a, 98a, 119, 128a, and 135e.
Uses egsi 119e, pgsir 94d, and pxp 93b.


### 2.8.16    h.16 EGSIT: S&L government gross investment, cw 2009$, trend

120d    ⟨*variable EGSIT* 120d⟩≡                                                    (221)
```
EGSIT    = S&L government gross investment, cw 2009$, trend
```
Defines:
EGSIT, used in chunk 233.


120e    ⟨*stdverEqs egsit* 120e⟩≡                                                    (254)
```
egsit: d( log(egsit), 0, 1 ) - egsit_aerr  _
                   = y_egsit(1) _
                   + y_egsit(2) * log(.01*pgsir(-1)*pxp(-1)*egsit(-1)/xgdptn(-1)) _
                   + y_egsit(3) * (hggdpt+hggdpt(-1)+hggdpt(-2)+hggdpt(-3)) / 1600
```

Defines:
egsit, used in chunk 119e.
Uses hggdpt 60d, pgsir 94d, pxp 93b, xgdptn 61a, and y_egsit 120f.


120f    ⟨*stdver_Coeffs y_egsit* 120f⟩≡                                                    (263)
```
y_egsit 3        -.379944,-.1,1.0
```
Defines:
y_egsit, used in chunk 120e.

### 2.8.17   h.17 EGSL: S&L government employee compensation, cw 2009$

121a       ⟨*variable EGSL* 121a⟩≡                                                    (221)
```
EGSL     = S&L government employee compensation, cw 2009$
```
Defines:
   EGSL, used in chunk 233.

121b       ⟨*stdverEqs egsl* 121b⟩≡                                                   (254)
```
egsl: d( log(egsl), 0, 1 ) - egsl_aerr _
                  = y_egsl(1) _
                  + y_egsl(2) * log(egsl(-1)/egslt(-1)) _
                  + ( y_egsl(3) *  d( log(egsl(-1)), 0, 1 ) +  y_egsl(4) *  d( log(egsl(-2)),
                  + y_egsl(5) * d( log(egslt), 0, 1 ) _
                  + ( y_egsl(6) *  xgap2 +  y_egsl(7) *  xgap2(-1))
```

Defines:
   egsl, used in chunks 48b, 63c, 74f, 119a, and 121e.
Uses egslt 122a, xgap2 59c, and y_egsl 121c.

121c       ⟨*stdver_Coeffs y_egsl* 121c⟩≡                                             (263)
```
y_egsl  7        0.000432632357275569,-0.1411968485071547,0.173955823870621,0.03758904468718688,
```
Defines:
   y_egsl, used in chunk 121b.

### 2.8.18   h.18 EGSLN: S&L government employee compensation, current $

121d       ⟨*variable EGSLN* 121d⟩≡                                                   (221)
```
EGSLN    = S&L government employee compensation, current $
```
Defines:
   EGSLN, used in chunk 233.

121e       ⟨*stdverEqs egsln* 121e⟩≡                                                  (254)
```
egsln: egsln - egsln_aerr = .01 * pgsl * egsl
```

Defines:
   egsln, used in chunks 48b, 70c, 119, and 128e.
Uses egsl 121b and pgsl 107c.

### 2.8.19   h.19 EGSLT: S&L government employee compensation, cw 2009$, trend

121f       ⟨*variable EGSLT* 121f⟩≡                                                   (221)
```
EGSLT    = S&L government employee compensation, cw 2009$, trend
```
Defines:
   EGSLT, used in chunk 233.

122a      $\langle stdverEqs\ egslt\ 122a\rangle\equiv$                                    (254)
```
egslt: d( log(egslt), 0, 1 ) - egslt_aerr  _
                  = y_egslt(1) _
                  + y_egslt(2) * log(.01*pgsl(-1)*egslt(-1)/xgdptn(-1)) _
                  + y_egslt(3) * (hggdpt+hggdpt(-1)+hggdpt(-2)+hggdpt(-3)) / 1600
```

Defines:
  egslt, used in chunk 121b.
Uses hggdpt 60d, pgsl 107c, xgdptn 61a, and y_egslt 122b.

122b      $\langle stdver\_Coeffs\ y\_egslt\ 122b\rangle\equiv$                            (263)
```
y_egslt 3         -.259779,-.1,1.0
```
Defines:
  y_egslt, used in chunk 122a.


### 2.8.20    h.20 EGSO: S&L government consumption ex. em-
###              ployee comp., cw 2009$

122c      $\langle variable\ EGSO\ 122c\rangle\equiv$                                     (221)
```
EGSO     = S&L government consumption ex. employee comp., cw 2009$
```
Defines:
  EGSO, used in chunk 233.
Uses ex 39c.

122d      $\langle stdverEqs\ egso\ 122d\rangle\equiv$                                    (254)
```
egso: d( log(egso), 0, 1 ) - egso_aerr _
                  = y_egso(1) _
                  + y_egso(2) * log(egso(-1)/egsot(-1)) _
                  + ( y_egso(3) * d( log(egso(-1)), 0, 1 ) + y_egso(4) *  d( log(
                  + y_egso(5) * d( log(egsot), 0, 1 ) _
                  + ( y_egso(6) *  xgap2 +  y_egso(7) *  xgap2(-1))
```

Defines:
  egso, used in chunks 48b, 51a, 119a, and 123b.
Uses egsot 123d, xgap2 59c, and y_egso 122e.

122e      $\langle stdver\_Coeffs\ y\_egso\ 122e\rangle\equiv$                            (263)
```
y_egso  7         -0.0002007505801469657,-0.09372198933526569,0.5475507872556951,0.1640
```
Defines:
  y_egso, used in chunk 122d.

### 2.8.21   h.21 EGSON: S&L government consumption ex. employee comp., current $

123a     ⟨*variable EGSON* 123a⟩≡                                              (221)
         EGSON    = S&L government consumption ex. employee comp., current $
         Defines:
           EGSON, used in chunk 233.
         Uses ex 39c.

123b     ⟨*stdverEqs egson* 123b⟩≡                                            (254)
         egson: egson - egson_aerr = .01 * pxp * pgsor * egso


         Defines:
           egson, used in chunks 48b, 51a, 98a, 119, and 128e.
         Uses egso 122d, pgsor 95a, and pxp 93b.

### 2.8.22   h.22 EGSOT: S&L government consumption ex. employee comp., cw 2009$, trend

123c     ⟨*variable EGSOT* 123c⟩≡                                             (221)
         EGSOT     = S&L government consumption ex. employee comp., cw 2009$, trend
         Defines:
           EGSOT, used in chunk 233.
         Uses ex 39c.

123d     ⟨*stdverEqs egsot* 123d⟩≡                                            (254)
         egsot: d( log(egsot), 0, 1 ) - egsot_aerr   _
                             = y_egsot(1) _
                             + y_egsot(2) * log(.01*pgsor(-1)*pxp(-1)*egsot(-1)/xgdptn(-1)) _
                             + y_egsot(3) * (hggdpt+hggdpt(-1)+hggdpt(-2)+hggdpt(-3)) / 1600


         Defines:
           egsot, used in chunk 122d.
         Uses hggdpt 60d, pgsor 95a, pxp 93b, xgdptn 61a, and y_egsot 123e.

123e     ⟨*stdver_Coeffs y_egsot* 123e⟩≡                                      (263)
         y_egsot 3         -.382643,-.1,1.0
         Defines:
           y_egsot, used in chunk 123d.

### 2.8.23   h.23 GFDBTN: Federal government debt stock, current $

123f     ⟨*variable GFDBTN* 123f⟩≡                                            (221)
         GFDBTN    = Federal government debt stock, current $
         Defines:
           GFDBTN, used in chunks 215e and 233.

124a    ⟨*stdverEqs gfdbtn* 124a⟩≡                                          (254)
```
gfdbtn: gfdbtn - gfdbtn_aerr = ugfdbt*(gfdbtn(-1) - .25*gfsrpn + .25*egfin _
                                  - .25*jygfgn - .25*jygfen)
```

Defines:
    `gfdbtn`, used in chunks 83a, 124c, 133d, and 157c.
Uses `egfin` 115a, `gfsrpn` 125d, `jygfen` 72e, `jygfgn` 73b, and `ugfdbt` 215e.

## 2.8.24    h.24 GFINTN: Federal government net interest payments, current \$

124b    ⟨*variable GFINTN* 124b⟩≡                                          (221)
```
GFINTN   = Federal government net interest payments, current $
```
Defines:
    `GFINTN`, used in chunk 233.

124c    ⟨*stdverEqs gfintn* 124c⟩≡                                          (254)
```
gfintn: gfintn - gfintn_aerr = rgfint*gfdbtn(-1)
```

Defines:
    `gfintn`, used in chunks 81b and 125d.
Uses `gfdbtn` 124a and `rgfint` 157c.

## 2.8.25    h.25 GFS: Federal government grants-in-aid to S&L government, deflated by PGDP

124d    ⟨*variable GFS* 124d⟩≡                                          (221)
```
GFS      = Federal government grants-in-aid to S&L government, deflated by PGDP
```
Defines:
    `GFS`, used in chunk 233.
Uses `PGDP` 106e.

124e    ⟨*stdverEqs gfs* 124e⟩≡                                          (254)
```
gfs: d( log(gfs), 0, 1 ) - gfs_aerr  _
                = y_gfs(1) _
                + y_gfs(2) * log(gfsn(-1)/xgdptn(-1)) _
                + y_gfs(3) * (hggdpt+hggdpt(-1)+hggdpt(-2)+hggdpt(-3)) / 1600
```

Defines:
    `gfs`, used in chunk 125b.
Uses `gfsn` 125b, `hggdpt` 60d, `xgdptn` 61a, and `y_gfs` 124f.

124f    ⟨*stdver_Coeffs y_gfs* 124f⟩≡                                          (263)
```
y_gfs    3          -.361185,-.1,1.0
```
Defines:
    `y_gfs`, used in chunk 124e.

### 2.8.26  h.26 GFSN: Federal government grants-in-aid to S&L government, current $

125a  ⟨*variable GFSN* 125a⟩≡ (221)
```
GFSN      = Federal government grants-in-aid to S&L government, current $
```
Defines:
  GFSN, used in chunk 233.

125b  ⟨*stdverEqs gfsn* 125b⟩≡ (254)
```
gfsn: gfsn - gfsn_aerr = .01*pgdp*gfs
```

Defines:
  gfsn, used in chunks 124e, 125d, and 128e.
Uses gfs 124e and pgdp 106f.

### 2.8.27  h.27 GFSRPN: Federal government budget surplus, current $

125c  ⟨*variable GFSRPN* 125c⟩≡ (221)
```
GFSRPN   = Federal government budget surplus, current $
```
Defines:
  GFSRPN, used in chunk 233.

125d  ⟨*stdverEqs gfsrpn* 125d⟩≡ (254)
```
gfsrpn: gfsrpn - gfsrpn_aerr = tfpn + tfcin + tfibn + tfsin + tfdiv _
                   - egfln - egfon - gftn - gfintn _
                   - gfsubn - gfsn
```

Defines:
  gfsrpn, used in chunks 124a, 133d, and 138b.
Uses egfln 116d, egfon 118b, gfintn 124c, gfsn 125b, gfsubn 126d, gftn 127b, tfcin 131a,
  tfibn 131c, tfpn 131e, and tfsin 132a.

### 2.8.28  h.28 GFSUB: Federal government subsidies less surplus, deflated by PGDP

125e  ⟨*variable GFSUB* 125e⟩≡ (221)
```
GFSUB     = Federal government subsidies less surplus, deflated by PGDP
```
Defines:
  GFSUB, used in chunk 233.
Uses PGDP 106e.

126a    ⟨*stdverEqs gfsub* 126a⟩≡                                          (254)
```
gfsub: d( log(gfsub), 0, 1 ) - gfsub_aerr  _
                  = y_gfsub(1) _
                  + y_gfsub(2) * log(gfsubn(-1)/xgdptn(-1)) _
                  + y_gfsub(3) * (hggdpt+hggdpt(-1)+hggdpt(-2)+hggdpt(-3)) / 1600
```

Defines:
  gfsub, used in chunk 126d.
Uses gfsubn 126d, hggdpt 60d, xgdptn 61a, and y_gfsub 126b.

126b    ⟨*stdver_Coeffs y_gfsub* 126b⟩≡                                    (263)
```
y_gfsub 3          -.550087,-.1,1.0
```
Defines:
  y_gfsub, used in chunk 126a.

## 2.8.29   h.29 GFSUBN: Federal government subsidies less surplus, current \$

126c    ⟨*variable GFSUBN* 126c⟩≡                                          (221)
```
GFSUBN    = Federal government subsidies less surplus, current $
```
Defines:
  GFSUBN, used in chunk 233.

126d    ⟨*stdverEqs gfsubn* 126d⟩≡                                         (254)
```
gfsubn: gfsubn - gfsubn_aerr = .01*pgdp*gfsub
```

Defines:
  gfsubn, used in chunks 77b, 125d, and 126a.
Uses gfsub 126a and pgdp 106f.

## 2.8.30   h.30 GFT: Federal government net transfer payments, deflated by PGDP

126e    ⟨*variable GFT* 126e⟩≡                                             (221)
```
GFT       = Federal government net transfer payments, deflated by PGDP
```
Defines:
  GFT, used in chunk 233.
Uses PGDP 106e.

126f    ⟨*stdverEqs gft* 126f⟩≡                                            (254)
```
gft: gft - gft_aerr = (gftrd+gftrt)*xgdpt
```

Defines:
  gft, used in chunk 127b.
Uses gftrd 127d, gftrt 209b, and xgdpt 55c.

### 2.8.31    h.31 GFTN: Federal government net transfer payments, current \$

127a        ⟨*variable GFTN* 127a⟩≡                                                  (221)
     GFTN       = Federal government net transfer payments, current \$
    Defines:
      GFTN, used in chunk 233.

127b        ⟨*stdverEqs gftn* 127b⟩≡                                                 (254)
     gftn: gftn - gftn_aerr = .01*pgdp*gft

    Defines:
      gftn, used in chunks 85d, 125d, 131e, and 137d.
    Uses gft 126f and pgdp 106f.

### 2.8.32    h.32 GFTRD: Deviation of ratio of federal transfers to GDP from trend ratio

127c        ⟨*variable GFTRD* 127c⟩≡                                                 (221)
     GFTRD      = Deviation of ratio of federal transfers to GDP from trend ratio
    Defines:
      GFTRD, used in chunk 233.

127d        ⟨*stdverEqs gftrd* 127d⟩≡                                                (254)
     gftrd: gftrd - gftrd_aerr = y_gftrd(1) _
                 + y_gftrd(2) * gftrd(-1) _
                 + y_gftrd(3) * xgap2

    Defines:
      gftrd, used in chunk 126f.
    Uses xgap2 59c and y_gftrd 127e.

127e        ⟨*stdver_Coeffs y_gftrd* 127e⟩≡                                          (263)
     y_gftrd 3        -3.598159243340642e-05,0.6589196196672864,-0.0002408286743628969
    Defines:
      y_gftrd, used in chunk 127d.

### 2.8.33    h.33 GSDBTN: S&L government debt stock, current \$

127f        ⟨*variable GSDBTN* 127f⟩≡                                                (221)
     GSDBTN     = S&L government debt stock, current \$
    Defines:
      GSDBTN, used in chunks 215f and 233.

128a    ⟨*stdverEqs gsdbtn* 128a⟩≡                                    (254)
```
gsdbtn: gsdbtn - gsdbtn_aerr = ugsdbt*(gsdbtn(-1) - .25*gssrpn + .25 * egsin _
                          - .25*jygsgn - .25*jygsen)
```

Defines:
    gsdbtn, used in chunks 83a, 128c, and 135e.
Uses egsin 120c, gssrpn 128e, jygsen 73d, jygsgn 73f, and ugsdbt 215f.

### 2.8.34   h.34 GSINTN: S&L government net interest payments, current $

128b    ⟨*variable GSINTN* 128b⟩≡                                    (221)
```
GSINTN   = S&L government net interest payments, current $
```
Defines:
    GSINTN, used in chunks 215g and 233.

128c    ⟨*stdverEqs gsintn* 128c⟩≡                                    (254)
```
gsintn: gsintn - gsintn_aerr = rgfint*gsdbtn(-1) + ugsint*xbn
```

Defines:
    gsintn, used in chunks 81b and 128e.
Uses gsdbtn 128a, rgfint 157c, ugsint 215g, and xbn 71c.

### 2.8.35   h.35 GSSRPN: S&L government budget surplus, current $

128d    ⟨*variable GSSRPN* 128d⟩≡                                    (221)
```
GSSRPN   = S&L government budget surplus, current $
```
Defines:
    GSSRPN, used in chunk 233.

128e    ⟨*stdverEqs gssrpn* 128e⟩≡                                    (254)
```
gssrpn: gssrpn - gssrpn_aerr = tspn + tscin + tsibn + tssin + gfsn  _
                        - egsln - egson - gstn - gsintn - gssubn
```

Defines:
    gssrpn, used in chunks 128a, 135e, and 138d.
Uses egsln 121e, egson 123b, gfsn 125b, gsintn 128c, gssubn 129b, gstn 129d, tscin 136f,
    tsibn 137b, tspn 137d, and tssin 137f.

### 2.8.36   h.36 GSSUBN: S&L government subsidies less surplus, current $

129a        $\langle$*variable GSSUBN* 129a$\rangle\equiv$                                                     (221)
        GSSUBN   = S&L government subsidies less surplus, current $
        Defines:
          GSSUBN, used in chunk 233.

129b        $\langle$*stdverEqs gssubn* 129b$\rangle\equiv$                                                    (254)
        gssubn: gssubn - gssubn_aerr = .01*pgdp*gssub


        Defines:
          gssubn, used in chunks 77b and 128e.
        Uses gssub 130e and pgdp 106f.

### 2.8.37   h.37 GSTN: S&L government net transfer payments, current $

129c        $\langle$*variable GSTN* 129c$\rangle\equiv$                                                       (221)
        GSTN     = S&L government net transfer payments, current $
        Defines:
          GSTN, used in chunk 233.

129d        $\langle$*stdverEqs gstn* 129d$\rangle\equiv$                                                      (254)
        gstn: gstn - gstn_aerr = .01*pgdp*gst


        Defines:
          gstn, used in chunks 85d, 128e, 131e, and 137d.
        Uses gst 129f and pgdp 106f.

### 2.8.38   h.38 GST: S&L government net transfer payments, deflated by PGDP

129e        $\langle$*variable GST* 129e$\rangle\equiv$                                                        (221)
        GST      = S&L government net transfer payments, deflated by PGDP
        Defines:
          GST, used in chunk 233.
        Uses PGDP 106e.

129f        $\langle$*stdverEqs gst* 129f$\rangle\equiv$                                                       (254)
        gst: gst - gst_aerr = (gstrd+gstrt)*xgdpt


        Defines:
          gst, used in chunk 129d.
        Uses gstrd 130b, gstrt 209e, and xgdpt 55c.

### 2.8.39   h.39 GSTRD: Deviation of ratio of S&L transfers to GDP from trend ratio

130a    ⟨*variable GSTRD* 130a⟩≡                                          (221)
```
GSTRD    = Deviation of ratio of S&L transfers to GDP from trend ratio
```
Defines:
   GSTRD, used in chunk 233.

130b    ⟨*stdverEqs gstrd* 130b⟩≡                                        (254)
```
gstrd: gstrd - gstrd_aerr = y_gstrd(1) _
                  + y_gstrd(2) * gstrd(-1) _
                  + y_gstrd(3) * xgap2
```

Defines:
   gstrd, used in chunk 129f.
Uses xgap2 59c and y_gstrd 130c.

130c    ⟨*stdver_Coeffs y_gstrd* 130c⟩≡                                  (263)
```
y_gstrd 3      -1.235658095172135e-05,0.7366990097980338,-4.483509762335216e-05
```
Defines:
   y_gstrd, used in chunk 130b.

### 2.8.40   h.40 GSSUB: S&L government subsidies less surplus, deflated by PGDP

130d    ⟨*variable GSSUB* 130d⟩≡                                         (221)
```
GSSUB    = S&L government subsidies less surplus, deflated by PGDP
```
Defines:
   GSSUB, used in chunks 216a and 233.
Uses PGDP 106e.

130e    ⟨*stdverEqs gssub* 130e⟩≡                                        (254)
```
gssub: gssub - gssub_aerr = ugssub*xgdpt
```

Defines:
   gssub, used in chunk 129b.
Uses ugssub 216a and xgdpt 55c.

### 2.8.41   h.41 TFCIN: Federal corporate income tax accruals, current $

130f    ⟨*variable TFCIN* 130f⟩≡                                         (221)
```
TFCIN    = Federal corporate income tax accruals, current $
```
Defines:
   TFCIN, used in chunk 233.

131a          ⟨*stdverEqs tfcin* 131a⟩≡                                              (254)
```
tfcin: tfcin - tfcin_aerr = trfci * ynicpn
```

Defines:
   tfcin, used in chunks 76–78, 83a, 125d, 153c, 198a, and 202f.
Uses trfci 132c and ynicpn 77b.

### 2.8.42   h.42 TFIBN: Federal indirect business tax receipts, current $

131b          ⟨*variable TFIBN* 131b⟩≡                                              (221)
```
TFIBN    = Federal indirect business tax receipts, current $
```
Defines:
   TFIBN, used in chunk 233.

131c          ⟨*stdverEqs tfibn* 131c⟩≡                                              (254)
```
tfibn: tfibn - tfibn_aerr = trfib * ecnian
```

Defines:
   tfibn, used in chunks 77b and 125d.
Uses ecnian 22a and trfib 213f.

### 2.8.43   h.43 TFPN: Federal personal income tax and non-tax receipts, current $

131d          ⟨*variable TFPN* 131d⟩≡                                              (221)
```
TFPN     = Federal personal income tax and nontax receipts, current $
```
Defines:
   TFPN, used in chunk 233.

131e          ⟨*stdverEqs tfpn* 131e⟩≡                                              (254)
```
tfpn: tfpn - tfpn_aerr = trfp * (ypn - gftn - gstn)
```

Defines:
   tfpn, used in chunks 77f, 84d, 125d, and 138f.
Uses gftn 127b, gstn 129d, trfp 133a, and ypn 77d.

### 2.8.44   h.44 TFSIN: Federal social insurance tax receipts

131f          ⟨*variable TFSIN* 131f⟩≡                                              (221)
```
TFSIN    = Federal social insurance tax receipts
```
Defines:
   TFSIN, used in chunk 233.

132a    ⟨*stdverEqs tfsin* 132a⟩≡                                                   (254)
```
tfsin: tfsin - tfsin_aerr = trfsi * yniln
```

Defines:
   tfsin, used in chunks 81f and 125d.
Uses trfsi 213i and yniln 74f.

### 2.8.45    h.45 TRFCI: Average federal corporate income tax rate

132b    ⟨*variable TRFCI* 132b⟩≡                                                    (221)
```
TRFCI    = Average federal corporate income tax rate
```
Defines:
   TRFCI, used in chunk 233.

132c    ⟨*stdverEqs trfci* 132c⟩≡                                                   (254)
```
trfci: trfci - trfci_aerr = y_trfci(1) _
                    + y_trfci(2) * trfci(-1) _
                    + y_trfci(3) * trfcim _
                    + y_trfci(4) * .01*pxp*epd*ppdr*.01*tapdt/ynicpn _
                    + y_trfci(5) * xgap2 _
                    + y_trfci(6) * picnia
```

Defines:
   trfci, used in chunks 131a and 134b.
Uses epd 25c, picnia 88f, ppdr 95g, pxp 93b, tapdt 213a, trfcim 213e, xgap2 59c,
   y_trfci 132d, and ynicpn 77b.

132d    ⟨*stdver_Coeffs y_trfci* 132d⟩≡                                             (263)
```
y_trfci 6        0.00133892767133083,0.8130157141532537,0.1085501838146501,-0.21918846
```
Defines:
   y_trfci, used in chunk 132c.

### 2.8.46    h.46 TRFP: Average federal tax rate for personal income tax and nontax receipts

132e    ⟨*variable TRFP* 132e⟩≡                                                     (221)
```
TRFP     = Average federal tax rate for personal income tax and nontax receipts
```
Defines:
   TRFP, used in chunk 233.

133a      ⟨*stdverEqs trfp* 133a⟩≡                                                          (254)
```
trfp: trfp - trfp_aerr = y_trfp(1) * trfpt _
                  + ( y_trfp(2) *  (trfp(-1)-trfpt(-1)) +  y_trfp(3) *  (trfp(-2)-trfpt(-2)))
                  + y_trfp(4) * xgap2(-1)
```

Defines:
     trfp, used in chunks 131e and 135b.
Uses trfpt 133d, xgap2 59c, and y_trfp 133b.

133b      ⟨*stdver_Coeffs y_trfp* 133b⟩≡                                                    (263)
```
y_trfp  4        1,0.6249369098272274,0.2896464773374296,0.0003722869429144596
```
Defines:
     y_trfp, used in chunk 133a.

## 2.8.47    h.47 TRFPT: Average federal tax rate for personal income tax, trend

133c      ⟨*variable TRFPT* 133c⟩≡                                                          (221)
```
TRFPT    = Average federal tax rate for personal income tax, trend
```
Defines:
     TRFPT, used in chunk 233.

133d      ⟨*stdverEqs trfpt* 133d⟩≡                                                         (254)
```
trfpt: trfpt - trfpt_aerr = dfpex * trfptx _
                  + dfpdbt * ( trfpt(-1) _
                      + y_trfpt(1) * (gfdbtn(-1)/xgdpn(-1) - gfdrt(-1))  _
                      + y_trfpt(2) * d( gfdbtn(-1)/xgdpn(-1) - gfdrt(-1), 0, 1 ) ) ) _
                  + dfpsrp * ( trfpt(-1) _
                      + y_trfpt(3) * ((gfsrpn(-1) - egfin(-1) + jygfgn(-1) _
                          + jygfen(-1))/xgdpn(-1) - gfsrt(-1)))
```

Defines:
     trfpt, used in chunk 133a.
Uses dfpdbt 207a, dfpex 207b, dfpsrp 207c, egfin 115a, gfdbtn 124a, gfdrt 208h,
     gfsrpn 125d, gfsrt 209a, jygfen 72e, jygfgn 73b, trfptx 213h, xgdpn 70c,
     and y_trfpt 133e.

133e      ⟨*stdver_Coeffs y_trfpt* 133e⟩≡                                                   (263)
```
y_trfpt 3        0.0500000000000000E+00,0.5000000000000000E+00,-0.1000000000000000E+00
```
Defines:
     y_trfpt, used in chunk 133d.

### 2.8.48   h.48 TRSCI: Average S&L corporate income tax rate

134a    ⟨*variable TRSCI* 134a⟩≡                                         (221)
```
TRSCI    = Average S&L corporate income tax rate
```
Defines:
  TRSCI, used in chunk 233.

134b    ⟨*stdverEqs trsci* 134b⟩≡                                        (254)
```
trsci: trsci - trsci_aerr = y_trsci(1) * trsci(-1) _
                 + ( y_trsci(2) *  trscit +  y_trsci(3) *  trscit(-1)) _
                 + ( y_trsci(4) *  xgap2 +  y_trsci(5) *  xgap2(-1))  _
                 + y_trsci(6) * d( trfci, 0, 1 )
```

Defines:
  trsci, used in chunk 136f.
Uses trfci 132c, trscit 214a, xgap2 59c, and y_trsci 134c.

134c    ⟨*stdver_Coeffs y_trsci* 134c⟩≡                                  (263)
```
y_trsci 6        0.791150698521011,0.9058859419794156,-0.6970366405004266,-0.00076812:
```
Defines:
  y_trsci, used in chunk 134b.

### 2.8.49   h.49 TRSIB: Average S&L indirect business tax rate

134d    ⟨*variable TRSIB* 134d⟩≡                                         (221)
```
TRSIB    = Average S&L indirect business tax rate
```
Defines:
  TRSIB, used in chunk 233.

134e    ⟨*stdverEqs trsib* 134e⟩≡                                        (254)
```
trsib: trsib - trsib_aerr = y_trsib(1) * trsib(-1) _
                 + ( y_trsib(2) *  trsibt +  y_trsib(3) *  trsibt(-1))  _
                 + y_trsib(4) * xgap2
```

Defines:
  trsib, used in chunk 137b.
Uses trsibt 214b, xgap2 59c, and y_trsib 134f.

134f    ⟨*stdver_Coeffs y_trsib* 134f⟩≡                                  (263)
```
y_trsib 4        0.9134383490112551,1.33647889726315,-1.249917246274406,-3.35380668439
```
Defines:
  y_trsib, used in chunk 134e.

## 2.8.50   h.50 TRSP: Average S&L tax rate for personal income tax and nontax receipts

135a    ⟨*variable TRSP* 135a⟩≡                                                    (221)
```
TRSP     = Average S&L tax rate for personal income tax and nontax receipts
```
Defines:
  TRSP, used in chunk 233.

135b    ⟨*stdverEqs trsp* 135b⟩≡                                                   (254)
```
trsp: trsp - trsp_aerr = y_trsp(1) * trsp(-1) _
                  + ( y_trsp(2) *  trspt +  y_trsp(3) *  trspt(-1))  _
                  + y_trsp(4) * xgap2(-1) _
                  + y_trsp(5) * d( trfp, 0, 1 )
```

Defines:
  trsp, used in chunk 137d.
Uses trfp 133a, trspt 135e, xgap2 59c, and y_trsp 135c.

135c    ⟨*stdver_Coeffs y_trsp* 135c⟩≡                                             (263)
```
y_trsp  5       0.632946369509944,0.882450152119161,-0.515396521629105,2.414664053290023e-05,0.
```
Defines:
  y_trsp, used in chunk 135b.

## 2.8.51   h.51 TRSPT: Trend S&L personal income tax rate

135d    ⟨*variable TRSPT* 135d⟩≡                                                   (221)
```
TRSPT    = Trend S&L personal income tax rate
```
Defines:
  TRSPT, used in chunk 233.

135e    ⟨*stdverEqs trspt* 135e⟩≡                                                  (254)
```
trspt: trspt - trspt_aerr = dfpex * trsptx _
                  + dfpdbt * ( trspt(-1) _
                      + y_trspt(1) * (gsdbtn(-1)/xgdpn(-1) - gsdrt(-1))  _
                      + y_trspt(2) * d( gsdbtn(-1)/xgdpn(-1) - gsdrt(-1), 0, 1 ) ) _
                  + dfpsrp * ( trspt(-1) _
                      + y_trspt(3) * ((gssrpn(-1) - egsin(-1) + jygsgn(-1) _
                          + jygsen(-1))/xgdpn(-1) - gssrt(-1)))
```

Defines:
  trspt, used in chunk 135b.
Uses dfpdbt 207a, dfpex 207b, dfpsrp 207c, egsin 120c, gsdbtn 128a, gsdrt 209c,
  gssrpn 128e, gssrt 209d, jygsen 73d, jygsgn 73f, trsptx 214d, xgdpn 70c,
  and y_trspt 136a.

136a    ⟨*stdver_Coeffs y_trspt* 136a⟩≡                                                                (263)
        y_trspt 3          0.05000000000000000E+00,0.50000000000000000E+00,-0.2500000000000000E-
        Defines:
        y_trspt, used in chunk 135e.


### 2.8.52    h.52 TRSSI: Average S&L social insurance tax rate

136b    ⟨*variable TRSSI* 136b⟩≡                                                                        (221)
        TRSSI    = Average S&L social insurance tax rate
        Defines:
        TRSSI, used in chunk 233.


136c    ⟨*stdverEqs trssi* 136c⟩≡                                                                        (254)
        trssi: trssi - trssi_aerr =  ( y_trssi(1) *  trssi(-1) +  y_trssi(2) *  trssi(-2))  _
                        + ( y_trssi(3) *  trssit +  y_trssi(4) *  trssit(-1))  _
                        + y_trssi(5) * xgap2



        Defines:
        trssi, used in chunk 137f.
        Uses trssit 214e, xgap2 59c, and y_trssi 136d.

136d    ⟨*stdver_Coeffs y_trssi* 136d⟩≡                                                                (263)
        y_trssi 5          1.18174981903228,-0.2318024453193926,1.575674530080275,-1.5256219037
        Defines:
        y_trssi, used in chunk 136c.


### 2.8.53    h.53 TSCIN: S&L corporate income tax accruals, current $

136e    ⟨*variable TSCIN* 136e⟩≡                                                                        (221)
        TSCIN    = S&L corporate income tax accruals, current $
        Defines:
        TSCIN, used in chunk 233.


136f    ⟨*stdverEqs tscin* 136f⟩≡                                                                        (254)
        tscin: tscin - tscin_aerr = trsci * ynicpn



        Defines:
        tscin, used in chunks 76–78, 83a, 128e, 153c, 198a, and 202f.
        Uses trsci 134b and ynicpn 77b.

### 2.8.54   h.54 TSIBN: S&L indirect business tax receipts, current $

137a       ⟨*variable TSIBN* 137a⟩≡                                              (221)
           TSIBN    = S&L indirect business tax receipts, current $
           Defines:
               TSIBN, used in chunk 233.

137b       ⟨*stdverEqs tsibn* 137b⟩≡                                            (254)
           tsibn: tsibn - tsibn_aerr = trsib * ecnian


           Defines:
               tsibn, used in chunks 77b and 128e.
           Uses ecnian 22a and trsib 134e.


### 2.8.55   h.55 TSPN: S&L personal income tax and nontax receipts, current $

137c       ⟨*variable TSPN* 137c⟩≡                                              (221)
           TSPN     = S&L personal income tax and nontax receipts, current $
           Defines:
               TSPN, used in chunk 233.

137d       ⟨*stdverEqs tspn* 137d⟩≡                                             (254)
           tspn: tspn - tspn_aerr = trsp * (ypn - gftn - gstn)


           Defines:
               tspn, used in chunks 77f, 84d, 128e, and 138f.
           Uses gftn 127b, gstn 129d, trsp 135b, and ypn 77d.


### 2.8.56   h.56 TSSIN: S&L social insurance tax receipts, current $

137e       ⟨*variable TSSIN* 137e⟩≡                                             (221)
           TSSIN    = S&L social insurance tax receipts, current $
           Defines:
               TSSIN, used in chunk 233.

137f       ⟨*stdverEqs tssin* 137f⟩≡                                            (254)
           tssin: tssin - tssin_aerr = trssi * yniln


           Defines:
               tssin, used in chunks 81f and 128e.
           Uses trssi 136c and yniln 74f.

### 2.8.57   h.57 YGFSN: Federal government saving

138a    ⟨*variable YGFSN* 138a⟩≡                                            (221)
```
YGFSN    = Federal government saving
```
Defines:
  `YGFSN`, used in chunk 233.

138b    ⟨*stdverEqs ygfsn* 138b⟩≡                                          (254)
```
ygfsn: ygfsn - ygfsn_aerr = gfsrpn + jygfgn + jygfen
```

Defines:
  `ygfsn`, never used.
Uses `gfsrpn` 125d, `jygfen` 72e, and `jygfgn` 73b.

### 2.8.58   h.58 YGSSN: State and Local government saving

138c    ⟨*variable YGSSN* 138c⟩≡                                           (221)
```
YGSSN    = State and Local government saving
```
Defines:
  `YGSSN`, used in chunk 233.

138d    ⟨*stdverEqs ygssn* 138d⟩≡                                          (254)
```
ygssn: ygssn - ygssn_aerr = gssrpn + jygsgn + jygsen
```

Defines:
  `ygssn`, never used.
Uses `gssrpn` 128e, `jygsen` 73d, and `jygsgn` 73f.

### 2.8.59   h.59 TRYH: Average tax rate on household income

138e    ⟨*variable TRYH* 138e⟩≡                                            (221)
```
TRYH     = Average tax rate on household income
```
Defines:
  `TRYH`, used in chunk 233.

138f    ⟨*stdverEqs tryh* 138f⟩≡                                           (254)
```
tryh: tryh - tryh_aerr = (tfpn+tspn)/(yhln+yhptn)
```

Defines:
  `tryh`, used in chunks 81d and 82b.
Uses `tfpn` 131e, `tspn` 137d, `yhln` 81f, and `yhptn` 83e.

## 2.9   Financial Sector

### 2.9.1   i.1 RFFTAY: Value of eff. federal funds rate given by the Taylor rule with output gap

139a     ⟨*variable RFFTAY* 139a⟩≡                                               (221)
     RFFTAY   = Value of eff. federal funds rate given by the Taylor rule with output gap
     Defines:
       RFFTAY, used in chunk 233.

139b     ⟨*stdverEqs rfftay* 139b⟩≡                                               (254)
```
    rfftay: rfftay - rfftay_aerr = rstar _
                        + ( picxfe +  picxfe(-1) +  picxfe(-2) +  picxfe(-3))  / 4  _
                        + y_rfftay(1) * ( ( picxfe +  picxfe(-1) +  picxfe(-2) +  picxfe(-3))  / 4
                        + y_rfftay(2) * xgap2
```

     Defines:
       rfftay, used in chunk 142d.
     Uses picxfe 87b, pitarg 211b, rstar 142a, xgap2 59c, and y_rfftay 139c.

139c     ⟨*stdver_Coeffs y_rfftay* 139c⟩≡                                               (263)
```
    y_rfftay        2         0.5,1.0
```
     Defines:
       y_rfftay, used in chunk 139b.

### 2.9.2   i.2 RFFTLR: Value of eff. federal funds rate given by the Taylor rule with unemployment gap

139d     ⟨*variable RFFTLR* 139d⟩≡                                               (221)
     RFFTLR   = Value of eff. federal funds rate given by the Taylor rule with unemployment gap
     Defines:
       RFFTLR, used in chunk 233.

139e     ⟨*stdverEqs rfftlr* 139e⟩≡                                               (254)
```
    rfftlr: rfftlr - rfftlr_aerr = rstar  _
                        + y_rfftlr(1) * pitarg _
                        + y_rfftlr(2) * ( ( picxfe +  picxfe(-1) +  picxfe(-2) +  picxfe(-3)) )
                        + y_rfftlr(3) * (lurnat + deuc * leuc - lur)
```

     Defines:
       rfftlr, used in chunk 142d.
     Uses deuc 206h, leuc 210e, lur 65f, lurnat 69e, picxfe 87b, pitarg 211b, rstar 142a,
       and y_rfftlr 139f.

139f     ⟨*stdver_Coeffs y_rfftlr* 139f⟩≡                                               (263)
```
    y_rfftlr        3         -0.5,.375,1.1
```
     Defines:
       y_rfftlr, used in chunk 139e.

### 2.9.3   i.3 RFFINTAY: Value of eff. federal funds rate given by the inertial Taylor rule

140a    ⟨*variable RFFINTAY* 140a⟩≡                                    (221)
    RFFINTAY = Value of eff. federal funds rate given by the inertial Taylor rule
Defines:
    RFFINTAY, used in chunk 233.

140b    ⟨*stdverEqs rffintay* 140b⟩≡                                    (254)
    rffintay: rffintay - rffintay_aerr = y_rffintay(3) * rffe(-1) _
                        + (1-y_rffintay(3)) * (rstar _
                        + ( picxfe +  picxfe(-1) +  picxfe(-2) + picxfe(-3))  / 4  _
                        + y_rffintay(1) * ( ( picxfe +  picxfe(-1) +  picxfe(-2) +  pic
                        + y_rffintay(2) * xgap2)

Defines:
    rffintay, used in chunk 142d.
Uses picxfe 87b, pitarg 211b, rffe 144e, rstar 142a, xgap2 59c, and y_rffintay 140c.

140c    ⟨*stdver_Coeffs y_rffintay* 140c⟩≡                                    (263)
    y_rffintay        3        0.5,1.0,.85
Defines:
    y_rffintay, used in chunk 140b.

### 2.9.4   i.4 RFFALT: Value of eff. federal funds rate given by estimated policy rule

140d    ⟨*variable RFFALT* 140d⟩≡                                    (221)
    RFFALT   = Value of eff. federal funds rate given by estimated policy rule
Defines:
    RFFALT, used in chunk 233.

140e    ⟨*stdverEqs rffalt* 140e⟩≡                                    (254)
    rffalt: rffalt - rffalt_aerr = y_rffalt(1) _
                        + y_rffalt(2) * rff(-1) _
                        + y_rffalt(3) * rff(-2) _
                        + y_rffalt(4) * xgap2 _
                        + y_rffalt(5) * xgap2(-1) _
                        + y_rffalt(6) * ( ( picxfe +  picxfe(-1) +  picxfe(-2) +  picxfe

Defines:
    rffalt, used in chunk 142d.
Uses picxfe 87b, rff 145a, xgap2 59c, and y_rffalt 141a.

141a       ⟨*stdver_Coeffs y_rffalt* 141a⟩≡                                              (263)
           y_rffalt          6            .0551,1.2,-.39,.6954,-.5168,.3287
           Defines:
              y_rffalt, used in chunk 140e.


## 2.9.5   i.5 RFFGEN: Value of eff. federal funds rate given by the generalized reaction function

141b       ⟨*variable RFFGEN* 141b⟩≡                                                    (221)
           RFFGEN   = Value of eff. federal funds rate given by the generalized reaction function
           Defines:
              RFFGEN, used in chunks 211a and 233.


141c       ⟨*stdverEqs rffgen* 141c⟩≡                                                   (254)
           rffgen: rffgen - rffgen_aerr = y_rffgen(1) _
                            + ( y_rffgen(2) *  rffe(-1) + y_rffgen(3) *  rffe(-2) + y_rffgen(4) *
                            + ( y_rffgen(6) *  picnia + y_rffgen(7) *  picnia(-1) + y_rffgen(8) *
                            + ( y_rffgen(11) *  xgap2 + y_rffgen(12) * xgap2(-1) + y_rffgen(13) *
                            + ( y_rffgen(16) *  lur + y_rffgen(17) *  lur(-1) + y_rffgen(18) *  lur
                            + ( y_rffgen(21) *  pcnia + y_rffgen(22) *  pcnia(-1) + y_rffgen(23) *
                            + ( y_rffgen(26) *  rstar + y_rffgen(27) *  rstar(-1) + y_rffgen(28) *
                            + ( y_rffgen(31) *  pitarg + y_rffgen(32) * pitarg(-1) + y_rffgen(33)
                            + ( y_rffgen(36) *  lurnat + y_rffgen(37) * lurnat(-1) + y_rffgen(38)
                            + ( y_rffgen(41) *  pcstar + y_rffgen(42) * pcstar(-1) + y_rffgen(43)
                            + ( y_rffgen(46) *  picxfe + y_rffgen(47) * picxfe(-1) + y_rffgen(48)


           Defines:
              rffgen, used in chunk 142d.
           Uses lur 65f, lurnat 69e, pcnia 89b, pcstar 211a, picnia 88f, picxfe 87b, pitarg 211b,
              rffe 144e, rstar 142a, xgap2 59c, and y_rffgen 141d.


141d       ⟨*stdver_Coeffs y_rffgen* 141d⟩≡                                             (263)
           y_rffgen          50           0.000000000000000000e+00,0.000000000000000000e+00,0.000000000000000000e
           Defines:
              y_rffgen, used in chunk 141c.


## 2.9.6   i.6 RSTAR: Equilibrium real federal funds rate (for monetary policy reaction functions)

141e       ⟨*variable RSTAR* 141e⟩≡                                                     (221)
           RSTAR    = Equilibrium real federal funds rate (for monetary policy reaction functions)
           Defines:
              RSTAR, used in chunks 208e and 233.

142a    $\langle stdverEqs\ rstar\ 142a\rangle\equiv$                                                            (254)

```
rstar: rstar - rstar_aerr = rstar(-1) _
                  + y_rstar(1) * ((rrffe-rstar(-1))*drstar)
```

Defines:
  rstar, used in chunks 139–41.
Uses drstar 208e, rrffe 145e, and y_rstar 142b.

142b    $\langle stdver\_Coeffs\ y\_rstar\ 142b\rangle\equiv$                                                     (263)

```
y_rstar 1          .05
```

Defines:
  y_rstar, used in chunk 142a.


### 2.9.7   i.7 RFFRULE: Federal funds rate (effective ann. yield)

142c    $\langle variable\ RFFRULE\ 142c\rangle\equiv$                                                          (221)

```
RFFRULE  = Federal funds rate (effective ann. yield)
```

Defines:
  RFFRULE, used in chunk 233.

142d    $\langle stdverEqs\ rffrule\ 142d\rangle\equiv$                                                         (254)

```
rffrule: rffrule - rffrule_aerr =  (@recode((dmpex * 100 * ((1+rfffix/36000)^365-1) _
                    + dmprr  * (rrfix + ( picxfe +  picxfe(-1) +  picxfe(-2) +  p
                    + dmptay * rfftay  _
                    + dmptlr * rfftlr  _
                    + dmpintay * rffintay  _
                    + dmpalt * 100*((1+rffalt/36000)^365-1) _
                    + dmpgen * rffgen)>(rffmin),dmpex * 100 * ((1+rfffix/36000)^36
                    + dmprr  * (rrfix + ( picxfe +  picxfe(-1) +  picxfe(-2) +  p
                    + dmptay * rfftay  _
                    + dmptlr * rfftlr  _
                    + dmpintay * rffintay  _
                    + dmpalt * 100*((1+rffalt/36000)^365-1) _
                    + dmpgen * rffgen,rffmin))
```

Defines:
  rffrule, used in chunk 144e.
Uses dmpalt 207e, dmpex 207f, dmpgen 207g, dmpintay 207h, dmprr 207i, dmptay 208b,
  dmptlr 208c, picxfe 87b, rffalt 140e, rfffix 211h, rffgen 141c, rffintay 140b,
  rffmin 212a, rfftay 139b, rfftlr 139e, and rrfix 212d.

### 2.9.8   i.8 DMPTLUR: Monetary policy indicator for unemployment threshold

143a        ⟨*variable DMPTLUR* 143a⟩≡                                           (221)
            DMPTLUR  = Monetary policy indicator for unemployment threshold
            Defines:
              DMPTLUR, used in chunk 233.

143b        ⟨*stdverEqs dmptlur* 143b⟩≡                                         (254)
            dmptlur: dmptlur - dmptlur_aerr = 1/(1+exp(y_dmptlur(1)*(lur-lurtrsh)))


            Defines:
              dmptlur, used in chunk 144a.
            Uses lur 65f, lurtrsh 210g, and y_dmptlur 143c.

143c        ⟨*stdver_Coeffs y_dmptlur* 143c⟩≡                                   (263)
            y_dmptlur          1           25
            Defines:
              y_dmptlur, used in chunk 143b.


### 2.9.9   i.9 DMPTPI: Monetary policy indicator for inflation threshold

143d        ⟨*variable DMPTPI* 143d⟩≡                                          (221)
            DMPTPI   = Monetary policy indicator for inflation threshold
            Defines:
              DMPTPI, used in chunk 233.

143e        ⟨*stdverEqs dmptpi* 143e⟩≡                                         (254)
            dmptpi: dmptpi - dmptpi_aerr = 1/(1+exp(y_dmptpi(1)*(zpic58-pitrsh)))


            Defines:
              dmptpi, used in chunk 144a.
            Uses pitrsh 211c, y_dmptpi 143f, and zpic58 180c 180e.

143f        ⟨*stdver_Coeffs y_dmptpi* 143f⟩≡                                   (263)
            y_dmptpi           1          -25
            Defines:
              y_dmptpi, used in chunk 143e.


### 2.9.10   i.10 DMPTMAX: Monetary policy indicator for both thresholds

143g        ⟨*variable DMPTMAX* 143g⟩≡                                         (221)
            DMPTMAX  = Monetary policy indicator for both thresholds
            Defines:
              DMPTMAX, used in chunk 233.

144a    ⟨*stdverEqs dmptmax* 144a⟩≡                                                    (254)
    `dmptmax: dmptmax - dmptmax_aerr = (@recode((dmptlur)>(dmptpi),dmptlur,dmptpi))`

Defines:
  `dmptmax`, used in chunk 144c.
Uses `dmptlur` 143b and `dmptpi` 143e.

### 2.9.11   i.11 DMPTR: Monetary policy indicator for policy rule thresholds

144b    ⟨*variable DMPTR* 144b⟩≡                                                    (221)
    `DMPTR    = Monetary policy indicator for policy rule thresholds`
Defines:
  `DMPTR`, used in chunk 233.

144c    ⟨*stdverEqs dmptr* 144c⟩≡                                                    (254)
    `dmptr: dmptr - dmptr_aerr = (@recode((dmptmax)>(dmptr(-1)),dmptmax,dmptr(-1)))`

Defines:
  `dmptr`, used in chunk 144e.
Uses `dmptmax` 144a.

### 2.9.12   i.12 RFFE: Federal funds rate (effective ann. yield)

144d    ⟨*variable RFFE* 144d⟩≡                                                    (221)
    `RFFE    = Federal funds rate (effective ann. yield)`
Defines:
  `RFFE`, used in chunk 233.

144e    ⟨*stdverEqs rffe* 144e⟩≡                                                    (254)
    `rffe: rffe - rffe_aerr = (1-dmptrsh) * (@recode((rffrule)>( rffmin),rffrule, rffmin)`
                    `+ dmptrsh * (@recode(((dmptr(-1)*rffrule + (1-dmptr(-1))*rffmin))`

Defines:
  `rffe`, used in chunks 80d, 140b, 141c, 145, 146a, 170–91, and 193–202.
Uses `dmptr` 144c, `dmptrsh` 208d, `rffmin` 212a, and `rffrule` 142d.

### 2.9.13   i.13 RFF: Federal funds rate

144f    ⟨*variable RFF* 144f⟩≡                                                    (221)
    `RFF     = Federal funds rate`
Defines:
  `RFF`, used in chunk 233.

145a      ⟨*stdverEqs rff* 145a⟩≡                                         (254)

```
rff: rff - rff_aerr = 36000*( (1+.01*rffe)^(1/365) - 1 )
```

Defines:
     `rff`, used in chunks 140e and 145c.
Uses `rffe` 144e.

### 2.9.14    i.14 DELRFF: Federal funds rate, first diff

145b      ⟨*variable DELRFF* 145b⟩≡                                          (221)

```
DELRFF   = Federal funds rate, first diff
```

Defines:
     `DELRFF`, used in chunk 233.

145c      ⟨*stdverEqs delrff* 145c⟩≡                                      (254)

```
delrff: delrff - delrff_aerr = rff - rff(-1)
```

Defines:
     `delrff`, never used.
Uses `rff` 145a.

### 2.9.15    i.15 RRFFE: Real federal funds rate (effective ann. yield)

145d      ⟨*variable RRFFE* 145d⟩≡                                         (221)

```
RRFFE    = Real federal funds rate (effective ann. yield)
```

Defines:
     `RRFFE`, used in chunk 233.

145e      ⟨*stdverEqs rrffe* 145e⟩≡                                      (254)

```
rrffe: rrffe - rrffe_aerr = rffe - ( picxfe + picxfe(-1) + picxfe(-2) + picxfe(-3)) / 4
```

Defines:
     `rrffe`, used in chunks 142a and 169a.
Uses `picxfe` 87b and `rffe` 144e.

### 2.9.16    i.16 RTBE: 3-month Treasury bill rate (effective ann. yield)

145f      ⟨*variable RTBE* 145f⟩≡                                            (221)

```
RTBE     = 3-month Treasury bill rate (effective ann. yield)
```

Defines:
     `RTBE`, used in chunk 233.

146a    ⟨*stdverEqs rtbe* 146a⟩≡                                             (254)
```
rtbe: rtbe - rtbe_aerr = y_rtbe(1) _
                + ( y_rtbe(2) *  rtbe(-1) +  y_rtbe(3) *  rtbe(-2))  _
                + ( y_rtbe(4) *  rffe +  y_rtbe(5) *  rffe(-1))
```

Defines:
  rtbe, used in chunk 146d.
Uses rffe 144e and y_rtbe 146b.

146b    ⟨*stdver_Coeffs y_rtbe* 146b⟩≡                                        (263)
```
y_rtbe  5        -0.06677368009690213,0.7720707564737897,0.1224099968713681,0.78509523
```
Defines:
  y_rtbe, used in chunk 146a.

### 2.9.17   i.17 RTB: 3-month Treasury bill rate

146c    ⟨*variable RTB* 146c⟩≡                                               (221)
```
RTB     = 3-month Treasury bill rate
```
Defines:
  RTB, used in chunk 233.

146d    ⟨*stdverEqs rtb* 146d⟩≡                                              (254)
```
rtb: rtb - rtb_aerr = 36000/90 * (1-(.01*rtbe+1)^(-90/365))
```

Defines:
  rtb, used in chunks 47b and 156f.
Uses rtbe 146a.

### 2.9.18   i.18 RG5P: 5-year Treasury note rate.  term premium

146e    ⟨*variable RG5P* 146e⟩≡                                              (221)
```
RG5P    = 5-year Treasury note rate. term premium
```
Defines:
  RG5P, used in chunk 233.

146f    ⟨*stdverEqs rg5p* 146f⟩≡                                             (254)
```
rg5p: rg5p - rg5p_aerr = y_rg5p(1) _
                + y_rg5p(2) * zgap05 _
                + y_rg5p(3) * (rg5p(-1) - y_rg5p(1) - y_rg5p(2)*zgap05(-1))
```

Defines:
  rg5p, used in chunk 147c.
Uses y_rg5p 147a and zgap05 173a.

147a       ⟨*stdver_Coeffs y_rg5p* 147a⟩≡                                                    (263)
    `y_rg5p  3      0.7478923780795074,-0.3984697511015516,0.9119509672669279`
Defines:
  y_rg5p, used in chunk 146f.


## 2.9.19   i.19 RG5E: 5-year Treasury note rate (effective ann. yield)

147b       ⟨*variable RG5E* 147b⟩≡                                                          (221)
    `RG5E    = 5-year Treasury note rate (effective ann. yield)`
Defines:
  RG5E, used in chunks 169e, 172e, and 233.

147c       ⟨*stdverEqs rg5e* 147c⟩≡                                                         (254)
    `rg5e: rg5e - rg5e_aerr = zrff5 + rg5p`


Defines:
  rg5e, used in chunks 31e and 147e.
Uses rg5p 146f and zrff5 170a 170c.


## 2.9.20   i.20 RG5: 5-year Treasury note rate

147d       ⟨*variable RG5* 147d⟩≡                                                           (221)
    `RG5     = 5-year Treasury note rate`
Defines:
  RG5, used in chunk 233.

147e       ⟨*stdverEqs rg5* 147e⟩≡                                                          (254)
    `rg5: rg5 - rg5_aerr = (( (.01*rg5e + 1)^.5 - 1) * 200)`


Defines:
  rg5, used in chunks 151d and 156f.
Uses rg5e 147c.


## 2.9.21   i.21 RG10P: 10-year Treasury bond rate, term premium

147f       ⟨*variable RG10P* 147f⟩≡                                                         (221)
    `RG10P   = 10-year Treasury bond rate, term premium`
Defines:
  RG10P, used in chunk 233.

148a    ⟨*stdverEqs rg10p* 148a⟩≡                                             (254)
```
rg10p: rg10p - rg10p_aerr = y_rg10p(1) _
                  + y_rg10p(2) * zgap10 _
                  + y_rg10p(3) * d8095 _
                  + y_rg10p(4) * (rg10p(-1) - y_rg10p(1)  - y_rg10p(2)*zgap10(-1) -
```

Defines:
  **rg10p**, used in chunk 148d.
Uses **d8095** 205f, **y_rg10p** 148b, and **zgap10** 174a.

148b    ⟨*stdver_Coeffs y_rg10p* 148b⟩≡                                       (263)
```
y_rg10p 4        0.9985065593208419,-0.4718548432007495,0.7314217770878953,0.8959336373
```
Defines:
  **y_rg10p**, used in chunk 148a.

### 2.9.22    i.22 RG10E: 10-year Treasury bond rate (effective ann. yield)

148c    ⟨*variable RG10E* 148c⟩≡                                             (221)
```
RG10E    = 10-year Treasury bond rate (effective ann. yield)
```
Defines:
  **RG10E**, used in chunks 170e, 173e, and 233.

148d    ⟨*stdverEqs rg10e* 148d⟩≡                                            (254)
```
rg10e: rg10e - rg10e_aerr = zrff10 + rg10p
```

Defines:
  **rg10e**, used in chunks 31e, 148f, 150f, 152a, and 163d.
Uses **rg10p** 148a and **zrff10** 171a 171c.

### 2.9.23    i.23 RG10: 10-year Treasury bond rate

148e    ⟨*variable RG10* 148e⟩≡                                              (221)
```
RG10     = 10-year Treasury bond rate
```
Defines:
  **RG10**, used in chunk 233.

148f    ⟨*stdverEqs rg10* 148f⟩≡                                             (254)
```
rg10: rg10 - rg10_aerr = (( (.01*rg10e + 1)^.5 - 1) * 200)
```

Defines:
  **rg10**, used in chunks 47b and 156f.
Uses **rg10e** 148d.

### 2.9.24   i.24 RG30P: 30-year Treasury bond rate, term premium

149a     ⟨*variable RG30P* 149a⟩≡                                                    (221)
    RG30P    = 30-year Treasury bond rate, term premium
Defines:
    RG30P, used in chunk 233.

149b     ⟨*stdverEqs rg30p* 149b⟩≡                                                   (254)
```
   rg30p: rg30p - rg30p_aerr = y_rg30p(1) _
                    + y_rg30p(2) * zgap30 _
                    + y_rg30p(3) * d8095 _
                    + y_rg30p(4) * (rg30p(-1) - y_rg30p(1) - y_rg30p(2)*zgap30(-1) - y_rg30p(3)*
```

Defines:
    rg30p, used in chunk 149e.
Uses d8095 205f, y_rg30p 149c, and zgap30 175a.

149c     ⟨*stdver_Coeffs y_rg30p* 149c⟩≡                                             (263)
    y_rg30p 4        1.337544689343979,-0.5892843861420656,0.8365523842356651,0.9045588991659449
Defines:
    y_rg30p, used in chunk 149b.

### 2.9.25   i.25 RG30E: 30-year Treasury bond rate (effective ann. yield)

149d     ⟨*variable RG30E* 149d⟩≡                                                    (221)
    RG30E    = 30-year Treasury bond rate (effective ann. yield)
Defines:
    RG30E, used in chunks 171e, 174e, and 233.

149e     ⟨*stdverEqs rg30e* 149e⟩≡                                                   (254)
    rg30e: rg30e - rg30e_aerr = zrff30 + rg30p

Defines:
    rg30e, used in chunks 150a and 153a.
Uses rg30p 149b and zrff30 172a 172c.

### 2.9.26   i.26 RG30: 30-year Treasury bond rate

149f     ⟨*variable RG30* 149f⟩≡                                                     (221)
    RG30     = 30-year Treasury bond rate
Defines:
    RG30, used in chunk 233.

150a     ⟨*stdverEqs rg30* 150a⟩≡                                          (254)
```
rg30: rg30 - rg30_aerr = (( (.01*rg30e + 1)^.5 - 1) * 200)
```

Defines:
  `rg30`, used in chunk 156f.
Uses `rg30e` 149e.


### 2.9.27   i.27 RBBBP: S&P BBB corporate bond rate, risk/term premium

150b     ⟨*variable RBBBP* 150b⟩≡                                          (221)
```
RBBBP    = S&P BBB corporate bond rate, risk/term premium
```
Defines:
  `RBBBP`, used in chunk 233.

150c     ⟨*stdverEqs rbbbp* 150c⟩≡                                          (254)
```
rbbbp: rbbbp - rbbbp_aerr = y_rbbbp(1) _
                    + y_rbbbp(2) * zgap10 _
                    + y_rbbbp(3) * (rbbbp(-1) - y_rbbbp(4) - y_rbbbp(5)*zgap10(-1))
```

Defines:
  `rbbbp`, used in chunks 150f and 152d.
Uses `y_rbbbp` 150d and `zgap10` 174a.

150d     ⟨*stdver_Coeffs y_rbbbp* 150d⟩≡                                          (263)
```
y_rbbbp 5        1.663544231588651,-0.1493888609930089,0.8866986585299741,1.663544231!
```
Defines:
  `y_rbbbp`, used in chunk 150c.


### 2.9.28   i.28 RBBBE: S&P BBB corporate bond rate (effective ann. yield)

150e     ⟨*variable RBBBE* 150e⟩≡                                          (221)
```
RBBBE    = S&P BBB corporate bond rate (effective ann. yield)
```
Defines:
  `RBBBE`, used in chunk 233.

150f     ⟨*stdverEqs rbbbe* 150f⟩≡                                          (254)
```
rbbbe: rbbbe - rbbbe_aerr = rbbbp + rg10e
```

Defines:
  `rbbbe`, used in chunks 31e, 75d, and 151b.
Uses `rbbbp` 150c and `rg10e` 148d.

### 2.9.29   i.29 RBBB: S&P BBB corporate bond rate

151a      $\langle variable\ RBBB\ 151a\rangle \equiv$                                    (221)
```
RBBB    = S&P BBB corporate bond rate
```
Defines:
   RBBB, used in chunk 233.

151b      $\langle stdverEqs\ rbbb\ 151b\rangle \equiv$                                    (254)
```
rbbb: rbbb - rbbb_aerr = ( ( (0.01*rbbbe + 1)^.5 - 1 ) * 200 )
```

Defines:
   rbbb, never used.
Uses rbbbe 150f.

### 2.9.30   i.30 RCAR: New car loan rate at finance companies

151c      $\langle variable\ RCAR\ 151c\rangle \equiv$                                    (221)
```
RCAR     = New car loan rate at finance companies
```
Defines:
   RCAR, used in chunk 233.

151d      $\langle stdverEqs\ rcar\ 151d\rangle \equiv$                                    (254)
```
rcar: rcar - rcar_aerr = y_rcar(1) _
              + y_rcar(2) * d79a _
              + y_rcar(3) * ((1-d79a)*t47) _
              + y_rcar(4) * rcar(-1) _
              + ( y_rcar(5) *  rg5 +  y_rcar(6) *  rg5(-1))
```

Defines:
   rcar, used in chunks 23c and 80d.
Uses rg5 147e, t47 212e, and y_rcar 151e.

151e      $\langle stdver\_Coeffs\ y\_rcar\ 151e\rangle \equiv$                           (263)
```
y_rcar  6        2.100170296931854,-1.167642954704071,-0.008386800063101975,0.6937687101118568,0
```
Defines:
   y_rcar, used in chunk 151d.

### 2.9.31   i.31 RME: Interest rate on conventional mortgages (effective ann. yield)

151f      $\langle variable\ RME\ 151f\rangle \equiv$                                    (221)
```
RME      = Interest rate on conventional mortgages (effective ann. yield)
```
Defines:
   RME, used in chunk 233.

152a    ⟨*stdverEqs rme* 152a⟩≡                                                          (254)
```
rme: d( rme, 0, 1 ) - rme_aerr = y_rme(1) _
                + y_rme(2) * d( rg10e, 0, 1 ) _
                + y_rme(3) * d87 * d( rg10e, 0, 1 ) _
                + y_rme(4) * (rg10e(-1)-rme(-1)) _
                + y_rme(5) * d87 * (rg10e(-1)-rme(-1))
```

Defines:
    rme, used in chunks 18e, 23e, and 157f.
Uses d87 206d, rg10e 148d, and y_rme 152b.

152b    ⟨*stdver_Coeffs y_rme* 152b⟩≡                                                    (263)
```
y_rme    5        0.4927100798849811,0.6776016328060693,0.2424386344238626,0.2305037984
```
Defines:
    y_rme, used in chunk 152a.


### 2.9.32   i.32 REQP: Real expected rate of return on equity, premium component

152c    ⟨*variable REQP* 152c⟩≡                                                          (221)
```
REQP     = Real expected rate of return on equity, premium component
```
Defines:
    REQP, used in chunk 233.

152d    ⟨*stdverEqs reqp* 152d⟩≡                                                         (254)
```
reqp: reqp - reqp_aerr = y_reqp(1) + y_reqp(2) * rbbbp _
                          + y_reqp(3) * (reqp(-1) - y_reqp(4) - y_reqp(5)*rbbbp(-1))
```

Defines:
    reqp, used in chunks 47b and 153a.
Uses rbbbp 150c and y_reqp 152e.

152e    ⟨*stdver_Coeffs y_reqp* 152e⟩≡                                                   (263)
```
y_reqp   5        2.882980324228344,0.6395674906531285,0.8185047577678474,2.8829803242:
```
Defines:
    y_reqp, used in chunk 152d.


### 2.9.33   i.33 REQ: Real expected rate of return on equity

152f    ⟨*variable REQ* 152f⟩≡                                                           (221)
```
REQ      = Real expected rate of return on equity
```
Defines:
    REQ, used in chunks 179c and 233.

153a       ⟨*stdverEqs req* 153a⟩≡                                                    (254)
           ```
           req: req - req_aerr = rg30e - zpic30 + reqp
           ```

           Defines:
               req, used in chunks 31e and 153c.
           Uses reqp 152d, rg30e 149e, and zpic30 179d 179f.

## 2.9.34   i.34 WPSN: Household stock market wealth, current \$

153b       ⟨*variable WPSN* 153b⟩≡                                                    (221)
           ```
           WPSN      = Household stock market wealth, current $
           ```
           Defines:
               WPSN, used in chunks 197e and 233.

153c       ⟨*stdverEqs wpsn* 153c⟩≡                                                   (254)
           ```
           wpsn: log(wpsn) - wpsn_aerr = log((ynicpn-tfcin-tscin)*.5)  _
                                   - .25 * (req-zdivgr) _
                                   + log(25) + 1
           ```

           Defines:
               wpsn, used in chunk 153e.
           Uses req 153a, tfcin 131a, tscin 136f, ynicpn 77b, and zdivgr 198a.

## 2.9.35   i.35 WPS: Household stock market wealth, real

153d       ⟨*variable WPS* 153d⟩≡                                                     (221)
           ```
           WPS       = Household stock market wealth, real
           ```
           Defines:
               WPS, used in chunk 233.

153e       ⟨*stdverEqs wps* 153e⟩≡                                                    (254)
           ```
           wps: wps - wps_aerr = wpsn/(.01*pcnia)
           ```

           Defines:
               wps, used in chunk 19e.
           Uses pcnia 89b and wpsn 153c.

## 2.9.36   i.36 RCGAIN: Rate of capital gain on the non-equity portion of household wealth

153f       ⟨*variable RCGAIN* 153f⟩≡                                                  (221)
           ```
           RCGAIN    = Rate of capital gain on the non-equity portion of household wealth
           ```
           Defines:
               RCGAIN, used in chunk 233.

154a      ⟨*stdverEqs rcgain* 154a⟩≡                                              (254)
```
rcgain: rcgain - rcgain_aerr = picx4 + y_rcgain(1) _
                     + y_rcgain(2) * xgap2 _
                     + y_rcgain(3) * (rcgain(-1) - picx4(-1) - y_rcgain(4)   _
                     - y_rcgain(5) * xgap2(-1) )
```

Defines:
   rcgain, used in chunk 155a.
Uses picx4 112d, xgap2 59c, and y_rcgain 154b.

154b      ⟨*stdver_Coeffs y_rcgain* 154b⟩≡                                        (263)
```
y_rcgain        5        0.1522590051966577,0.2987109747902424,0.2513416212164487,0.15
```
Defines:
   y_rcgain, used in chunk 154a.

### 2.9.37   i.37 PHOUSE: Loan Performance House Price Index

154c      ⟨*variable PHOUSE* 154c⟩≡                                              (221)
```
PHOUSE   = Loan Performance House Price Index
```
Defines:
   PHOUSE, used in chunk 233.

154d      ⟨*stdverEqs phouse* 154d⟩≡                                             (254)
```
phouse: d( log(phouse), 0, 1) - phouse_aerr = y_phouse(1) + y_phouse(2) * d( log(phou
                     + y_phouse(3) * log(phouse(-1)/(pchr(-1)*pcnia(-1)))
```

Defines:
   phouse, used in chunk 155a.
Uses pchr 112a, pcnia 89b, and y_phouse 154e.

154e      ⟨*stdver_Coeffs y_phouse* 154e⟩≡                                       (263)
```
y_phouse        3        0.004817103239693556,0.8898461413782496,-0.01120829645070205
```
Defines:
   y_phouse, used in chunk 154d.

### 2.9.38   i.38 WPON: Household property wealth ex. stock market, current $

154f      ⟨*variable WPON* 154f⟩≡                                               (221)
```
WPON     = Household property wealth ex. stock market, current $
```
Defines:
   WPON, used in chunk 233.
Uses ex 39c.

155a     ⟨*stdverEqs wpon* 155a⟩≡                                                      (254)
```
wpon: wpon - wpon_aerr = wpon(-1)*exp( (1-((phouse(-1)*kh(-1)/116)/wpon(-1)))*rcgain/400  _
+ ((phouse(-1)*kh(-1)/116)/wpon(-1))*d( log(phouse), 0, 1) ) _
                    + .25 * (ydn-ecnian-yhibn) _
                    + .25 * (.01*pcdr*pcnia*(ecd-jkcd))
```

Defines:
  wpon, used in chunk 156a.
Uses ecd 18b, ecnian 22a, jkcd 24a, kh 23a, pcdr 112f, pcnia 89b, phouse 154d, rcgain 154a,
  ydn 77f, and yhibn 80d.

## 2.9.39    i.39 MEI: Multiplicative discrepancy for the differ-
          ence between XGDI and XGDO

155b     ⟨*variable MEI* 155b⟩≡                                                       (221)
```
MEI       = Multiplicative discrepancy for the difference between XGDI and XGDO
```
Defines:
  MEI, used in chunk 233.
Uses XGDI 55f and XGDO 56b.

155c     ⟨*stdverEqs mei* 155c⟩≡                                                      (254)
```
mei: log(mei) - mei_aerr = y_mei(1) * log(mei(-1))
```

Defines:
  mei, used in chunk 56a.
Uses y_mei 155d.

155d     ⟨*stdver_Coeffs y_mei* 155d⟩≡                                                (263)
```
y_mei    1         0.86
```
Defines:
  y_mei, used in chunk 155c.

## 2.9.40    i.40 WPO: Household property wealth ex.  stock
          market, real

155e     ⟨*variable WPO* 155e⟩≡                                                       (221)
```
WPO       = Household property wealth ex. stock market, real
```
Defines:
  WPO, used in chunk 233.
Uses ex 39c.

156a     ⟨*stdverEqs wpo* 156a⟩≡                                          (254)
```
wpo: wpo - wpo_aerr = wpon/(.01*pcnia)
```

Defines:
  wpo, used in chunk 19e.
Uses pcnia 89b and wpon 155a.

### 2.9.41   i.41 MEP: Multiplicative discrepancy for the difference between XGDP and XGDO

156b     ⟨*variable MEP* 156b⟩≡                                          (221)
```
MEP       = Multiplicative discrepancy for the difference between XGDP and XGDO
```
Defines:
  MEP, used in chunk 233.
Uses XGDO 56b and XGDP 48c.

156c     ⟨*stdverEqs mep* 156c⟩≡                                          (254)
```
mep: log(mep) - mep_aerr = y_mep(1) * log(mep(-1))
```

Defines:
  mep, used in chunk 56c.
Uses y_mep 156d.

156d     ⟨*stdver_Coeffs y_mep* 156d⟩≡                                    (263)
```
y_mep    1        0.86
```
Defines:
  y_mep, used in chunk 156c.

### 2.9.42   i.42 RGW: Approximate average rate of interest on new federal debt

156e     ⟨*variable RGW* 156e⟩≡                                          (221)
```
RGW       = Approximate average rate of interest on new federal debt
```
Defines:
  RGW, used in chunk 233.

156f     ⟨*stdverEqs rgw* 156f⟩≡                                          (254)
```
rgw: rgw - rgw_aerr = y_rgw(1) * rtb _
                + y_rgw(2) * rg5 _
                + y_rgw(3) * rg10 _
                + y_rgw(4) * rg30
```

Defines:
  rgw, used in chunk 157c.
Uses rg10 148f, rg30 150a, rg5 147e, rtb 146d, and y_rgw 157a.

157a      ⟨*stdver_Coeffs y_rgw* 157a⟩≡                                              (263)
      `y_rgw    4          .00495,.00271,.00129,.00105`
    Defines:
      y_rgw, used in chunk 156f.

### 2.9.43   i.43 RGFINT: Average rate of interest on existing federal debt

157b      ⟨*variable RGFINT* 157b⟩≡                                                  (221)
      `RGFINT   = Average rate of interest on existing federal debt`
    Defines:
      RGFINT, used in chunk 233.

157c      ⟨*stdverEqs rgfint* 157c⟩≡                                                 (254)
```
rgfint: rgfint - rgfint_aerr  _
               = (y_rgfint(1) * rgfint(-1) + (1-y_rgfint(1))*rgw(-1))*(gfdbtn(-2)/gfdbtn(-1))
               + rgw(-1)*(1-gfdbtn(-2)/gfdbtn(-1)) + y_rgfint(2)
```
    Defines:
      rgfint, used in chunks 124c and 128c.
    Uses gfdbtn 124a, rgw 156f, and y_rgfint 157d.

157d      ⟨*stdver_Coeffs y_rgfint* 157d⟩≡                                           (263)
      `y_rgfint       2         0.86,0.005417428040208504`
    Defines:
      y_rgfint, used in chunk 157c.

### 2.9.44   i.44 RRMET: Real mortgage rate, trend

157e      ⟨*variable RRMET* 157e⟩≡                                                   (221)
      `RRMET    = Real mortgage rate, trend`
    Defines:
      RRMET, used in chunks 177e and 233.

157f      ⟨*stdverEqs rrmet* 157f⟩≡                                                  (254)
```
rrmet: rrmet - rrmet_aerr = y_rrmet(1) * rrmet(-1) _
               + y_rrmet(2) * (rme-zpi10)
```
    Defines:
      rrmet, used in chunks 19b and 75d.
    Uses rme 152a, y_rrmet 157g, and zpi10 178a.

157g      ⟨*stdver_Coeffs y_rrmet* 157g⟩≡                                            (263)
      `y_rrmet 2         .9048,.0952`
    Defines:
      y_rrmet, used in chunk 157f.

## 2.10    Foreign Activity

### 2.10.1    j.1 FXGAP: Foreign output gap (world, bilateral export weights)

158a    ⟨*variable FXGAP* 158a⟩≡                                        (221)
```
FXGAP    = Foreign output gap (world, bilateral export weights)
```
Defines:
  FXGAP, used in chunk 233.

158b    ⟨*stdverEqs fxgap* 158b⟩≡                                        (254)
```
fxgap: fxgap - fxgap_aerr =  _
                 + y_fxgap(1) * fxgap(-1) _
                 + y_fxgap(2) * fxgap(-2) _
                 + y_fxgap(3) * ( ( frs10(-1) _
                   -(fpi10(-1)+fpi10(-2)+fpi10(-3)+fpi10(-4))/4 +  frs10(-2) _
                   -(fpi10(-2)+fpi10(-3)+fpi10(-4)+fpi10(-5))/4 +  frs10(-3) _
                   -(fpi10(-3)+fpi10(-4)+fpi10(-5)+fpi10(-6))/4) /3-frstar) _
                 + y_fxgap(4) * xgap2(-1)
```

Defines:
  fxgap, used in chunks 39c, 158e, 159e, 162a, and 163a.
Uses fpi10 159e, frs10 162a, frstar 162d, xgap2 59c, and y_fxgap 158c.

158c    ⟨*stdver_Coeffs y_fxgap* 158c⟩≡                                        (263)
```
y_fxgap 4       1.284002584226955,-0.4544105287732581,-0.05,0.02742233318740996
```
Defines:
  y_fxgap, used in chunk 158b.

### 2.10.2    j.2 FGDP: Foreign aggregate GDP (world, bilateral export weights)

158d    ⟨*variable FGDP* 158d⟩≡                                        (221)
```
FGDP     = Foreign aggregate GDP (world, bilateral export weights)
```
Defines:
  FGDP, used in chunk 233.

158e    ⟨*stdverEqs fgdp* 158e⟩≡                                        (254)
```
fgdp: fgdp - fgdp_aerr = fgdpt*exp(fxgap/100)
```

Defines:
  fgdp, used in chunk 39c.
Uses fgdpt 159b and fxgap 158b.

### 2.10.3   j.3 FGDPT: Foreign aggregate GDP (world, bilateral export weights), trend

159a       ⟨*variable FGDPT* 159a⟩≡                                                    (221)
      FGDPT    = Foreign aggregate GDP (world, bilateral export weights), trend
    Defines:
      FGDPT, used in chunk 233.

159b       ⟨*stdverEqs fgdpt* 159b⟩≡                                                   (254)
```
    fgdpt: d( log(fgdpt), 0, 1 ) - fgdpt_aerr  _
                        = y_fgdpt(1) _
                        + y_fgdpt(2) * log(fgdpt(-1)/xgdpt(-1)) _
                        + y_fgdpt(3) * (hggdpt+hggdpt(-1)+hggdpt(-2)+hggdpt(-3)) / 1600
```

    Defines:
      fgdpt, used in chunk 158e.
    Uses hggdpt 60d, xgdpt 55c, and y_fgdpt 159c.

159c       ⟨*stdver_Coeffs y_fgdpt* 159c⟩≡                                             (263)
```
    y_fgdpt 3         -.458264,-.1,1.0
```
    Defines:
      y_fgdpt, used in chunk 159b.

### 2.10.4   j.4 FPI10: Foreign consumer price inflation (G10)

159d       ⟨*variable FPI10* 159d⟩≡                                                    (221)
      FPI10    = Foreign consumer price inflation (G10)
    Defines:
      FPI10, used in chunk 233.

159e       ⟨*stdverEqs fpi10* 159e⟩≡                                                   (254)
```
    fpi10: fpi10-fpi10_aerr = y_fpi10(1) * ( ( fpi10(-1) +  fpi10(-2) +  fpi10(-3) +  fpi10(-4)) /
                    + y_fpi10(2) * fpitrg _
                    + y_fpi10(3) * fxgap(-1) _
                    + ( y_fpi10(4) * d( log(poilr), 0, 1 ) +  y_fpi10(5) * d( log(poilr(-1)), 0,
```

    Defines:
      fpi10, used in chunks 158b, 160, and 162.
    Uses fpitrg 208f, fxgap 158b, poilr 101a, and y_fpi10 159f.

159f       ⟨*stdver_Coeffs y_fpi10* 159f⟩≡                                             (263)
```
    y_fpi10 5        0.7045829169372979,0.2954170830627021,0.2531839520282475,5.324212789847609,0.91
```
    Defines:
      y_fpi10, used in chunk 159e.

### 2.10.5    j.5 FPI10T: Foreign consumer price inflation, trend (G10)

160a      $\langle$*variable FPI10T* 160a$\rangle\equiv$                                              (221)
```
FPI10T   = Foreign consumer price inflation, trend (G10)
```
Defines:
   FPI10T, used in chunk 233.

160b      $\langle$*stdverEqs fpi10t* 160b$\rangle\equiv$                                              (254)
```
fpi10t: fpi10t-fpi10t_aerr = y_fpi10t(1) * fpi10t(-1) _
                   + y_fpi10t(2) * fpi10
```

Defines:
   fpi10t, used in chunk 163d.
Uses fpi10 159e and y_fpi10t 160c.

160c      $\langle$*stdver_Coeffs y_fpi10t* 160c$\rangle\equiv$                                              (263)
```
y_fpi10t      2       9.500000000000000000e-01,5.000000000000000000e-02
```
Defines:
   y_fpi10t, used in chunk 160b.

### 2.10.6    j.6 FPIC: Foreign consumer price inflation (G39, bilateral export trade weights)

160d      $\langle$*variable FPIC* 160d$\rangle\equiv$                                              (221)
```
FPIC     = Foreign consumer price inflation (G39, bilateral export trade weights)
```
Defines:
   FPIC, used in chunk 233.

160e      $\langle$*stdverEqs fpic* 160e$\rangle\equiv$                                              (254)
```
fpic: fpic-fpic_aerr = y_fpic(1) _
               + y_fpic(2) * fpi10 _
               + y_fpic(3) * fpic(-1)
```

Defines:
   fpic, used in chunk 161b.
Uses fpi10 159e and y_fpic 160f.

160f      $\langle$*stdver_Coeffs y_fpic* 160f$\rangle\equiv$                                              (263)
```
y_fpic  3       2.174669585864584,0.6994194241702426,0.3005805758297574
```
Defines:
   y_fpic, used in chunk 160e.

### 2.10.7   j.7 FPC: Foreign aggregate consumer price (G39, import/export trade weights)

161a     ⟨*variable FPC* 161a⟩≡                                                      (221)
```
FPC       = Foreign aggregate consumer price (G39, import/export trade weights)
```
Defines:
  `FPC`, used in chunk 233.


161b     ⟨*stdverEqs fpc* 161b⟩≡                                                    (254)
```
fpc: fpc - fpc_aerr = fpc(-1)*exp(fpic/400)
```

Defines:
  `fpc`, used in chunks 39c, 43e, 45c, 161d, and 164.
Uses `fpic` 160e.


### 2.10.8   j.8 FPCM: Foreign aggregate consumer price (G39, bilateral non-oil import trade weights)

161c     ⟨*variable FPCM* 161c⟩≡                                                    (221)
```
FPCM      = Foreign aggregate consumer price (G39, bilateral non-oil import trade weights)
```
Defines:
  `FPCM`, used in chunks 215b and 233.


161d     ⟨*stdverEqs fpcm* 161d⟩≡                                                   (254)
```
fpcm: fpcm - fpcm_aerr = ufpcm*fpc
```

Defines:
  `fpcm`, used in chunks 105e and 164f.
Uses `fpc` 161b and `ufpcm` 215b.


### 2.10.9   j.9 FRS10: Foreign short-term interest rate (G10)

161e     ⟨*variable FRS10* 161e⟩≡                                                   (221)
```
FRS10     = Foreign short-term interest rate (G10)
```
Defines:
  `FRS10`, used in chunk 233.

162a    ⟨*stdverEqs frs10* 162a⟩≡                                                    (254)
```
frs10: frs10 - frs10_aerr = dfmprr * (y_frs10(1) _
                    + y_frs10(2) * frstar(-1) _
                    + y_frs10(3) * ( ( fpi10 +  fpi10(-1) +  fpi10(-2) +  fpi10(-3))
                    + y_frs10(4) * ( ( fpi10 +  fpi10(-1) +  fpi10(-2) +  fpi10(-3))
                    + y_frs10(5) * fxgap) _
                    + (1-dfmprr) * (rfrs10 +  ( fpi10 +  fpi10(-1) +  fpi10(-2) +  fp:
```

Defines:
    frs10, used in chunks 158b, 162d, and 163a.
Uses dfmprr 206i, fpi10 159e, fpitrg 208f, frstar 162d, fxgap 158b, rfrs10 212c,
    and y_frs10 162b.

162b    ⟨*stdver_Coeffs y_frs10* 162b⟩≡                                              (263)
```
y_frs10 5          0.0,1.0,1.0,0.5,1.0
```
Defines:
    y_frs10, used in chunk 162a.

### 2.10.10   j.10 FRSTAR: Equilibrium real short-term interest rate used in foreign Taylor rule

162c    ⟨*variable FRSTAR* 162c⟩≡                                                    (221)
```
FRSTAR   = Equilibrium real short-term interest rate used in foreign Taylor rule
```
Defines:
    FRSTAR, used in chunk 233.

162d    ⟨*stdverEqs frstar* 162d⟩≡                                                   (254)
```
frstar: frstar - frstar_aerr = y_frstar(1) * frstar(-1) _
                    + y_frstar(2) * (frs10 -  ( fpi10 +  fpi10(-1) +  fpi10(-2) +  f
```

Defines:
    frstar, used in chunks 158b and 162a.
Uses fpi10 159e, frs10 162a, and y_frstar 162e.

162e    ⟨*stdver_Coeffs y_frstar* 162e⟩≡                                             (263)
```
y_frstar        2          .95,.05
```
Defines:
    y_frstar, used in chunk 162d.

### 2.10.11   j.11 FRL10: Foreign long-term interest rate (G10)

162f    ⟨*variable FRL10* 162f⟩≡                                                     (221)
```
FRL10    = Foreign long-term interest rate (G10)
```
Defines:
    FRL10, used in chunk 233.

163a        ⟨*stdverEqs frl10* 163a⟩≡                                                                    (254)
```
frl10: frl10 - frl10(-1) - frl10_aerr = y_frl10(1) _
                          + y_frl10(2) * (frl10(-1) - frs10(-1)) _
                          + y_frl10(3) * (frl10(-1) - frl10(-2)) _
                          + y_frl10(4) * (frs10 - frs10(-1)) _
                          + y_frl10(5) * (fxgap - fxgap(-1))
```

Defines:
   frl10, used in chunk 163d.
Uses frs10 162a, fxgap 158b, and y_frl10 163b.

163b        ⟨*stdver_Coeffs y_frl10* 163b⟩≡                                                             (263)
```
y_frl10 5       0.03993364460261257,-0.07293669623744157,0.08403561227292196,0.3637926024013994
```
Defines:
   y_frl10, used in chunk 163a.


### 2.10.12    j.12 FPXR: Real exchange rate (G39, import/export trade weights)

163c        ⟨*variable FPXR* 163c⟩≡                                                                     (221)
```
FPXR      = Real exchange rate (G39, import/export trade weights)
```
Defines:
   FPXR, used in chunks 178e and 233.

163d        ⟨*stdverEqs fpxr* 163d⟩≡                                                                    (254)
```
fpxr: log(fpxr) - fpxr_aerr - log(fpxrr) = _
                        y_fpxr(1)*(rg10e-zpi10f-frl10+fpi10t) _
                      + y_fpxr(2)*(fnin/xgdpn)
```

Defines:
   fpxr, used in chunks 88c and 164d.
Uses fnin 43e, fpi10t 160b, fpxrr 164a, frl10 163a, rg10e 148d, xgdpn 70c, y_fpxr 163e,
   and zpi10f 178f.

163e        ⟨*stdver_Coeffs y_fpxr* 163e⟩≡                                                              (263)
```
y_fpxr  2         0.048,0.5
```
Defines:
   y_fpxr, used in chunk 163d.


### 2.10.13    j.13 FPXRR: Real exchange rate residual

163f        ⟨*variable FPXRR* 163f⟩≡                                                                    (221)
```
FPXRR     = Real exchange rate residual
```
Defines:
   FPXRR, used in chunk 233.

164a    ⟨*stdverEqs fpxrr* 164a⟩≡                                                           (254)
```
fpxrr: d( log(fpxrr), 0, 1 ) - fpxrr_aerr _
                    = y_fpxrr(1) * log(fpxrrt(-1)/fpxrr(-1)) _
                    + y_fpxrr(2) * d( log(fpxrr(-1)), 0, 1 ) _
                    + (1-y_fpxrr(2)) * d( log(fpxrrt), 0, 1 )
```

Defines:
   fpxrr, used in chunk 163d.
Uses fpxrrt 208g and y_fpxrr 164b.

164b    ⟨*stdver_Coeffs y_fpxrr* 164b⟩≡                                                     (263)
```
y_fpxrr 2      0.03011994048459088,0.2026244928161041
```
Defines:
   y_fpxrr, used in chunk 164a.

## 2.10.14   j.14 FPX: Nominal exchange rate (G39, import/export trade weights)

164c    ⟨*variable FPX* 164c⟩≡                                                              (221)
```
FPX      = Nominal exchange rate (G39, import/export trade weights)
```
Defines:
   FPX, used in chunk 233.

164d    ⟨*stdverEqs fpx* 164d⟩≡                                                             (254)
```
fpx: fpx - fpx_aerr = fpxr*fpc/pcpi
```

Defines:
   fpx, used in chunks 39c, 43e, 45c, and 164f.
Uses fpc 161b, fpxr 163d, and pcpi 89d.

## 2.10.15   j.15 FPXM: Nominal exchange rate (G39, bilateral import trade weights)

164e    ⟨*variable FPXM* 164e⟩≡                                                             (221)
```
FPXM     = Nominal exchange rate (G39, bilateral import trade weights)
```
Defines:
   FPXM, used in chunks 215c and 233.

164f    ⟨*stdverEqs fpxm* 164f⟩≡                                                            (254)
```
fpxm: fpxm - fpxm_aerr = ufpxm*fpx*fpcm/fpc
```

Defines:
   fpxm, used in chunk 105e.
Uses fpc 161b, fpcm 161d, fpx 164d, and ufpxm 215c.

## 2.11    Expectations

**2.11.1**    **z1.1 PTR: 10-year expected PCE price inflation (Survey of Professional Forecasters)**

**2.11.2**    **z1.2 RRTR: Expected long-run real federal funds rate**

**2.11.3**    **z1.3 RTR: Expected federal funds rate in the long run (Blue Chip)**

**2.11.4**    **z1.4 ZRFF5: Expected federal funds rate, for RG5E eq. (5-yr mat.) (VAR exp.)**

**2.11.5**    **z1.5 ZRFF10: Expected federal funds rate, for RG10E eq. (10-yr mat.) (VAR exp.)**

**2.11.6**    **z1.6 ZRFF30: Expected federal funds rate, for RG30E eq. (30-yr mat.) (VAR exp.)**

**2.11.7**    **z1.7 ZGAP05: Expected output gap, for RG5E eq. (VAR exp.)**

**2.11.8**    **z1.8 ZGAP10: Expected output gap, for RG10E eq. (VAR exp.)**

**2.11.9**    **z1.9 ZGAP30: Expected output gap, for RG30E eq. (VAR exp.)**

**2.11.10**    **z1.10 ZPI5: Expected cons. price infl., for RCCD eq. (5-yr mat.) (VAR exp.)**

**2.11.11**    **z1.11 ZPIB5: Expected output price infl., for RPD eq. (5-yr mat.) (VAR exp.)**

**2.11.12**    **z1.12 ZPI10: Expected cons. price infl., for RCCH, RRMET, and YHPNTN eqs. (10-yr mat.) (VAR exp.)**

**2.11.13**    **z1.13 ZPI10F: Expected cons. price infl., for FPXR eq. (10-yr mat.) (VAR exp.)**

**2.11.14**    **z1.14 ZPIC30: Expected cons. price infl., for REQ eq. (30-yr mat.) (VAR exp.)**

**2.11.15**    **z1.15 ZPIC58: Expected 4-qtr consumer price inflation (8 qtrs. in the future) (VAR exp.)**

**2.11.16**    **z1.16 ZPICXFE: Expected value of picxfe in the next quarter (VAR exp.)**

**2.11.17**    **z1.17 ZPIECI: Expected value of pieci in the next quarter (VAR exp.)**

**2.11.18**    **z1.18 ZECO: Expected growth rate of target non-durables and nonhousing services, for ECO eq (VAR exp.)**

```
    ZYHST     = Expected trend ratio of household income to GDP
```
Defines:
    ZYHST, used in chunk 233.

167a    ⟨*stdverEqs zyhst* 167a⟩≡                                                    (254)
```
    zyhst: zyhst-zyhst_aerr = zyhst(-1) + y_zyhst(1)*(yhshr-zyhst(-1))
```

Defines:
    zyhst, used in chunks 80b and 200–202.
Uses y_zyhst 167b and yhshr 84b.

167b    ⟨*stdver_Coeffs y_zyhst* 167b⟩≡                                              (263)
```
    y_zyhst 1        0.05000000000000000E+00
```
Defines:
    y_zyhst, used in chunk 167a.

## 2.11.35  z1.35 ZYHPST: Expected trend share of property income in household income

167c    ⟨*variable ZYHPST* 167c⟩≡                                                    (221)
```
    ZYHPST    = Expected trend share of property income in household income
```
Defines:
    ZYHPST, used in chunk 233.

167d    ⟨*stdverEqs zyhpst* 167d⟩≡                                                   (254)
```
    zyhpst: zyhpst-zyhpst_aerr = zyhpst(-1) + y_zyhpst(1)*(yhpshr-zyhpst(-1))
```

Defines:
    zyhpst, used in chunks 82d and 201a.
Uses y_zyhpst 167e and yhpshr 83c.

167e    ⟨*stdver_Coeffs y_zyhpst* 167e⟩≡                                             (263)
```
    y_zyhpst        1        0.05000000000000000E+00
```
Defines:
    y_zyhpst, used in chunk 167d.

## 2.11.36  z1.36 ZYHTST: Expected trend share of transfer income in household income

167f    ⟨*variable ZYHTST* 167f⟩≡                                                    (221)
```
    ZYHTST    = Expected trend share of transfer income in household income
```
Defines:
    ZYHTST, used in chunk 233.

168a      ⟨*stdverEqs zyhtst* 168a⟩≡                                        (254)
          zyhtst: zyhtst - zyhtst_aerr = zyhtst(-1) + y_zyhtst(1)*(yhtshr-zyhtst(-1))


          Defines:
            zyhtst, used in chunks 85b and 202a.
          Uses y_zyhtst 168b and yhtshr 85f.

168b      ⟨*stdver_Coeffs y_zyhtst* 168b⟩≡                                  (263)
          y_zyhtst        1        0.05000000000000000E+00
          Defines:
            y_zyhtst, used in chunk 168a.


### 2.11.37   z1.37 HGYNID: Growth rate of real after-tax corporate profits

## 2.12   Model-Consistent Expectations

### 2.12.1   z2.1 PTR: 10-year expected PCE price inflation (Survey of Professional Forecasters)

168c      ⟨*variable PTR* 168c⟩≡                                            (221)
          PTR       = 10-year expected PCE price inflation (Survey of Professional Forecasters)
          Defines:
            PTR, used in chunk 233.

168d      ⟨*stdverEqs ptr* 168d⟩≡                                           (254)
          ptr: ptr - ptr_aerr = y_ptr(1)*ptr(-1) + y_ptr(2)*picxfe(-1)+ y_ptr(3)*pitarg(-1)


          Defines:
            ptr, used in chunks 87, 169–91, and 193–202.
          Uses picxfe 87b, pitarg 211b, and y_ptr 168e.

168e      ⟨*stdver_Coeffs y_ptr* 168e⟩≡                                     (263)
          y_ptr   3        0.9,0.05,0.05
          Defines:
            y_ptr, used in chunk 168d.


### 2.12.2   z2.2 RRTR: Expected long-run real federal funds rate

168f      ⟨*variable RRTR* 168f⟩≡                                           (221)
          RRTR      = Expected long-run real federal funds rate
          Defines:
            RRTR, used in chunk 233.

169a        ⟨*stdverEqs rrtr* 169a⟩≡                                                    (254)
            ```
            rrtr: rrtr - rrtr_aerr = y_rrtr(1) * rrtr(-1) _
                            + y_rrtr(2) * rrffe
            ```

            Defines:
               rrtr, used in chunk 169d.
            Uses rrffe 145e and y_rrtr 169b.

169b        ⟨*stdver_Coeffs y_rrtr* 169b⟩≡                                              (263)
            ```
            y_rrtr   2          .97,.03
            ```
            Defines:
               y_rrtr, used in chunk 169a.

### 2.12.3   z2.3 RTR: Expected federal funds rate in the long run (Blue Chip)

169c        ⟨*variable RTR* 169c⟩≡                                                      (221)
            ```
            RTR       = Expected federal funds rate in the long run (Blue Chip)
            ```
            Defines:
               RTR, used in chunk 233.

169d        ⟨*stdverEqs rtr* 169d⟩≡                                                     (254)
            ```
            rtr: rtr - rtr_aerr = rrtr + ptr
            ```

            Defines:
               rtr, used in chunks 170–91 and 193–202.
            Uses ptr 168d and rrtr 169a.

### 2.12.4   z2.4 ZRFF5: Expected federal funds rate, for RG5E eq. (5-yr mat.) (MCE exp.)

169e        ⟨*variable ZRFF5* 169e⟩≡                                                    (221)
            ```
            ZRFF5     = Expected federal funds rate, for RG5E eq. (5-yr mat.)
            ```
            Defines:
               ZRFF5, used in chunk 233.
            Uses RG5E 147b.

170a    ⟨*stdverEqs zrff5* 170a⟩≡                                                    (254)
```
zrff5:  zrff5-zrff5_aerr = y_zrff5(1) _
                  + ( y_zrff5(2) *  picnia +  y_zrff5(3) *  picnia(-1) +  y_zrff5(4)
                  + ( y_zrff5(6) *  rffe +  y_zrff5(7) *  rffe(-1) +  y_zrff5(8) *
                  + y_zrff5(10) * rtr _
                  + y_zrff5(11) * ptr _
                  + ( y_zrff5(12) *  xgap +  y_zrff5(13) *  xgap(-1) +  y_zrff5(14)
```

Defines:
   zrff5, used in chunk 147c.
Uses picnia 88f, ptr 168d, rffe 144e, rtr 169d, xgap 59a, and y_zrff5 170b 170d.

170b    ⟨*stdver_Coeffs y_zrff5* 170b⟩≡                                              (263)
```
y_zrff5 15      -2.893994419845934e-13,-0.03329615692337154,-0.01651377444295286,-0.0
```
Defines:
   y_zrff5, used in chunk 170.

170c    ⟨*pfverEqs zrff5* 170c⟩≡
```
zrff5: zrff5 - zrff5_aerr = _
              y_zrff5(1) * rffe _
            + y_zrff5(2) * zrff5(1)
```

Defines:
   zrff5, used in chunk 147c.
Uses rffe 144e and y_zrff5 170b 170d.

170d    ⟨*pfver_Coeffs y_zrff5* 170d⟩≡
```
y_zrff5 2       0.05479365264340726,0.9452063473565927
```
Defines:
   y_zrff5, used in chunk 170.

### 2.12.5  z2.5 ZRFF10: Expected federal funds rate, for RG10E eq. (10-yr mat.) (MCE exp.)

170e    ⟨*variable ZRFF10* 170e⟩≡                                                   (221)
```
ZRFF10   = Expected federal funds rate, for RG10E eq. (10-yr mat.)
```
Defines:
   ZRFF10, used in chunk 233.
Uses RG10E 148c.

171a        ⟨*stdverEqs zrff10* 171a⟩≡                                                    (254)
```
zrff10:  zrff10-zrff10_aerr = y_zrff10(1) _
                      + ( y_zrff10(2) *  picnia + y_zrff10(3) * picnia(-1) + y_zrff10(4) *  p
                      + ( y_zrff10(6) * rffe + y_zrff10(7) * rffe(-1) + y_zrff10(8) * rffe(
                      + y_zrff10(10) * rtr _
                      + y_zrff10(11) * ptr _
                      + ( y_zrff10(12) * xgap + y_zrff10(13) * xgap(-1) + y_zrff10(14) *  xg
```

Defines:
   zrff10, used in chunk 148d.
Uses picnia 88f, ptr 168d, rffe 144e, rtr 169d, xgap 59a, and y_zrff10 171b 171d.

171b        ⟨*stdver_Coeffs y_zrff10* 171b⟩≡                                              (263)
```
y_zrff10        15       -1.225928191740291e-13,-0.02771619956382117,-0.01188080871189547,-0.032
```
Defines:
   y_zrff10, used in chunk 171.

171c        ⟨*pfverEqs zrff10* 171c⟩≡
```
zrff10: zrff10 - zrff10_aerr = _
              y_zrff10(1) * rffe _
            + y_zrff10(2) * zrff10(1)
```

Defines:
   zrff10, used in chunk 148d.
Uses rffe 144e and y_zrff10 171b 171d.

171d        ⟨*pfver_Coeffs y_zrff10* 171d⟩≡
```
y_zrff10        2        0.03007455810944507,0.969925441890555
```
Defines:
   y_zrff10, used in chunk 171.


### 2.12.6    z2.6 ZRFF30: Expected federal funds rate, for RG30E eq. (30-yr mat.) (MCE exp.)

171e        ⟨*variable ZRFF30* 171e⟩≡                                                     (221)
```
ZRFF30   = Expected federal funds rate, for RG30E eq. (30-yr mat.)
```
Defines:
   ZRFF30, used in chunk 233.
Uses RG30E 149d.

172a      ⟨*stdverEqs zrff30* 172a⟩≡                                                (254)

```
zrff30:  zrff30-zrff30_aerr = y_zrff30(1) _
                    + ( y_zrff30(2) *  picnia +  y_zrff30(3) *  picnia(-1) +  y_zrf
                    + ( y_zrff30(6) *  rffe +  y_zrff30(7) *  rffe(-1) +  y_zrff30(8
                    + y_zrff30(10) * rtr _
                    + y_zrff30(11) * ptr _
                    + ( y_zrff30(12) *  xgap +  y_zrff30(13) *  xgap(-1) +  y_zrff30
```

Defines:
  `zrff30`, used in chunk 149e.
Uses `picnia` 88f, `ptr` 168d, `rffe` 144e, `rtr` 169d, `xgap` 59a, and `y_zrff30` 172b 172d.

172b      ⟨*stdver_Coeffs y_zrff30* 172b⟩≡                                         (263)

```
y_zrff30        15       -6.431098710768743e-14,-0.01469452480129645,-0.0063666115489
```

Defines:
  `y_zrff30`, used in chunk 172.

172c      ⟨*pfverEqs zrff30* 172c⟩≡

```
zrff30: zrff30 - zrff30_aerr = _
               y_zrff30(1) * rffe _
             + y_zrff30(2) * zrff30(1)
```

Defines:
  `zrff30`, used in chunk 149e.
Uses `rffe` 144e and `y_zrff30` 172b 172d.

172d      ⟨*pfver_Coeffs y_zrff30* 172d⟩≡

```
y_zrff30        2        0.01410658898201937,0.9858934110179807
```

Defines:
  `y_zrff30`, used in chunk 172.

### 2.12.7   z2.7 ZGAP05: Expected output gap, for RG5E eq. (MCE exp.)

172e      ⟨*variable ZGAP05* 172e⟩≡                                                (221)

```
ZGAP05   = Expected output gap, for RG5E eq.
```

Defines:
  `ZGAP05`, used in chunk 233.
Uses `RG5E` 147b.

173a     ⟨stdverEqs zgap05 173a⟩≡                                          (254)
         zgap05:  zgap05-zgap05_aerr = y_zgap05(1) _
                             + ( y_zgap05(2) * picnia + y_zgap05(3) * picnia(-1) + y_zgap05(4) * p
                             + ( y_zgap05(6) * rffe + y_zgap05(7) * rffe(-1) + y_zgap05(8) * rffe(
                             + y_zgap05(10) * rtr _
                             + y_zgap05(11) * ptr _
                             + ( y_zgap05(12) * xgap + y_zgap05(13) * xgap(-1) + y_zgap05(14) * xg


         Defines:
           zgap05, used in chunks 146f and 173c.
         Uses picnia 88f, ptr 168d, rffe 144e, rtr 169d, xgap 59a, and y_zgap05 173b 173d.

173b     ⟨stdver_Coeffs y_zgap05 173b⟩≡                                      (263)
           y_zgap05        15       2.257007909357927e-15,-0.1597149595303493,-0.02714596421531133,-0.05644
         Defines:
           y_zgap05, used in chunk 173.

173c     ⟨pfverEqs zgap05 173c⟩≡
           zgap05: zgap05 - zgap05_aerr = _
                     y_zgap05(1) * xgap _
                   + y_zgap05(2) * zgap05(1)


         Uses xgap 59a, y_zgap05 173b 173d, and zgap05 173a.

173d     ⟨pfver_Coeffs y_zgap05 173d⟩≡
           y_zgap05        2        0.05479365264340726,0.9452063473565927
         Defines:
           y_zgap05, used in chunk 173.


## 2.12.8   z2.8 ZGAP10: Expected output gap, for RG10E eq. (MCE exp.)

173e     ⟨variable ZGAP10 173e⟩≡                                            (221)
           ZGAP10    = Expected output gap, for RG10E eq.
         Defines:
           ZGAP10, used in chunk 233.
         Uses RG10E 148c.

174a    ⟨*stdverEqs zgap10* 174a⟩≡                                                         (254)
```
zgap10:  zgap10-zgap10_aerr = y_zgap10(1) _
                    + ( y_zgap10(2) *  picnia +  y_zgap10(3) * picnia(-1) +  y_zgap
                    + ( y_zgap10(6) *  rffe +  y_zgap10(7) *  rffe(-1) +  y_zgap10(8
                    + y_zgap10(10) * rtr _
                    + y_zgap10(11) * ptr _
                    + ( y_zgap10(12) *  xgap +  y_zgap10(13) *  xgap(-1) +  y_zgap10(
```

Defines:
    zgap10, used in chunks 148a, 150c, and 174c.
Uses picnia 88f, ptr 168d, rffe 144e, rtr 169d, xgap 59a, and y_zgap10 174b 174d.

174b    ⟨*stdver_Coeffs y_zgap10* 174b⟩≡                                                   (263)
```
y_zgap10        15       1.913550184020851e-15,-0.08856716084344839,-0.0151479335334093
```
Defines:
    y_zgap10, used in chunk 174.

174c    ⟨*pfverEqs zgap10* 174c⟩≡
```
zgap10: zgap10 - zgap10_aerr = _
              y_zgap10(1) * xgap _
            + y_zgap10(2) * zgap10(1)
```

Uses xgap 59a, y_zgap10 174b 174d, and zgap10 174a.

174d    ⟨*pfver_Coeffs y_zgap10* 174d⟩≡
```
y_zgap10        2        0.03007455810944507,0.969925441890555
```
Defines:
    y_zgap10, used in chunk 174.

### 2.12.9  z2.9 ZGAP30: Expected output gap, for RG30E eq. (MCE exp.)

174e    ⟨*variable ZGAP30* 174e⟩≡                                                          (221)
```
ZGAP30   = Expected output gap, for RG30E eq.
```
Defines:
    ZGAP30, used in chunk 233.
Uses RG30E 149d.

175a     ⟨*stdverEqs zgap30* 175a⟩≡                                                    (254)
```
zgap30:  zgap30-zgap30_aerr = y_zgap30(1) _
                    + ( y_zgap30(2) * picnia + y_zgap30(3) * picnia(-1) + y_zgap30(4) * p
                    + ( y_zgap30(6) * rffe + y_zgap30(7) * rffe(-1) + y_zgap30(8) * rffe(
                    + y_zgap30(10) * rtr _
                    + y_zgap30(11) * ptr _
                    + ( y_zgap30(12) * xgap + y_zgap30(13) * xgap(-1) + y_zgap30(14) * xg
```

Defines:
  zgap30, used in chunks 149b and 175c.
Uses picnia 88f, ptr 168d, rffe 144e, rtr 169d, xgap 59a, and y_zgap30 175b 175d.

175b     ⟨*stdver_Coeffs y_zgap30* 175b⟩≡                                              (263)
```
y_zgap30        15       9.185040883300084e-15,-0.04699887854311754,-0.008064404203305675,-0.016
```
Defines:
  y_zgap30, used in chunk 175.

175c     ⟨*pfverEqs zgap30* 175c⟩≡
```
zgap30: zgap30 - zgap30_aerr = _
               y_zgap30(1) * xgap _
             + y_zgap30(2) * zgap30(1)
```

Uses xgap 59a, y_zgap30 175b 175d, and zgap30 175a.

175d     ⟨*pfver_Coeffs y_zgap30* 175d⟩≡
```
y_zgap30         2        0.01410658898201937,0.9858934110179807
```
Defines:
  y_zgap30, used in chunk 175.

### 2.12.10   z2.10 ZPI5: Expected cons. price infl., for RCCD eq. (5-yr mat.) (MCE exp.)

175e     ⟨*variable ZPI5* 175e⟩≡                                                       (221)
```
ZPI5     = Expected cons. price infl., for RCCD eq. (5-yr mat.)
```
Defines:
  ZPI5, used in chunk 233.
Uses RCCD 23b.

176a    ⟨*stdverEqs zpi5* 176a⟩≡                                                      (254)
```
zpi5: zpi5-zpi5_aerr = ( y_zpi5(1) * picnia(-1) + y_zpi5(2) * picnia(-2) + y_zp
                + ( y_zpi5(5) * rffe(-1) + y_zpi5(6) * rffe(-2) + y_zpi5(7) * r
                + y_zpi5(9) * rtr(-1) _
                + y_zpi5(10) * ptr(-1) _
                + ( y_zpi5(11) * xgap(-1) + y_zpi5(12) * xgap(-2) + y_zpi5(13) *
```

Defines:
  zpi5, used in chunk 23c.
Uses picnia 88f, ptr 168d, rffe 144e, rtr 169d, xgap 59a, and y_zpi5 176b 176d.

176b    ⟨*stdver_Coeffs y_zpi5* 176b⟩≡                                                (263)
```
y_zpi5  14      0.06758353158403318,0.02161485431596137,0.01782456814136856,0.002964
```
Defines:
  y_zpi5, used in chunk 176.

176c    ⟨*pfverEqs zpi5* 176c⟩≡
```
zpi5: zpi5 - zpi5_aerr = _
            y_zpi5(1) * picnia _
          + y_zpi5(2) * zpi5(1)
```

Defines:
  zpi5, used in chunk 23c.
Uses picnia 88f and y_zpi5 176b 176d.

176d    ⟨*pfver_Coeffs y_zpi5* 176d⟩≡
```
y_zpi5  2       0.05479365264340726,0.9452063473565927
```
Defines:
  y_zpi5, used in chunk 176.

### 2.12.11   z2.11 ZPIB5: Expected output price infl., for RPD eq. (5-yr mat.) (MCE exp.)

176e    ⟨*variable ZPIB5* 176e⟩≡                                                      (221)
```
ZPIB5    = Expected output price infl., for RPD eq. (5-yr mat.)
```
Defines:
  ZPIB5, used in chunk 233.
Uses RPD 31d.

177a      ⟨*stdverEqs zpib5* 177a⟩≡                                                      (254)
```
zpib5:  zpib5-zpib5_aerr = y_zpib5(1) _
           + ( y_zpib5(2) *  picnia(-1) + y_zpib5(3) *  picnia(-2) + y_zpib5(4) *  picnia(-3)
           + ( y_zpib5(6) *  rffe(-1) +  y_zpib5(7) *  rffe(-2) +  y_zpib5(8) *  rffe(-3) + y_
           + y_zpib5(10) * rtr(-1) _
           + y_zpib5(11) * ptr(-1) _
           + ( y_zpib5(12) *  xgap(-1) +  y_zpib5(13) *  xgap(-2) +  y_zpib5(14) *  xgap(-3) +
           + ( y_zpib5(16) *  (400*d( log(pxb(-1)), 0, 1 )) +  y_zpib5(17) *  (400*d( log(pxb(-
```

Defines:
  zpib5, used in chunks 31e, 37a, and 38a.
Uses picnia 88f, ptr 168d, pxb 108d, rffe 144e, rtr 169d, xgap 59a, and y_zpib5 177b 177d.

177b      ⟨*stdver_Coeffs y_zpib5* 177b⟩≡                                                (263)
```
y_zpib5 19      2.014761562942157e-14,0.08381220448829916,0.03966837250165698,0.029682684899265
```
Defines:
  y_zpib5, used in chunk 177.

177c      ⟨*pfverEqs zpib5* 177c⟩≡
```
zpib5: zpib5 - zpib5_aerr = _
           y_zpib5(1) * 400 * d( log(pxb), 0, 1 ) _
           + y_zpib5(2) * zpib5(1)
```

Defines:
  zpib5, used in chunks 31e, 37a, and 38a.
Uses pxb 108d and y_zpib5 177b 177d.

177d      ⟨*pfver_Coeffs y_zpib5* 177d⟩≡
```
y_zpib5 2       0.05479365264340726,0.9452063473565927
```
Defines:
  y_zpib5, used in chunk 177.

### 2.12.12 z2.12 ZPI10: Expected cons. price infl., for RCCH, RRMET, and YHPNTN eqs. (10-yr mat.) (MCE exp.)

177e      ⟨*variable ZPI10* 177e⟩≡                                                       (221)
```
ZPI10    = Expected cons. price infl., for RCCH, RRMET, and YHPNTN eqs. (10-yr mat.)
```
Defines:
  ZPI10, used in chunk 233.
Uses RCCH 23d, RRMET 157e, and YHPNTN 82e.

178a    ⟨*stdverEqs zpi10* 178a⟩≡                                                    (254)
```
zpi10:  zpi10-zpi10_aerr = ( y_zpi10(1) * picnia(-1) + y_zpi10(2) * picnia(-2) +
                    + ( y_zpi10(5) * rffe(-1) + y_zpi10(6) * rffe(-2) + y_zpi10(7)
                    + y_zpi10(9) * rtr(-1) _
                    + y_zpi10(10) * ptr(-1) _
                    + ( y_zpi10(11) * xgap(-1) + y_zpi10(12) * xgap(-2) + y_zpi10(
```

Defines:
  zpi10, used in chunks 23e, 83a, 157f, and 178.
Uses picnia 88f, ptr 168d, rffe 144e, rtr 169d, xgap 59a, and y_zpi10 178b 178d.

178b    ⟨*stdver_Coeffs y_zpi10* 178b⟩≡                                              (263)
```
y_zpi10 14       0.03879756717884661,0.01310655690781879,0.01249073978840772,0.0020136
```
Defines:
  y_zpi10, used in chunk 178.

178c    ⟨*pfverEqs zpi10* 178c⟩≡
```
zpi10: zpi10 - zpi10_aerr = _
              y_zpi10(1) * picnia _
            + y_zpi10(2) * zpi10(1)
```

Uses picnia 88f, y_zpi10 178b 178d, and zpi10 178a.

178d    ⟨*pfver_Coeffs y_zpi10* 178d⟩≡
```
y_zpi10 2        0.03007455810944507,0.969925441890555
```
Defines:
  y_zpi10, used in chunk 178.

## 2.12.13   z2.13 ZPI10F: Expected cons. price infl., for FPXR eq. (10-yr mat.) (MCE exp.)

178e    ⟨*variable ZPI10F* 178e⟩≡                                                    (221)
```
ZPI10F  = Expected cons. price infl., for FPXR eq. (10-yr mat.)
```
Defines:
  ZPI10F, used in chunk 233.
Uses FPXR 163c.

178f    ⟨*stdverEqs zpi10f* 178f⟩≡                                                   (254)
```
zpi10f:  zpi10f-zpi10f_aerr = zpi10
```

Defines:
  zpi10f, used in chunks 163d and 179a.
Uses zpi10 178a.

179a    ⟨*pfverEqs zpi10f* 179a⟩≡
```
zpi10f: zpi10f - zpi10f_aerr = _
            y_zpi10f(1) * picnia _
          + y_zpi10f(2) * zpi10f(1)
```

Uses picnia 88f, y_zpi10f 179b, and zpi10f 178f.

179b    ⟨*pfver_Coeffs y_zpi10f* 179b⟩≡
```
y_zpi10f        2         0.03007455810944507,0.969925441890555
```
Defines:
    y_zpi10f, used in chunk 179a.


## 2.12.14  z2.14 ZPIC30: Expected cons.  price infl., for REQ eq. (30-yr mat.) (MCE exp.)

179c    ⟨*variable ZPIC30* 179c⟩≡                                              (221)
```
ZPIC30   = Expected cons. price infl., for REQ eq. (30-yr mat.)
```
Defines:
    ZPIC30, used in chunk 233.
Uses REQ 152f.

179d    ⟨*stdverEqs zpic30* 179d⟩≡                                             (254)
```
zpic30:  zpic30-zpic30_aerr = y_zpic30(1) _
          + ( y_zpic30(2) * picnia + y_zpic30(3) * picnia(-1) + y_zpic30(4) * picnia(-2)
          + ( y_zpic30(6) * rffe + y_zpic30(7) * rffe(-1) + y_zpic30(8) * rffe(-2) + y_z
          + y_zpic30(10) * rtr _
          + y_zpic30(11) * ptr _
          + ( y_zpic30(12) * xgap + y_zpic30(13) * xgap(-1) + y_zpic30(14) * xgap(-2) +
```

Defines:
    zpic30, used in chunk 153a.
Uses picnia 88f, ptr 168d, rffe 144e, rtr 169d, xgap 59a, and y_zpic30 179e 180a.

179e    ⟨*stdver_Coeffs y_zpic30* 179e⟩≡                                       (263)
```
y_zpic30       15        9.998348776898279e-14,0.03772442939281018,0.00691792724638696,0.0066112
```
Defines:
    y_zpic30, used in chunk 179.

179f    ⟨*pfverEqs zpic30* 179f⟩≡
```
zpic30: zpic30 - zpic30_aerr = _
            y_zpic30(1) * picnia _
          + y_zpic30(2) * zpic30(1)
```

Defines:
    zpic30, used in chunk 153a.
Uses picnia 88f and y_zpic30 179e 180a.

180a    ⟨*pfver_Coeffs y_zpic30* 180a⟩≡
```
y_zpic30        2        0.01410658898201937,0.9858934110179807
```
Defines:
  y_zpic30, used in chunk 179.

### 2.12.15   z2.15 ZPIC58: Expected 4-qtr consumer price inflation (8 qtrs. in the future) (MCE exp.)

180b    ⟨*variable ZPIC58* 180b⟩≡                                        (221)
```
ZPIC58   = Expected 4-qtr consumer price inflation (8 qtrs. in the future)
```
Defines:
  ZPIC58, used in chunk 233.

180c    ⟨*stdverEqs zpic58* 180c⟩≡                                        (254)
```
zpic58:  zpic58-zpic58_aerr = ( y_zpic58(1) * picnia + y_zpic58(2) * picnia(-1) -
                   + ( y_zpic58(5) * rffe + y_zpic58(6) * rffe(-1) + y_zpic58(7)
                   + y_zpic58(9) * rtr _
                   + y_zpic58(10) * ptr _
                   + ( y_zpic58(11) * xgap + y_zpic58(12) * xgap(-1) + y_zpic58(1
```

Defines:
  zpic58, used in chunk 143e.
  Uses picnia 88f, ptr 168d, rffe 144e, rtr 169d, xgap 59a, and y_zpic58 180d.

180d    ⟨*stdver_Coeffs y_zpic58* 180d⟩≡                                        (263)
```
y_zpic58        14        0.3419924857225884,0.05029077146057983,0.04280461383060537,-0
```
Defines:
  y_zpic58, used in chunk 180c.

180e    ⟨*pfverEqs zpic58* 180e⟩≡
```
zpic58: zpic58 - zpic58_aerr = pic4(8)
```

Defines:
  zpic58, used in chunk 143e.
  Uses pic4 113c.

### 2.12.16   z2.16 ZPICXFE: Expected value of picxfe in the next quarter (MCE exp.)

180f    ⟨*variable ZPICXFE* 180f⟩≡                                        (221)
```
ZPICXFE  = Expected value of picxfe in the next quarter
```
Defines:
  ZPICXFE, used in chunk 233.
  Uses picxfe 87b.

181a   ⟨*stdverEqs zpicxfe* 181a⟩≡                                 (254)

```
zpicxfe:  zpicxfe-zpicxfe_aerr = ( y_zpicxfe(1) *  picxfe(-1) +  y_zpicxfe(2) *  picxfe(-2) +
                   + ( y_zpicxfe(5) *  pieci(-1) +  y_zpicxfe(6) *  pieci(-2) +  y_zpicxfe(7) *
                   + ( y_zpicxfe(9) *  rffe(-1) +  y_zpicxfe(10) *  rffe(-2) +  y_zpicxfe(11) *
                   + ( y_zpicxfe(13) *  xgap2(-1) +  y_zpicxfe(14) *  xgap2(-2) +  y_zpicxfe(15)
                   + y_zpicxfe(17) * rtr(-1) _
                   + y_zpicxfe(18) * ptr(-1) _
                   + y_zpicxfe(19) * log(qpcnia(-1)/pcnia(-1)) _
                   + y_zpicxfe(20) * log(qpl(-1)/pl(-1)) _
                   + y_zpicxfe(21) * (hlprdt(-1) - 400*huqpct(-1)) _
                   + ( y_zpicxfe(22) * (lur(-1) - lurnat(-1)) +  y_zpicxfe(23) * (lur(-2) - lurr
```

Defines:
  zpicxfe, used in chunk 87b.
Uses hlprdt 69c, huqpct 100d, lur 65f, lurnat 69e, pcnia 89b, picxfe 87b, pieci 87e, pl 90d,
  ptr 168d, qpcnia 92f, qpl 92a, rffe 144e, rtr 169d, xgap2 59c, and y_zpicxfe 181b.

181b   ⟨*stdver_Coeffs y_zpicxfe* 181b⟩≡                                 (263)

```
y_zpicxfe       23      0.323685055125,-0.00320254773354,0.000957688783119,0.0104690425827,0.07
```

Defines:
  y_zpicxfe, used in chunk 181a.

181c   ⟨*pfverEqs zpicxfe* 181c⟩≡

```
zpicxfe: zpicxfe - zpicxfe_aerr = picxfe(1)
```

Defines:
  zpicxfe, used in chunk 87b.
Uses picxfe 87b.

### 2.12.17   z2.17 ZPIECI: Expected value of pieci in the next quarter (MCE exp.)

181d   ⟨*variable ZPIECI* 181d⟩≡                                 (221)

```
ZPIECI   = Expected value of pieci in the next quarter
```

Defines:
  ZPIECI, used in chunk 233.
Uses pieci 87e.

182a      ⟨*stdverEqs zpieci* 182a⟩≡                                               (254)
          zpieci:    zpieci-zpieci_aerr = ( y_zpieci(1) * picxfe(-1) + y_zpieci(2) * picxfe(
                         + ( y_zpieci(5) * pieci(-1) + y_zpieci(6) * pieci(-2) + y_zpie
                         + ( y_zpieci(9) * rffe(-1) + y_zpieci(10) * rffe(-2) + y_zpiec
                         + ( y_zpieci(13) * xgap2(-1) + y_zpieci(14) * xgap2(-2) + y_zp
                         + y_zpieci(17) * rtr(-1) _
                         + y_zpieci(18) * ptr(-1) _
                         + y_zpieci(19) * log(qpcnia(-1)/pcnia(-1)) _
                         + y_zpieci(20) * log(qpl(-1)/pl(-1)) _
                         + y_zpieci(21) * (hlprdt(-1) - 400*huqpct(-1)) _
                         + ( y_zpieci(22) * (lur(-1) - lurnat(-1)) + y_zpieci(23) * (lur(-2

          Defines:
            zpieci, used in chunk 87e.
          Uses hlprdt 69c, huqpct 100d, lur 65f, lurnat 69e, pcnia 89b, picxfe 87b, pieci 87e,
            pl 90d, ptr 168d, qpcnia 92f, qpl 92a, rffe 144e, rtr 169d, xgap2 59c, and y_zpieci 182b.

182b      ⟨*stdver_Coeffs y_zpieci* 182b⟩≡                                          (263)
          y_zpieci        23         -0.0173696976108,-0.00564002523431,0.000750046022225,0.018644
          Defines:
            y_zpieci, used in chunk 182a.

182c      ⟨*pfverEqs zpieci* 182c⟩≡
          zpieci: zpieci - zpieci_aerr = pieci(1)

          Defines:
            zpieci, used in chunk 87e.
          Uses pieci 87e.

182d      ⟨*pfverEqs zpl* 182d⟩≡
          zpl: zpl - zpl_aerr = pipl(1)

          Defines:
            zpl, never used.
          Uses pipl 90b.

182e      ⟨*pfverEqs zpnc* 182e⟩≡
          zpnc: zpnc - zpnc_aerr = pipxnc(1)

          Defines:
            zpnc, never used.
          Uses pipxnc 88c.

### 2.12.18   z2.18 ZECO: Expected growth rate of target non-durables and nonhousing services, for ECO eq (MCE exp.)

183a      ⟨*variable ZECO* 183a⟩≡                                                                (221)
```
ZECO     = Expected growth rate of target nondurables and nonhousing services, for ECO eq
```
Defines:
  ZECO, used in chunk 233.
Uses ECO 17a.

183b      ⟨*stdverEqs zeco* 183b⟩≡                                                              (254)
```
zeco: zeco-zeco_aerr =  _
              ( y_zeco(1) *  picnia(-1) + y_zeco(2) * picnia(-2) +  y_zeco(3) *  picnia(-3)
            + ( y_zeco(5) *  rffe(-1) + y_zeco(6) *  rffe(-2) +  y_zeco(7) *  rffe(-3) +  y_
            + ( y_zeco(9) *  xgap2(-1) + y_zeco(10) *  xgap2(-2) +  y_zeco(11) *  xgap2(-3)
            + y_zeco(13) * ptr(-1) _
            + y_zeco(14) * rtr(-1) _
            + ( y_zeco(15) *  yhgap(-1) +  y_zeco(16) *  yhgap(-2) +  y_zeco(17) *  yhgap(-3)
            + ( y_zeco(19) *  yhtgap(-1) +  y_zeco(20) *  yhtgap(-2) +  y_zeco(21) *  yhtgap(
            + ( y_zeco(23) *  yhpgap(-1) +  y_zeco(24) *  yhpgap(-2) +  y_zeco(25) *  yhpgap(
            + y_zeco(27)* ((hggdpt(-1)/400)) _
            + ( y_zeco(28)  _
            * (d( log(qeco(-1)), 0, 1 )) +  y_zeco(29)  _
            * (d( log(qeco(-2)), 0, 1 )) +  y_zeco(30)  _
            * (d( log(qeco(-3)), 0, 1 )) +  y_zeco(31)  _
            * (d( log(qeco(-4)), 0, 1 )))
```

Defines:
  zeco, used in chunks 17b and 183d.
Uses hggdpt 60d, picnia 88f, ptr 168d, qeco 20b, rffe 144e, rtr 169d, xgap2 59c,
  y_zeco 183c 184a, yhgap 80b, yhpgap 82d, and yhtgap 85b.

183c      ⟨*stdver_Coeffs y_zeco* 183c⟩≡                                                        (263)
```
y_zeco  31      -8.302302840394758e-05,-8.481341005195437e-05,-1.070919356458063e-05,9.3814944C
```
Defines:
  y_zeco, used in chunk 183.

183d      ⟨*pfverEqs zeco* 183d⟩≡
```
zeco: zeco - zeco_aerr = _
            y_zeco(1) * d( log(qec/pcor), 0, 1 ) _
          + y_zeco(2) * d( log(qec(1)/pcor(1)), 0, 1 ) _
          + y_zeco(3) * zeco(1) _
          + y_zeco(4) * zeco(2)
```

Uses pcor 111c, qec 19e, y_zeco 183c 184a, and zeco 183b.

184a    ⟨*pfver_Coeffs y_zeco* 184a⟩≡

```
y_zeco   4         0.1138041021174215,-0.05038309637106111,1.32505960599245,-0.442717752
```

Defines:
  y_zeco, used in chunk 183.

## 2.12.19   z2.19 ZECD: Expected growth rate of target durable consumption, for ECD eq. (MCE exp.)

184b    ⟨*variable ZECD* 184b⟩≡                                          (221)

```
ZECD     = Expected growth rate of target durable consumption, for ECD eq.
```

Defines:
  ZECD, used in chunk 233.
Uses ECD 18a.

184c    ⟨*stdverEqs zecd* 184c⟩≡                                          (254)

```
zecd: zecd-zecd_aerr =  ( y_zecd(1) *  picnia(-1) +  y_zecd(2) *  picnia(-2) +  y_zec
                    + ( y_zecd(5) *  rffe(-1) +  y_zecd(6) *  rffe(-2) +  y_zecd(7) *  rf
                    + ( y_zecd(9) *  xgap2(-1) +  y_zecd(10) *  xgap2(-2) +  y_zecd(11) *
                    + y_zecd(13) * ptr(-1) _
                    + y_zecd(14) * rtr(-1) _
                    + ( y_zecd(15) *  yhgap(-1) +  y_zecd(16) *  yhgap(-2) +  y_zecd(17)
                    + ( y_zecd(19) *  yhtgap(-1) +  y_zecd(20) *  yhtgap(-2) +  y_zecd(21
                    + ( y_zecd(23) *  yhpgap(-1) +  y_zecd(24) *  yhpgap(-2) +  y_zecd(25
                    + y_zecd(27)* (hggdpt(-1)/400) _
                    + y_zecd(28)* (hgpcdr(-1)/400) _
                    + ( y_zecd(29) *  d( log(qecd(-1)), 0, 1 ) +  y_zecd(30) *  d( log(qe
```

Defines:
  zecd, used in chunks 18b and 184e.
Uses hggdpt 60d, hgpcdr 209f, picnia 88f, ptr 168d, qecd 20e, rffe 144e, rtr 169d,
  xgap2 59c, y_zecd 184d 185a, yhgap 80b, yhpgap 82d, and yhtgap 85b.

184d    ⟨*stdver_Coeffs y_zecd* 184d⟩≡                                    (263)

```
y_zecd   32        -0.0005835440697737298,-0.0004890487384829661,-0.0003178601486946526,
```

Defines:
  y_zecd, used in chunk 184.

184e    ⟨*pfverEqs zecd* 184e⟩≡

```
zecd: zecd - zecd_aerr = _
          y_zecd(1) * d( log(qecd), 0, 1 ) _
        + y_zecd(2) * d( log(qecd(1)), 0, 1 ) _
        + y_zecd(3) * zecd(1) _
        + y_zecd(4) * zecd(2)
```

Uses qecd 20e, y_zecd 184d 185a, and zecd 184c.

185a     ⟨*pfver_Coeffs y_zecd* 185a⟩≡
         y_zecd  4          0.1737782158096821,0.00978040143757678,0.7703217929174532,0.05628094057708619
         Defines:
           y_zecd, used in chunk 184.


## 2.12.20   z2.20 ZGAPC2: Expected output gap, for ECD eq. (MCE exp.)

185b     ⟨*variable ZGAPC2* 185b⟩≡                                              (221)
         ZGAPC2   = Expected output gap, for ECD eq.
         Defines:
           ZGAPC2, used in chunk 233.
         Uses ECD 18a.

185c     ⟨*stdverEqs zgapc2* 185c⟩≡                                             (254)
         zgapc2: zgapc2-zgapc2_aerr =  ( y_zgapc2(1) *  picnia(-1) +  y_zgapc2(2) *  picnia(-2) +  y_zg
                      + ( y_zgapc2(5) *  rffe(-1) + y_zgapc2(6) *  rffe(-2) + y_zgapc2(7) *  rffe(-
                      + ( y_zgapc2(9) *  xgap2(-1) + y_zgapc2(10) *  xgap2(-2) +  y_zgapc2(11) *  xg
                      + y_zgapc2(13) * ptr(-1) _
                      + y_zgapc2(14) * rtr(-1)

         Defines:
           zgapc2, used in chunks 18b and 185e.
         Uses picnia 88f, ptr 168d, rffe 144e, rtr 169d, xgap2 59c, and y_zgapc2 185d 185f.

185d     ⟨*stdver_Coeffs y_zgapc2* 185d⟩≡                                        (263)
         y_zgapc2        14        -0.01642348362157579,-0.003669559326500591,-0.008031103190068016,0.0041
         Defines:
           y_zgapc2, used in chunk 185.

185e     ⟨*pfverEqs zgapc2* 185e⟩≡
         zgapc2: zgapc2 - zgapc2_aerr = _
                      y_zgapc2(1) * xgap2 _
                    + y_zgapc2(2) * zgapc2(1) _
                    + y_zgapc2(3) * zgapc2(2)

         Uses xgap2 59c, y_zgapc2 185d 185f, and zgapc2 185c.

185f     ⟨*pfver_Coeffs y_zgapc2* 185f⟩≡
         y_zgapc2        3        0.02693826961930335,0.7703217929174532,0.05628094057708619
         Defines:
           y_zgapc2, used in chunk 185.

### 2.12.21   z2.21 ZEH: Expected growth rate of target residential investment, for EH eq. (MCE exp.)

186a    ⟨*variable ZEH* 186a⟩≡                                          (221)
```
ZEH       = Expected growth rate of target residential investment, for EH eq.
```
Defines:
  ZEH, used in chunk 233.
Uses EH 18d.

186b    ⟨*stdverEqs zeh* 186b⟩≡                                        (254)
```
zeh: zeh-zeh_aerr =  _
                ( y_zeh(1) *  picnia(-1) +  y_zeh(2) *  picnia(-2) +  y_zeh(3) *  pic
              + ( y_zeh(5) *  rffe(-1) +  y_zeh(6) *  rffe(-2) +  y_zeh(7) *  rffe(-3
              + ( y_zeh(9) *  xgap2(-1) +  y_zeh(10) *  xgap2(-2) +  y_zeh(11) *  xga
              + y_zeh(13) * ptr(-1) _
              + y_zeh(14) * rtr(-1) _
              + ( y_zeh(15) *  yhgap(-1) +  y_zeh(16) *  yhgap(-2) +  y_zeh(17) *  yh
              + ( y_zeh(19) *  yhtgap(-1) +  y_zeh(20) *  yhtgap(-2) +  y_zeh(21) *
              + ( y_zeh(23) *  yhpgap(-1) +  y_zeh(24) *  yhpgap(-2) +  y_zeh(25) *
              + y_zeh(27)* (hggdpt(-1)/400) _
              + ( y_zeh(28) *  d( log(qeh(-1)), 0, 1 ) +  y_zeh(29) *  d( log(qeh(-2)
```

Defines:
  zeh, used in chunks 18e and 186d.
Uses hggdpt 60d, picnia 88f, ptr 168d, qeh 21a, rffe 144e, rtr 169d, xgap2 59c,
  y_zeh 186c 186e, yhgap 80b, yhpgap 82d, and yhtgap 85b.

186c    ⟨*stdver_Coeffs y_zeh* 186c⟩≡                                  (263)
```
y_zeh   31      -0.0001475636416872941,-3.032365273125124e-05,-4.473855969321594e-06,
```
Defines:
  y_zeh, used in chunk 186.

186d    ⟨*pfverEqs zeh* 186d⟩≡
```
zeh: zeh - zeh_aerr = _
              y_zeh(1) * d( log(qeh), 0, 1 ) _
            + y_zeh(2) * d( log(qeh(1)), 0, 1 ) _
            + y_zeh(3) * d( log(qeh(2)), 0, 1 ) _
            + y_zeh(4) * zeh(1) _
            + y_zeh(5) * zeh(2)  _
            + y_zeh(6) * zeh(3)
```

Uses qeh 21a, y_zeh 186c 186e, and zeh 186b.

186e    ⟨*pfver_Coeffs y_zeh* 186e⟩≡
```
y_zeh   6       0.01906335911291184,-0.006467948514797445,-0.003878049463055788,1.318
```
Defines:
  y_zeh, used in chunk 186.

## 2.12.22   z2.22 ZLHP: Expected growth rate of target aggregate hours (MCE exp.)

187a      ⟨*variable ZLHP* 187a⟩≡                                                          (221)
    ZLHP       = Expected growth rate of target aggregate hours
Defines:
  ZLHP, used in chunk 233.

187b      ⟨*stdverEqs zlhp* 187b⟩≡                                                        (254)
```
zlhp: zlhp-zlhp_aerr = ( y_zlhp(1) * picnia(-1) + y_zlhp(2) * picnia(-2) + y_zlhp(3) * p
              + ( y_zlhp(5) * rffe(-1) + y_zlhp(6) * rffe(-2) + y_zlhp(7) * rffe(-3) +
              + y_zlhp(9) * rtr(-1) _
              + y_zlhp(10) * ptr(-1) _
              + ( y_zlhp(11) * xgap(-1) + y_zlhp(12) * xgap(-2) + y_zlhp(13) * xgap(-3)
              + y_zlhp(15) * (d( log(xgo(-1)), 0, 1 ) - (d( log(lprdt(-1)), 0, 1 ))) _
              + y_zlhp(16) * ((hlept(-1) - hqlww(-1))/400)
```

Defines:
  zlhp, used in chunks 56e and 187d.
Uses hlept 68d, hqlww 61e, lprdt 69a, picnia 88f, ptr 168d, rffe 144e, rtr 169d, xgap 59a,
  xgo 50b, and y_zlhp 187c 187e.

187c      ⟨*stdver_Coeffs y_zlhp* 187c⟩≡                                                  (263)
    y_zlhp   16      -0.0002522439372141123,-5.098270125007645e-05,-0.0002552621374828649,3.98160743
Defines:
  y_zlhp, used in chunk 187.

187d      ⟨*pfverEqs zlhp* 187d⟩≡
```
zlhp: zlhp - zlhp_aerr = _
             y_zlhp(1) * d( log(qlhp), 0, 1 ) _
          + y_zlhp(2) * d( log(qlhp(1)), 0, 1 ) _
          + y_zlhp(3) * zlhp(1) _
          + y_zlhp(4) * zlhp(2)
```

Uses qlhp 57c, y_zlhp 187c 187e, and zlhp 187b.

187e      ⟨*pfver_Coeffs y_zlhp* 187e⟩≡
    y_zlhp   4       0.2651763839183581,-0.03797794861501333,0.8762009231175162,-0.1432176879925547
Defines:
  y_zlhp, used in chunk 187.

### 2.12.23   z2.?? ZLUEC: Expected ???????

188a        ⟨*pfverEqs zlurc* 188a⟩≡
```
       zlurc:   zlurc-zlurc_aerr = y_zlurc(1) _
                          + ( y_zlurc(2) *  pipl(-1)/400 +  y_zlurc(3) * pipl(-2)/400 +  y_z
                          + ( y_zlurc(5) *  d( log(pxp(-1)), 0, 1 ) +  y_zlurc(6) *  d( log(p
                          + ( y_zlurc(8) *  (picnia(-1)/400) +  y_zlurc(9) *  (picnia(-2)/400
                          + ( y_zlurc(12) *  d( log(pxnc(-1)), 0, 1 ) +  y_zlurc(13) *  d( lo
                          + ( y_zlurc(15) *  d( log(pxg(-1)), 0, 1 ) +  y_zlurc(16) *  d( log
                          + y_zlurc(19) * (ptr(-1)/400) _
                          + y_zlurc(20) * (log(pcnia(-1)/qpcnia(-1))) _
                          + y_zlurc(21) * (log(pxnc(-1)/qpxnc(-1))) _
                          + y_zlurc(22) * hprdtw(-1) _
                          + y_zlurc(23) * hprdtp(-1) _
                          + ( y_zlurc(24) *  ((lur(-1) - lurnat(-1))) +  y_zlurc(25) *  ((lu
                          + ( y_zlurc(28) *  (rffe(-1)/400) +  y_zlurc(29) *  (rffe(-2)/400)
                          + y_zlurc(32) * (rtr(-1)/400) _
                          + y_zlurc(33) * (ucfs(-1) * d( log(pcfr(-1)), 0, 1 )) _
                          + y_zlurc(34) * (uces(-1) * d( log(pcer(-1)), 0, 1 )) _
                          + y_zlurc(35) * uqpxp(-1) _
                          + y_zlurc(36) * huqpct(-1)
```

Uses huqpct 100d, lur 65f, lurnat 69e, pcer 103c, pcfr 104a, pcnia 89b, picnia 88f,
   pipl 90b, ptr 168d, pxg 108b, pxnc 90f, pxp 93b, qpcnia 92f, qpxnc 99d, rffe 144e,
   rtr 169d, uces 104d, ucfs 105b, and y_zlurc 188b.

188b        ⟨*pfver_Coeffs y_zlurc* 188b⟩≡
```
       y_zlurc 36          -9.3059281947E-7,.283931692182,.180106628426,.0683593886802,-.010194
```
Defines:
   y_zlurc, used in chunk 188a.

189a        ⟨*pfverEqs zlurl* 189a⟩≡
```
       zlurl:    zlurl-zlurl_aerr = y_zlurl(1) _
                          + ( y_zlurl(2) *  pipl(-1)/400 +  y_zlurl(3) *  pipl(-2)/400 +  y_zlurl(4) *
                          + ( y_zlurl(5) *  d( log(pxp(-1)), 0, 1 ) +  y_zlurl(6) *  d( log(pxp(-2)), 0
                          + ( y_zlurl(8) *  (picnia(-1)/400) +  y_zlurl(9) *  (picnia(-2)/400) +  y_zlu
                          + ( y_zlurl(12) *  d( log(pxnc(-1)), 0, 1 ) +  y_zlurl(13) * d( log(pxnc(-2)
                          + ( y_zlurl(15) *  d( log(pxg(-1)), 0, 1 ) +  y_zlurl(16) *  d( log(pxg(-2)),
                          + y_zlurl(19) * (ptr(-1)/400) _
                          + y_zlurl(20) * (log(pcnia(-1)/qpcnia(-1))) _
                          + y_zlurl(21) * (log(pxnc(-1)/qpxnc(-1))) _
                          + y_zlurl(22) * hprdtw(-1) _
                          + y_zlurl(23) * hprdtp(-1) _
                          + ( y_zlurl(24) *  ((lur(-1) - lurnat(-1))) +  y_zlurl(25) *  ((lur(-2) - lur
                          + ( y_zlurl(28) *  (rffe(-1)/400) +  y_zlurl(29) *  (rffe(-2)/400) +  y_zlurl
                          + y_zlurl(32) * (rtr(-1)/400) _
                          + y_zlurl(33) * (ucfs(-1) * d( log(pcfr(-1)), 0, 1 )) _
                          + y_zlurl(34) * (uces(-1) * d( log(pcer(-1)), 0, 1 )) _
                          + y_zlurl(35) * uqpxp(-1) _
                          + y_zlurl(36) * huqpct(-1)
```

Uses huqpct 100d, lur 65f, lurnat 69e, pcer 103c, pcfr 104a, pcnia 89b, picnia 88f,
     pipl 90b, ptr 168d, pxg 108b, pxnc 90f, pxp 93b, qpcnia 92f, qpxnc 99d, rffe 144e,
     rtr 169d, uces 104d, ucfs 105b, and y_zlurl 189b.

189b        ⟨*pfver_Coeffs y_zlurl* 189b⟩≡
```
       y_zlurl 36          -1.00741652442E-6,.295406699763,.189125426666,.0722568486872,-.0119783479823,.0
```
Defines:
     y_zlurl, used in chunk 189a.

190a    ⟨*pfverEqs zlurnc* 190a⟩≡
```
zlurnc:    zlurnc-zlurnc_aerr = y_zlurnc(1) _
                   + ( y_zlurnc(2) *  pipl(-1)/400 + y_zlurnc(3) *  pipl(-2)/400 +  y
                   + ( y_zlurnc(5) *  d( log(pxp(-1)), 0, 1 ) + y_zlurnc(6) *  d( log
                   + ( y_zlurnc(8) *  (picnia(-1)/400) + y_zlurnc(9) *  (picnia(-2)/4
                   + ( y_zlurnc(12) *  d( log(pxnc(-1)), 0, 1 ) + y_zlurnc(13) *  d(
                   + ( y_zlurnc(15) *  d( log(pxg(-1)), 0, 1 ) + y_zlurnc(16) *  d( l
                   + y_zlurnc(19) * (ptr(-1)/400) _
                   + y_zlurnc(20) * (log(pcnia(-1)/qpcnia(-1))) _
                   + y_zlurnc(21) * (log(pxnc(-1)/qpxnc(-1))) _
                   + y_zlurnc(22) * hprdtw(-1) _
                   + y_zlurnc(23) * hprdtp(-1) _
                   + ( y_zlurnc(24) *  ((lur(-1) - lurnat(-1))) + y_zlurnc(25) *  ((l
                   + ( y_zlurnc(28) *  (rffe(-1)/400) + y_zlurnc(29) *  (rffe(-2)/400
                   + y_zlurnc(32) * (rtr(-1)/400) _
                   + y_zlurnc(33) * (ucfs(-1) * d( log(pcfr(-1)), 0, 1 )) _
                   + y_zlurnc(34) * (uces(-1) * d( log(pcer(-1)), 0, 1 )) _
                   + y_zlurnc(35) * uqpxp(-1) _
                   + y_zlurnc(36) * huqpct(-1)
```

Uses huqpct 100d, lur 65f, lurnat 69e, pcer 103c, pcfr 104a, pcnia 89b, picnia 88f,
   pipl 90b, ptr 168d, pxg 108b, pxnc 90f, pxp 93b, qpcnia 92f, qpxnc 99d, rffe 144e,
   rtr 169d, uces 104d, ucfs 105b, and y_zlurnc 190b.

190b    ⟨*pfver_Coeffs y_zlurnc* 190b⟩≡
```
y_zlurnc          36        -8.80777489942E-7,.260753164094,.166898878715,.0637538844125,
```
Defines:
   y_zlurnc, used in chunk 190a.

190c    ⟨*pfverEqs zpc* 190c⟩≡
```
zpc: zpc - zpc_aerr = picnia(1)
```

Uses picnia 88f.

## 2.12.24    z2.23 ZVPD: Expected growth rate of capital-output ratio, for EPD (MCE exp.)

190d    ⟨*variable ZVPD* 190d⟩≡                                                     (221)
```
ZVPD      = Expected growth rate of capital-output ratio, for EPD
```
Defines:
   ZVPD, used in chunk 233.
Uses EPD 25b.

191a      ⟨*stdverEqs zvpd* 191a⟩≡                                                    (254)
```
zvpd:  zvpd-zvpd_aerr = y_zvpd(1) _
                + ( y_zvpd(2) *  picnia(-1) +  y_zvpd(3) *  picnia(-2) +  y_zvpd(4) *  picnia(
                + ( y_zvpd(6) *  rffe(-1) +  y_zvpd(7) *  rffe(-2) +  y_zvpd(8) *  rffe(-3) +
                + y_zvpd(10) * rtr(-1) _
                + y_zvpd(11) * ptr(-1) _
                + ( y_zvpd(12) *  xgap(-1) +  y_zvpd(13) *  xgap(-2) +  y_zvpd(14) *  xgap(-3)
                + ( y_zvpd(16) *  d( log(xbo(-1)), 0, 1 ) +  y_zvpd(17) *  d( log(xbo(-2)), 0,
                + ( y_zvpd(20) *  d( log(vpd(-1)), 0, 1 ) +  y_zvpd(21) *  d( log(vpd(-2)), 0,
                + y_zvpd(24) * hgvpd(-1)
```

Defines:
   zvpd, used in chunk 25c.
Uses hgvpd 34d, picnia 88f, ptr 168d, rffe 144e, rtr 169d, vpd 33d, xbo 50e, xgap 59a,
   and y_zvpd 191b 191d.

191b      ⟨*stdver_Coeffs y_zvpd* 191b⟩≡                                              (263)
```
y_zvpd  24       -3.503545878896081e-16,-0.0002563318120287816,-0.0003053817493858787,0.00027546
```
Defines:
   y_zvpd, used in chunk 191.

191c      ⟨*pfverEqs zvpd* 191c⟩≡
```
zvpd: zvpd - zvpd_aerr = _
              y_zvpd(1) * d( log(vpd), 0, 1 ) _
          + y_zvpd(2) * d( log(vpd(1)), 0, 1 ) _
          + y_zvpd(3) * d( log(vpd(2)), 0, 1 ) _
          + y_zvpd(4) * zvpd(1) _
          + y_zvpd(5) * zvpd(2) _
          + y_zvpd(6) * zvpd(3)
```

Defines:
   zvpd, used in chunk 25c.
Uses vpd 33d and y_zvpd 191b 191d.

191d      ⟨*pfver_Coeffs y_zvpd* 191d⟩≡
```
y_zvpd  6        0.1318273627339884,-0.05535469740611846,-0.04590273268094027,1.255037999197345,
```
Defines:
   y_zvpd, used in chunk 191.

192a    ⟨*pfverEqs zvpdc* 192a⟩≡
```
zvpdc: zvpdc - zvpdc_aerr = _
            y_zvpdc(1) * d( log(vpdc), 0, 1 ) _
        + y_zvpdc(2) * d( log(vpdc(1)), 0, 1 ) _
        + y_zvpdc(3) * d( log(vpdc(2)), 0, 1 ) _
        + y_zvpdc(4) * zvpdc(1) _
        + y_zvpdc(5) * zvpdc(2) _
        + y_zvpdc(6) * zvpdc(3)
```

Defines:
  zvpdc, never used.
Uses y_zvpdc 192b.

192b    ⟨*pfver_Coeffs y_zvpdc* 192b⟩≡
```
y_zvpdc 6         0.09803022871456824,-0.02414648545834694,-0.03606336906524894,1.14293
```
Defines:
  y_zvpdc, used in chunk 192a.

192c    ⟨*pfverEqs zvpdo* 192c⟩≡
```
zvpdo: zvpdo - zvpdo_aerr = _
            y_zvpdo(1) * d( log(vpdo), 0, 1 ) _
        + y_zvpdo(2) * d( log(vpdo(1)), 0, 1 ) _
        + y_zvpdo(3) * d( log(vpdo(2)), 0, 1 ) _
        + y_zvpdo(4) * zvpdo(1) _
        + y_zvpdo(5) * zvpdo(2) _
        + y_zvpdo(6) * zvpdo(3)
```

Defines:
  zvpdo, never used.
Uses y_zvpdo 192d.

192d    ⟨*pfver_Coeffs y_zvpdo* 192d⟩≡
```
y_zvpdo 6         0.1507100292335419,-0.00334506123525439,-0.03390971943637334,0.859638
```
Defines:
  y_zvpdo, used in chunk 192c.

### 2.12.25   z2.24 ZVPI: Expected growth rate of capital-output ratio, for EPI (MCE exp.)

192e    ⟨*variable ZVPI* 192e⟩≡                                            (221)
```
ZVPI     = Expected growth rate of capital-output ratio, for EPI
```
Defines:
  ZVPI, used in chunk 233.
Uses EPI 25e.

193a     ⟨*stdverEqs zvpi* 193a⟩≡                                       (254)

```
zvpi: zvpi-zvpi_aerr = ( y_zvpi(1) * picnia(-1) + y_zvpi(2) * picnia(-2) + y_zvpi(3) *  p
              + ( y_zvpi(5) * rffe(-1) + y_zvpi(6) * rffe(-2) + y_zvpi(7) * rffe(-3) +
              + y_zvpi(9) * rtr(-1) _
              + y_zvpi(10) * ptr(-1) _
              + ( y_zvpi(11) * xgap(-1) + y_zvpi(12) * xgap(-2) + y_zvpi(13) * xgap(-3)
              + ( y_zvpi(15) * d( log(xbo(-1)), 0, 1 ) + y_zvpi(16) * d( log(xbo(-2)), 0,
              + ( y_zvpi(19) * d( log(vpi(-1)), 0, 1 ) + y_zvpi(20) * d( log(vpi(-2)), 0,
              + y_zvpi(23) * hgvpi(-1)
```

Defines:
     zvpi, used in chunk 26a.
Uses hgvpi 38e, picnia 88f, ptr 168d, rffe 144e, rtr 169d, vpi 33f, xbo 50e, xgap 59a,
     and y_zvpi 193b 193d.

193b     ⟨*stdver_Coeffs y_zvpi* 193b⟩≡                                     (263)

```
y_zvpi  23     3.869791235963136e-05,3.80256114092935e-06,2.612181181174604e-05,2.05719790994
```
Defines:
     y_zvpi, used in chunk 193.

193c     ⟨*pfverEqs zvpi* 193c⟩≡

```
zvpi: zvpi - zvpi_aerr = _
           y_zvpi(1) * d( log(vpi), 0, 1 ) _
        + y_zvpi(2) * d( log(vpi(1)), 0, 1 ) _
        + y_zvpi(3) * d( log(vpi(2)), 0, 1 ) _
        + y_zvpi(4) * zvpi(1) _
        + y_zvpi(5) * zvpi(2) _
        + y_zvpi(6) * zvpi(3)
```

Defines:
     zvpi, used in chunk 26a.
Uses vpi 33f and y_zvpi 193b 193d.

193d     ⟨*pfver_Coeffs y_zvpi* 193d⟩≡

```
y_zvpi  6      0.01173233722668564,-0.007643688620445599,-0.001950946215522212,1.6363899477894
```
Defines:
     y_zvpi, used in chunk 193.

### 2.12.26    z2.25 ZVPS: Expected growth rate of des. capital-output ratio, for EPS eq. (MCE exp.)

193e     ⟨*variable ZVPS* 193e⟩≡                                       (221)

```
ZVPS    = Expected growth rate of des. capital-output ratio, for EPS eq.
```
Defines:
     ZVPS, used in chunk 233.
Uses EPS 26c.

194a    ⟨*stdverEqs zvps* 194a⟩≡                                        (254)

```
zvps: zvps-zvps_aerr = ( y_zvps(1) * picnia(-1) + y_zvps(2) * picnia(-2) + y_zv
               + ( y_zvps(5) * rffe(-1) + y_zvps(6) * rffe(-2) + y_zvps(7) * r
               + y_zvps(9) * rtr(-1) _
               + y_zvps(10) * ptr(-1) _
               + ( y_zvps(11) * xgap(-1) + y_zvps(12) * xgap(-2) + y_zvps(13) *
               + ( y_zvps(15) * d( log(xbo(-1)), 0, 1 ) + y_zvps(16) * d( log(xk
               + ( y_zvps(19) * d( log(vps(-1)), 0, 1 ) + y_zvps(20) * d( log(vp
               + y_zvps(23) * hgvps(-1)
```

Defines:
    zvps, used in chunk 26d.
Uses hgvps 35a, picnia 88f, ptr 168d, rffe 144e, rtr 169d, vps 34b, xbo 50e, xgap 59a,
    and y_zvps 194b 194d.

194b    ⟨*stdver_Coeffs y_zvps* 194b⟩≡                                    (263)

```
y_zvps  23      0.0007852314783589356,-0.0001325502846474631,0.0001060837434901873,0.
```
Defines:
    y_zvps, used in chunk 194.

194c    ⟨*pfverEqs zvps* 194c⟩≡

```
zvps: zvps - zvps_aerr = _
            y_zvps(1) * d( log(vps), 0, 1 ) _
          + y_zvps(2) * d( log(vps(1)), 0, 1 ) _
          + y_zvps(3) * d( log(vps(2)), 0, 1 ) _
          + y_zvps(4) * zvps(1) _
          + y_zvps(5) * zvps(2) _
          + y_zvps(6) * zvps(3)
```

Defines:
    zvps, used in chunk 26d.
Uses vps 34b and y_zvps 194b 194d.

194d    ⟨*pfver_Coeffs y_zvps* 194d⟩≡

```
y_zvps  6       0.05036892209181758,-0.02593059010019546,-0.01546281010316031,1.44643
```
Defines:
    y_zvps, used in chunk 194.

### 2.12.27   z2.26 ZXBD: Expected growth rate of buisiness output for EPD (MCE exp.)

194e    ⟨*variable ZXBD* 194e⟩≡                                         (221)

```
ZXBD      = Expected growth rate of buisiness output for EPD
```
Defines:
    ZXBD, used in chunk 233.
Uses EPD 25b.

195a      ⟨*stdverEqs zxbd* 195a⟩≡                                                              (254)
```
zxbd:  zxbd-zxbd_aerr = y_zxbd(1) _
                 + ( y_zxbd(2) *  picnia(-1) +  y_zxbd(3) *  picnia(-2) +  y_zxbd(4) *  picnia(-3
                 + ( y_zxbd(6) *  rffe(-1) +  y_zxbd(7) *  rffe(-2) +  y_zxbd(8) *  rffe(-3) +  y
                 + y_zxbd(10) * rtr(-1) _
                 + y_zxbd(11) * ptr(-1) _
                 + ( y_zxbd(12) *  xgap(-1) +  y_zxbd(13) *  xgap(-2) +  y_zxbd(14) *  xgap(-3) +
                 + ( y_zxbd(16) *  d( log(xbo(-1)), 0, 1 ) +  y_zxbd(17) *  d( log(xbo(-2)), 0, 1
                 + ( y_zxbd(20) *  d( log(vpd(-1)), 0, 1 ) +  y_zxbd(21) *  d( log(vpd(-2)), 0, 1
                 + y_zxbd(24) * hgx(-1)/400
```

Defines:
     zxbd, used in chunk 25c.
Uses hgx 59e, picnia 88f, ptr 168d, rffe 144e, rtr 169d, vpd 33d, xbo 50e, xgap 59a,
     and y_zxbd 195b 195d.

195b      ⟨*stdver_Coeffs y_zxbd* 195b⟩≡                                                         (263)
```
y_zxbd  24      -2.515799209424174e-16,-0.0001835522663957102,-9.20694428089123e-05,-0.00016905
```
Defines:
     y_zxbd, used in chunk 195.

195c      ⟨*pfverEqs zxbd* 195c⟩≡
```
zxbd: zxbd - zxbd_aerr = _
            y_zxbd(1) * d( log(xbo), 0, 1 ) _
          + y_zxbd(2) * d( log(xbo(1)), 0, 1 ) _
          + y_zxbd(3) * d( log(xbo(2)), 0, 1 ) _
          + y_zxbd(4) * zxbd(1) _
          + y_zxbd(5) * zxbd(2) _
          + y_zxbd(6) * zxbd(3)
```

Defines:
     zxbd, used in chunk 25c.
Uses xbo 50e and y_zxbd 195b 195d.

195d      ⟨*pfver_Coeffs y_zxbd* 195d⟩≡
```
y_zxbd  6      0.1318273627339884,-0.05535469740611846,-0.04590273268094027,1.255037999197345,
```
Defines:
     y_zxbd, used in chunk 195.


## 2.12.28    z2.27 ZXBI: Expected growth rate of business output, for EPI (MCE exp.)

195e      ⟨*variable ZXBI* 195e⟩≡                                                               (221)
```
ZXBI     = Expected growth rate of business output, for EPI
```
Defines:
     ZXBI, used in chunk 233.
Uses EPI 25e.

196a     ⟨stdverEqs zxbi 196a⟩≡                                              (254)
```
zxbi:  zxbi-zxbi_aerr =  _
                 ( y_zxbi(1) *  picnia(-1) +  y_zxbi(2) *  picnia(-2) + y_zxbi(3) *
              + ( y_zxbi(5) *  rffe(-1) +  y_zxbi(6) *  rffe(-2) +  y_zxbi(7) *  rff
              + y_zxbi(9) * rtr(-1) _
              + y_zxbi(10) * ptr(-1) _
              + ( y_zxbi(11) *  xgap(-1) +  y_zxbi(12) *  xgap(-2) + y_zxbi(13) *
              + ( y_zxbi(15) *  d( log(xbo(-1)), 0, 1 ) +  y_zxbi(16) *  d( log(xbo
              + ( y_zxbi(19) *  d( log(vpi(-1)), 0, 1 ) +  y_zxbi(20) *  d( log(vpi
              + y_zxbi(23) * hgx(-1)/400
```

Defines:
   zxbi, used in chunk 26a.
Uses hgx 59e, picnia 88f, ptr 168d, rffe 144e, rtr 169d, vpi 33f, xbo 50e, xgap 59a,
   and y_zxbi 196b 196d.

196b     ⟨stdver_Coeffs y_zxbi 196b⟩≡                                        (263)
```
y_zxbi  23      -3.907288119414607e-05,-1.536565753314579e-05,-1.048653204032815e-05,
```
Defines:
   y_zxbi, used in chunk 196.

196c     ⟨pfverEqs zxbi 196c⟩≡
```
zxbi: zxbi - zxbi_aerr = _
              y_zxbi(1) * d( log(xbo), 0, 1 ) _
           + y_zxbi(2) * d( log(xbo(1)), 0, 1 ) _
           + y_zxbi(3) * d( log(xbo(2)), 0, 1 ) _
           + y_zxbi(4) * zxbi(1) _
           + y_zxbi(5) * zxbi(2) _
           + y_zxbi(6) * zxbi(3)
```

Defines:
   zxbi, used in chunk 26a.
Uses xbo 50e and y_zxbi 196b 196d.

196d     ⟨pfver_Coeffs y_zxbi 196d⟩≡
```
y_zxbi  6       0.01173233722668564,-0.007643688620445599,-0.001950946215522212,1.636
```
Defines:
   y_zxbi, used in chunk 196.

### 2.12.29   z2.28 ZXBS: Expected growth rate of business output, for EPS (MCE exp.)

196e     ⟨variable ZXBS 196e⟩≡                                               (221)
```
ZXBS     = Expected growth rate of business output, for EPS
```
Defines:
   ZXBS, used in chunk 233.
Uses EPS 26c.

197a    ⟨*stdverEqs zxbs* 197a⟩≡                                                                        (254)
```
zxbs:  zxbs-zxbs_aerr =  _
                ( y_zxbs(1) *  picnia(-1) +  y_zxbs(2) *  picnia(-2) +  y_zxbs(3) *  picnia(-3
               + ( y_zxbs(5) *  rffe(-1) +  y_zxbs(6) *  rffe(-2) +  y_zxbs(7) *  rffe(-3) +  y
               + y_zxbs(9) * rtr(-1) _
               + y_zxbs(10) * ptr(-1) _
               + ( y_zxbs(11) *  xgap(-1) +  y_zxbs(12) *  xgap(-2) +  y_zxbs(13) *  xgap(-3) +
               + ( y_zxbs(15) *  d( log(xbo(-1)), 0, 1 ) +  y_zxbs(16) *  d( log(xbo(-2)), 0, 1
               + ( y_zxbs(19) *  d( log(vps(-1)), 0, 1 ) +  y_zxbs(20) *  d( log(vps(-2)), 0, 1
               + y_zxbs(23) * hgx(-1)/400
```

Defines:
    zxbs, used in chunk 26d.
Uses hgx 59e, picnia 88f, ptr 168d, rffe 144e, rtr 169d, vps 34b, xbo 50e, xgap 59a,
    and y_zxbs 197b 197d.

197b    ⟨*stdver_Coeffs y_zxbs* 197b⟩≡                                                                  (263)
```
y_zxbs  23      -0.0001994456999380124,-7.214041996312615e-05,-7.99329702758048e-05,2.211360307
```
Defines:
    y_zxbs, used in chunk 197.

197c    ⟨*pfverEqs zxbs* 197c⟩≡
```
zxbs: zxbs - zxbs_aerr = _
            y_zxbs(1) * d( log(xbo), 0, 1 ) _
          + y_zxbs(2) * d( log(xbo(1)), 0, 1 ) _
          + y_zxbs(3) * d( log(xbo(2)), 0, 1 ) _
          + y_zxbs(4) * zxbs(1) _
          + y_zxbs(5) * zxbs(2) _
          + y_zxbs(6) * zxbs(3)
```

Defines:
    zxbs, used in chunk 26d.
Uses xbo 50e and y_zxbs 197b 197d.

197d    ⟨*pfver_Coeffs y_zxbs* 197d⟩≡
```
y_zxbs  6       0.05036892209181758,-0.02593059010019546,-0.01546281010316031,1.446435342067598
```
Defines:
    y_zxbs, used in chunk 197.

### 2.12.30   z2.29 ZDIVGR: Expected growth rate of real dividends, for WPSN eq. (MCE exp.)

197e    ⟨*variable ZDIVGR* 197e⟩≡                                                                       (221)
```
ZDIVGR   = Expected growth rate of real dividends, for WPSN eq.
```
Defines:
    ZDIVGR, used in chunk 233.
Uses WPSN 153b.

198a    ⟨*stdverEqs zdivgr* 198a⟩≡                                                    (254)
```
zdivgr: zdivgr-zdivgr_aerr = y_zdivgr(1) _
         + ( y_zdivgr(2) *  picnia +  y_zdivgr(3) *  picnia(-1) +  y_zdivgr(4) *  p
         + ( y_zdivgr(6) *  rffe +  y_zdivgr(7) *  rffe(-1) +  y_zdivgr(8) *  rffe(
         + y_zdivgr(10) * rtr _
         + y_zdivgr(11) * ptr _
         + ( y_zdivgr(12) *  xgap +  y_zdivgr(13) *  xgap(-1) +  y_zdivgr(14) *  xg
         + ( y_zdivgr(16) *  (400*d( log((ynicpn-tfcin-tscin)*.5/(.01*pxg)), 0, 1 )
         + y_zdivgr(20) * hgx
```

Defines:
  zdivgr, used in chunks 153c and 198c.
Uses hgx 59e, picnia 88f, ptr 168d, pxg 108b, rffe 144e, rtr 169d, tfcin 131a, tscin 136f,
  xgap 59a, y_zdivgr 198b 198d, and ynicpn 77b.

198b    ⟨*stdver_Coeffs y_zdivgr* 198b⟩≡                                              (263)
```
y_zdivgr          20        1.511071172206618e-15,-0.009111480239164081,0.03183741780107
```
Defines:
  y_zdivgr, used in chunk 198.

198c    ⟨*pfverEqs zdivgr* 198c⟩≡
```
zdivgr: zdivgr - zdivgr_aerr = y_zdivgr(1) * hgynid(1) _
                    + y_zdivgr(2) * zdivgr(1)
```

Uses hgynid 202f, y_zdivgr 198b 198d, and zdivgr 198a.

198d    ⟨*pfver_Coeffs y_zdivgr* 198d⟩≡
```
y_zdivgr           2         0.009757264257434617,0.9902427357425654
```
Defines:
  y_zdivgr, used in chunk 198.

## 2.12.31    z2.30 ZYNID: Expected rate of growth of target real dividends, for YNIDN eq. (MCE exp.)

198e    ⟨*variable ZYNID* 198e⟩≡                                                      (221)
```
ZYNID    = Expected rate of growth of target real dividends, for YNIDN eq.
```
Defines:
  ZYNID, used in chunk 233.
Uses YNIDN 76d.

199a      ⟨*stdverEqs zynid* 199a⟩≡                                                                            (254)
```
zynid: zynid - zynid_aerr = y_zynid(1) _
                     + ( y_zynid(2) *  picnia(-1) + y_zynid(3) *  picnia(-2) + y_zynid(4) *  p
                     + ( y_zynid(6) *  rffe(-1) + y_zynid(7) *  rffe(-2) + y_zynid(8) *  rffe(
                     + y_zynid(10) * rtr(-1) _
                     + y_zynid(11) * ptr(-1) _
                     + ( y_zynid(12) *  xgap(-1) + y_zynid(13) * xgap(-2) + y_zynid(14) *  xg
                     + ( y_zynid(16) *  d( log(qynidn(-1)/pxb(-1)), 0, 1 ) + y_zynid(17) *  d(
                     + y_zynid(20) * (hggdpt(-1)/400)
```

Defines:
    zynid, used in chunk 76e.
Uses hggdpt 60d, picnia 88f, ptr 168d, pxb 108d, qynidn 76b, rffe 144e, rtr 169d, xgap 59a,
    and y_zynid 199b 199d.

199b      ⟨*stdver_Coeffs y_zynid* 199b⟩≡                                                                     (263)
```
    y_zynid 20        -5.177745029596233e-16,3.507527558415562e-05,0.0004354171509883335,0.0003765833
```
Defines:
    y_zynid, used in chunk 199.

199c      ⟨*pfverEqs zynid* 199c⟩≡
```
zynid: zynid - zynid_aerr = _
            y_zynid(1) * d( log((qynidn / pxg)), 0, 1 ) _
          + y_zynid(2) * d( log(qynidn(1) / pxg(1)), 0, 1 ) _
          + y_zynid(3) * zynid(1) _
          + y_zynid(4) * zynid(2)
```

Defines:
    zynid, used in chunk 76e.
Uses pxg 108b, qynidn 76b, and y_zynid 199b 199d.

199d      ⟨*pfver_Coeffs y_zynid* 199d⟩≡
```
    y_zynid 4         0.1117530633602278,0.01463967001459732,0.7577779500862103,0.131000167462143
```
Defines:
    y_zynid, used in chunk 199.

## 2.12.32  z2.31 ZYH: Expected level of real after-tax household income, for QEC eq. (MCE exp.)

199e      ⟨*variable ZYH* 199e⟩≡                                                                              (221)
```
    ZYH       = Expected level of real after-tax household income, for QEC eq.
```
Defines:
    ZYH, used in chunk 233.
Uses QEC 19d.

200a    ⟨*stdverEqs zyh* 200a⟩≡                                                     (254)
```
zyh: log(zyh) - zyh_aerr =  ( y_zyh(1) *  picnia +  y_zyh(2) *  picnia(-1) +  y_zyh(3
                         + ( y_zyh(5) *  rffe +  y_zyh(6) *  rffe(-1) +  y_zyh(7) *  rffe
                         + ( y_zyh(9) *  xgap2 +  y_zyh(10) *  xgap2(-1) +  y_zyh(11) *
                         + y_zyh(13) * ptr _
                         + y_zyh(14) * rtr _
                         + ( y_zyh(15) *  yhgap +  y_zyh(16) *  yhgap(-1) +  y_zyh(17) *
                         + log(zyhst*xgdpt)
```

Defines:
    zyh, used in chunk 19e.
Uses picnia 88f, ptr 168d, rffe 144e, rtr 169d, xgap2 59c, xgdpt 55c, y_zyh 200b 200d,
    yhgap 80b, and zyhst 167a.

200b    ⟨*stdver_Coeffs y_zyh* 200b⟩≡                                               (263)
```
y_zyh   18      -0.0002301813961999326,0.0007292083597749006,0.0006217471253906824,0.
```
Defines:
    y_zyh, used in chunk 200.

200c    ⟨*pfverEqs zyh* 200c⟩≡
```
zyh: zyh - zyh_aerr = (1 - (y_zyh(1)^.25)*exp(y_zyh(2))) * yh _
                  + (y_zyh(1)^.25) * zyh(1)
```

Defines:
    zyh, used in chunk 19e.
Uses y_zyh 200b 200d and yh 79f.

200d    ⟨*pfver_Coeffs y_zyh* 200d⟩≡
```
y_zyh   2       0.750,0.0075
```
Defines:
    y_zyh, used in chunk 200.

### 2.12.33  z2.32 ZYHP: Expected level of real after-tax property income, for QEC eq. (MCE exp.)

200e    ⟨*variable ZYHP* 200e⟩≡                                                    (221)
```
ZYHP    = Expected level of real after-tax property income, for QEC eq.
```
Defines:
    ZYHP, used in chunk 233.
Uses QEC 19d.

201a        ⟨*stdverEqs zyhp* 201a⟩≡                                                    (254)
```
zyhp: log(zyhp) - zyhp_aerr = ( y_zyhp(1) *  picnia +  y_zyhp(2) *  picnia(-1) + y_zyhp(3) *
                        + ( y_zyhp(5) *  rffe +  y_zyhp(6) *  rffe(-1) +  y_zyhp(7) *  rffe(-2)
                        + ( y_zyhp(9) *  xgap2 +  y_zyhp(10) *  xgap2(-1) + y_zyhp(11) *  xgap2
                        + y_zyhp(13) * ptr _
                        + y_zyhp(14) * rtr _
                        + ( y_zyhp(15) *  yhgap +  y_zyhp(16) *  yhgap(-1) + y_zyhp(17) *  yhga
                        + ( y_zyhp(19) *  yhpgap +  y_zyhp(20) *  yhpgap(-1) + y_zyhp(21) *  yh
                        + log(zyhpst*zyhst*xgdpt)
```

Defines:
    zyhp, used in chunk 19e.
Uses picnia 88f, ptr 168d, rffe 144e, rtr 169d, xgap2 59c, xgdpt 55c, y_zyhp 201b 201d,
    yhgap 80b, yhpgap 82d, zyhpst 167d, and zyhst 167a.

201b        ⟨*stdver_Coeffs y_zyhp* 201b⟩≡                                              (263)
```
y_zyhp   22        0.000384467702497963,0.001205361597423436,0.0009620980096161766,0.0006968834502
```
Defines:
    y_zyhp, used in chunk 201.

201c        ⟨*pfverEqs zyhp* 201c⟩≡
```
zyhp: zyhp - zyhp_aerr = (1 - (y_zyhp(1)^.25)*exp(y_zyhp(2))) * yhp _
                    + (y_zyhp(1)^.25) * zyhp(1)
```

Defines:
    zyhp, used in chunk 19e.
Uses y_zyhp 201b 201d and yhp 82b.

201d        ⟨*pfver_Coeffs y_zyhp* 201d⟩≡
```
y_zyhp   2        0.750,0.0075
```
Defines:
    y_zyhp, used in chunk 201.

## 2.12.34   z2.33 ZYHT: Expected level of real transfer income, for QEC eq. (MCE exp.)

201e        ⟨*variable ZYHT* 201e⟩≡                                                     (221)
```
ZYHT     = Expected level of real transfer income, for QEC eq.
```
Defines:
    ZYHT, used in chunk 233.
Uses QEC 19d.

202a    ⟨*stdverEqs zyht* 202a⟩≡                                                    (254)
```
zyht: log(zyht) - zyht_aerr  =  ( y_zyht(1) *  picnia +  y_zyht(2) *  picnia(-1) +  y
                   + ( y_zyht(5) *  rffe +  y_zyht(6) *  rffe(-1) +  y_zyht(7) *
                   + ( y_zyht(9) *  xgap2 +  y_zyht(10) *  xgap2(-1) +  y_zyht(1
                   + y_zyht(13) * ptr _
                   + y_zyht(14) * rtr _
                   + ( y_zyht(15) *  yhgap +  y_zyht(16) *  yhgap(-1) +  y_zyht(
                   + ( y_zyht(19) *  yhtgap +  y_zyht(20) *  yhtgap(-1) +  y_zyh
                   + log(zyhtst*zyhst*xgdpt)
```

Defines:
    zyht, used in chunk 19e.
Uses picnia 88f, ptr 168d, rffe 144e, rtr 169d, xgap2 59c, xgdpt 55c, y_zyht 202b 202d,
    yhgap 80b, yhtgap 85b, zyhst 167a, and zyhtst 168a.

202b    ⟨*stdver_Coeffs y_zyht* 202b⟩≡                                              (263)
```
y_zyht  22        -0.0005375756842287296,0.0004256398977551294,0.000429593178783961,0.0
```
Defines:
    y_zyht, used in chunk 202.

202c    ⟨*pfverEqs zyht* 202c⟩≡
```
zyht: zyht - zyht_aerr = (1 - (y_zyht(1)^.25)*exp(y_zyht(2))) * yht _
                   + (y_zyht(1)^.25) * zyht(1)
```

Defines:
    zyht, used in chunk 19e.
Uses y_zyht 202b 202d and yht 84f.

202d    ⟨*pfver_Coeffs y_zyht* 202d⟩≡
```
y_zyht  2         0.750,0.0075
```
Defines:
    y_zyht, used in chunk 202.

### 2.12.35   z2.37 HGYNID: Growth rate of real after-tax corporate profits

202e    ⟨*variable HGYNID* 202e⟩≡                                                   (221)
```
HGYNID   = Growth rate of real after-tax corporate profits
```
Defines:
    HGYNID, used in chunk 233.

202f    ⟨*stdverEqs hgynid* 202f⟩≡                                                  (254)
```
hgynid: hgynid - hgynid_aerr = 400*d( log((ynicpn-tfcin-tscin)*.5/pxg), 0, 1 )
```

Defines:
    hgynid, used in chunk 198c.
Uses pxg 108b, tfcin 131a, tscin 136f, and ynicpn 77b.

# Appendices

# Appendix A

# Exogenous Variables

205a    ⟨*variable D01Q4* 205a⟩≡                                                    (221)
```
D01Q4    = Dummy, destruction of World Trade Center
```
Defines:
  D01Q4, used in chunk 233.
  d01q4, used in chunk 26d.

205b    ⟨*variable D2002* 205b⟩≡                                                    (221)
```
D2002    = Dummy,
```
Defines:
  D2002, used in chunk 233.
  d2002, used in chunk 38a.

205c    ⟨*variable D2003* 205c⟩≡                                                    (221)
```
D2003    = Dummy,
```
Defines:
  D2003, used in chunk 233.
  d2003, used in chunk 38a.

205d    ⟨*variable D69* 205d⟩≡                                                      (221)
```
D69      = Dummy, post-1968 indicator
```
Defines:
  D69, used in chunk 233.
  d69, used in chunk 37a.

205e    ⟨*variable D79A* 205e⟩≡                                                     (221)
```
D79A     = Dummy, post-1979 indicator
```
Defines:
  d78a, never used.
  D79A, used in chunk 233.

205f    ⟨*variable D8095* 205f⟩≡                                                    (221)
```
D8095    = Dummy, 1980-1995 indicator
```
Defines:
  D8095, used in chunk 233.
  d8095, used in chunks 148a and 149b.

206a     ⟨*variable D81* 206a⟩≡                                                    (221)
         D81      = Dummy, post-1980 indicator
         Defines:
           D81, used in chunk 233.
           d81, used in chunks 37a and 38a.

206b     ⟨*variable D83* 206b⟩≡                                                    (221)
         D83      = Dummy, post-1983 indicator
         Defines:
           D83, used in chunk 233.
           d83, used in chunk 18e.

206c     ⟨*variable D86* 206c⟩≡                                                    (221)
         D86      = Dummy, post-1985 indicator
         Defines:
           D86, used in chunk 233.
           d86, used in chunk 37a.

206d     ⟨*variable D87* 206d⟩≡                                                    (221)
         D87      = Dummy, post-1986 indicator
         Defines:
           D87, used in chunk 233.
           d87, used in chunks 38a and 152a.

206e     ⟨*variable DCON* 206e⟩≡                                                   (221)
         DCON     = Dummy, 0 prior to 1986, 1 after 1988, with a linear trend in between
         Defines:
           DCON, used in chunk 233.
           dcon, used in chunk 19e.

206f     ⟨*variable DDOCKM* 206f⟩≡                                                 (221)
         DDOCKM   = Dock strike dummy, import equation
         Defines:
           DDOCKM, used in chunk 233.
           ddockm, used in chunk 40b.

206g     ⟨*variable DDOCKX* 206g⟩≡                                                 (221)
         DDOCKX   = Dock strike dummy, export equation
         Defines:
           DDOCKX, used in chunk 233.
           ddockx, used in chunk 39c.

206h     ⟨*variable DEUC* 206h⟩≡                                                   (221)
         DEUC     = EUC switch:  1 for including EUC, 0 for not including
         Defines:
           DEUC, used in chunk 233.
           deuc, used in chunk 139e.

206i     ⟨*variable DFMPRR* 206i⟩≡                                                 (221)
         DFMPRR   = Dummy, Foreign monetary policy switch:  Exogenous real interest rate
         Defines:
           DFMPRR, used in chunk 233.
           dfmprr, used in chunk 162a.

207a        ⟨*variable DFPDBT* 207a⟩≡                                                    (221)
       `DFPDBT   = Fiscal policy switch:  1 for debt ratio stabilization`
Defines:
    DFPDBT, used in chunk 233.
    dfpdbt, used in chunks 133d and 135e.

207b        ⟨*variable DFPEX* 207b⟩≡                                                     (221)
       `DFPEX    = Fiscal policy switch:  1 for exogenous personal income trend tax rates`
Defines:
    DFPEX, used in chunk 233.
    dfpex, used in chunks 133d and 135e.

207c        ⟨*variable DFPSRP* 207c⟩≡                                                    (221)
       `DFPSRP   = Fiscal policy switch:  1 for surplus ratio stabilization`
Defines:
    DFPSRP, used in chunk 233.
    dfpsrp, used in chunks 133d and 135e.

207d        ⟨*variable DGLPRD* 207d⟩≡                                                    (221)
       `DGLPRD   = Switch to control for long-run productivity growth in the government sector`
Defines:
    DGLPRD, used in chunk 233.
    dglprd, used in chunks 29d, 58e, 63, and 107.

207e        ⟨*variable DMPALT* 207e⟩≡                                                    (221)
       `DMPALT   = Monetary policy switch: MA rule`
Defines:
    DMPALT, used in chunk 233.
    dmpalt, used in chunk 142d.

207f        ⟨*variable DMPEX* 207f⟩≡                                                     (221)
       `DMPEX    = Monetary policy switch:  exogenous federal funds rate`
Defines:
    DMPEX, used in chunk 233.
    dmpex, used in chunk 142d.

207g        ⟨*variable DMPGEN* 207g⟩≡                                                    (221)
       `DMPGEN   = Monetary policy switch:  Generalized reaction function`
Defines:
    DMPGEN, used in chunk 233.
    dmpgen, used in chunk 142d.

207h        ⟨*variable DMPINTAY* 207h⟩≡                                                  (221)
       `DMPINTAY = Monetary policy switch:  inertial taylor rule`
Defines:
    DMPINTAY, used in chunk 233.
    dmpintay, used in chunk 142d.

207i        ⟨*variable DMPRR* 207i⟩≡                                                     (221)
       `DMPRR    = Monetary policy switch:  exogenous real federal funds rate`
Defines:
    DMPRR, used in chunk 233.
    dmprr, used in chunk 142d.

208a      ⟨*variable DMPSTB* 208a⟩≡                                                                    (221)
          DMPSTB   = Stabilization  switch:  0 for standard applications, 1 for stochastic simu

Defines:
    DMPSTB, used in chunk 233.
    dmpstb, used in chunk 68d.

208b      ⟨*variable DMPTAY* 208b⟩≡                                                                    (221)
          DMPTAY   = Monetary policy switch:  Taylor's reaction function

Defines:
    DMPTAY, used in chunk 233.
    dmptay, used in chunk 142d.

208c      ⟨*variable DMPTLR* 208c⟩≡                                                                    (221)
          DMPTLR   = Monetary policy switch:  Taylor's reaction function with unemployment gap

Defines:
    DMPTLR, used in chunk 233.
    dmptlr, used in chunk 142d.

208d      ⟨*variable DMPTRSH* 208d⟩≡                                                                   (221)
          DMPTRSH  = Monetary policy threshold switch:  0 for no threshold,  1 for threshold

Defines:
    DMPTRSH, used in chunk 233.
    dmptrsh, used in chunk 144e.

208e      ⟨*variable DRSTAR* 208e⟩≡                                                                    (221)
          DRSTAR   = RSTAR updating switch: 1 is on, 0 is off

Defines:
    DRSTAR, used in chunk 233.
    drstar, used in chunk 142a.
Uses RSTAR 141e.

208f      ⟨*variable FPITRG* 208f⟩≡                                                                    (221)
          FPITRG   = Foreign target consumer price inflation (G10)

Defines:
    FPITRG, used in chunk 233.
    fpitrg, used in chunks 159e and 162a.

208g      ⟨*variable FPXRRT* 208g⟩≡                                                                    (221)
          FPXRRT   = Real exchange rate residual, trend

Defines:
    FPXRRT, used in chunk 233.
    fpxrrt, used in chunk 164a.

208h      ⟨*variable GFDRT* 208h⟩≡                                                                     (221)
          GFDRT    = Federal government target debt-to-GDP ratio

Defines:
    GFDRT, used in chunk 233.
    gfdrt, used in chunk 133d.

209a        $\langle variable\ GFSRT\ 209a \rangle \equiv$                                                    (221)
            GFSRT     = Federal government target surplus-to-GDP ratio
            Defines:
              GFSRT, used in chunk 233.
              gfsrt, used in chunk 133d.

209b        $\langle variable\ GFTRT\ 209b \rangle \equiv$                                                    (221)
            GFTRT     = Federal government, trend ratio of transfer payments to GDP
            Defines:
              GFTRT, used in chunk 233.
              gftrt, used in chunk 126f.

209c        $\langle variable\ GSDRT\ 209c \rangle \equiv$                                                    (221)
            GSDRT     = S&L government target debt-to-GDP ratio
            Defines:
              GSDRT, used in chunk 233.
              gsdrt, used in chunk 135e.

209d        $\langle variable\ GSSRT\ 209d \rangle \equiv$                                                    (221)
            GSSRT     = State and local government, target surplus-to-GDP ratio
            Defines:
              GSSRT, used in chunk 233.
              gssrt, used in chunk 135e.

209e        $\langle variable\ GSTRT\ 209e \rangle \equiv$                                                    (221)
            GSTRT     = S&L government, trend ratio of transfer payments to GDP
            Defines:
              GSTRT, used in chunk 233.
              gstrt, used in chunk 129f.

209f        $\langle variable\ HGPCDR\ 209f \rangle \equiv$                                                   (221)
            HGPCDR    = Trend growth rate of price of consumer durable goods (relative to PCNIA)
            Defines:
              HGPCDR, used in chunk 233.
              hgpcdr, used in chunks 20e and 184c.
            Uses PCNIA 89a.

209g        $\langle variable\ HKSR\ 209g \rangle \equiv$                                                     (221)
            HKSR      = Residual growth of capital services
            Defines:
              HKSR, used in chunk 233.
              hksr, used in chunk 31a.

209h        $\langle variable\ JRCD\ 209h \rangle \equiv$                                                     (221)
            JRCD      = Depreciation rate, consumer durables
            Defines:
              JRCD, used in chunk 233.
              jrcd, used in chunks 20e and 22–24.

210a     ⟨*variable JRH* 210a⟩≡                                                                (221)
      `JRH       = Depreciation rate, housing`
    Defines:
      `JRH`, used in chunk 233.
      `jrh`, used in chunks 21a, 23, and 72.

210b     ⟨*variable JRPD* 210b⟩≡                                                               (221)
      `JRPD      = Depreciation rate, equipment`
    Defines:
      `JRPD`, used in chunk 233.
      `jrpd`, used in chunks 28a, 29g, 32a, and 72c.

210c     ⟨*variable JRPI* 210c⟩≡                                                               (221)
      `JRPI      = Depreciation rate, intellectual property`
    Defines:
      `JRPI`, used in chunk 233.
      `jrpi`, used in chunks 29a, 30b, and 32c.

210d     ⟨*variable JRPS* 210d⟩≡                                                               (221)
      `JRPS      = Depreciation rate, nonresidential structures`
    Defines:
      `JRPS`, used in chunk 233.
      `jrps`, used in chunks 28d, 30d, 32e, and 72c.

210e     ⟨*variable LEUC* 210e⟩≡                                                               (221)
      `LEUC      = Emergency unemployment compensation (EUC)`
    Defines:
      `LEUC`, used in chunk 233.
      `leuc`, used in chunk 139e.

210f     ⟨*variable LQUALT* 210f⟩≡                                                             (221)
      `LQUALT    = Labor quality, trend level`
    Defines:
      `LQUALT`, used in chunk 233.
      `lqualt`, used in chunks 52c and 59e.

210g     ⟨*variable LURTRSH* 210g⟩≡                                                            (221)
      `LURTRSH   = Unemployment threshold`
    Defines:
      `LURTRSH`, used in chunk 233.
      `lurtrsh`, used in chunk 143b.

210h     ⟨*variable N16* 210h⟩≡                                                                (221)
      `N16       = Noninstitutional population, aged 16 and over (break adjusted)`
    Defines:
      `N16`, used in chunk 233.
      `n16`, used in chunks 65–68.

210i     ⟨*variable PCFRT* 210i⟩≡                                                              (221)
      `PCFRT     = Real PCE price of food, trend`
    Defines:
      `PCFRT`, used in chunk 233.
      `pcfrt`, used in chunks 104a and 105b.

211a      ⟨*variable PCSTAR* 211a⟩≡                                           (221)
```
PCSTAR    = Target consumption price level (used in RFFGEN policy rule)
```
Defines:
    PCSTAR, used in chunk 233.
    pcstar, used in chunk 141c.
Uses RFFGEN 141b.

211b      ⟨*variable PITARG* 211b⟩≡                                        (221)
```
PITARG    = Target rate of consumption price inflation (used in policy reaction functions)
```
Defines:
    PITARG, used in chunk 233.
    pitarg, used in chunks 139–41 and 168d.

211c      ⟨*variable PITRSH* 211c⟩≡                                        (221)
```
PITRSH    = Inflation threshold
```
Defines:
    PITRSH, used in chunk 233.
    pitrsh, used in chunk 143e.

211d      ⟨*variable PKIR* 211d⟩≡                                         (221)
```
PKIR      = Price index for stock of inventories, cw (relative to PXP)
```
Defines:
    PKIR, used in chunks 109e and 233.
    pkir, used in chunks 33b, 36d, 49a, and 109f.
Uses PXP 93a.

211e      ⟨*variable PLMINR* 211e⟩≡                                        (221)
```
PLMINR    = Ratio of hourly minimum wage to compensation per hour (times 100)
```
Defines:
    PLMINR, used in chunk 233.
    plminr, used in chunk 99b.

211f      ⟨*variable POILRT* 211f⟩≡                                        (221)
```
POILRT    = Price of imported oil, relative to price index for bus. sector output, trend
```
Defines:
    POILRT, used in chunk 233.
    poilrt, used in chunk 101a.

211g      ⟨*variable QLEOR* 211g⟩≡                                         (221)
```
QLEOR     = Desired ratio of employment discrepancy to the labor force
```
Defines:
    QLEOR, used in chunk 233.
    qleor, used in chunks 62d and 68.

211h      ⟨*variable RFFFIX* 211h⟩≡                                        (221)
```
RFFFIX    = Federal funds rate given by fixed, pre-determined funds rate path
```
Defines:
    RFFFIX, used in chunk 233.
    rfffix, used in chunk 142d.

212a      ⟨*variable RFFMIN* 212a⟩≡                                                    (221)
    RFFMIN   = Minimum nominal funds rate (set at 0 to impose zero lower bound)

Defines:
  RFFMIN, used in chunk 233.
  rffmin, used in chunks 142d and 144e.

212b      ⟨*variable RFNICT* 212b⟩≡                                                    (221)
    RFNICT   = Residual in FNICN equation

Defines:
  RFNICT, used in chunk 233.
  rfnict, used in chunk 45c.
Uses FNICN 45b.

212c      ⟨*variable RFRS10* 212c⟩≡                                                    (221)
    RFRS10   = Real foreign short-term interest rate

Defines:
  RFRS10, used in chunk 233.
  rfrs10, used in chunk 162a.

212d      ⟨*variable RRFIX* 212d⟩≡                                                     (221)
    RRFIX    = Real federal funds rate given by fixed, pre-determined real funds rate pat

Defines:
  RRFIX, used in chunk 233.
  rrfix, used in chunk 142d.

212e      ⟨*variable T47* 212e⟩≡                                                       (221)
    T47      = Time trend, begins in 1947q1 (0 before)

Defines:
  T47, used in chunk 233.
  t47, used in chunks 104d, 105b, and 151d.

212f      ⟨*variable TAPDAD* 212f⟩≡                                                    (221)
    TAPDAD   = Proportion of investment in equipment using accelerated depreciation

Defines:
  TAPDAD, used in chunk 233.
  tapdad, used in chunk 38a.

212g      ⟨*variable TAPDDP* 212g⟩≡                                                    (221)
    TAPDDP   = Proportion of investment tax credit deducted from depr. base

Defines:
  TAPDDP, used in chunk 233.
  tapddp, used in chunk 32a.

212h      ⟨*variable TAPDS* 212h⟩≡                                                     (221)
    TAPDS    = Tax service life of equipment

Defines:
  TAPDS, used in chunk 233.
  tapds, used in chunk 38a.

213a  ⟨*variable TAPDT* 213a⟩≡ (221)
  TAPDT  = Investment tax credit rate for equipment
Defines:
 TAPDT, used in chunk 233.
 tapdt, used in chunks 32a and 132c.

213b  ⟨*variable TAPSAD* 213b⟩≡ (221)
  TAPSAD  = Proportion of investment in nonresidential structures using accelerated depreciation
Defines:
 TAPSAD, used in chunk 233.
 tapsad, used in chunk 37a.

213c  ⟨*variable TAPSSL* 213c⟩≡ (221)
  TAPSSL  = Tax service life of nonresidential structures
Defines:
 TAPSSL, used in chunk 233.
 tapssl, used in chunk 37a.

213d  ⟨*variable TFDIV* 213d⟩≡ (221)
  TFDIV  = Federal income receipts on assets, dividends, current $
Defines:
 TFDIV, used in chunk 233.
 Tfdiv, never used.

213e  ⟨*variable TRFCIM* 213e⟩≡ (221)
  TRFCIM  = Marginal federal corporate income tax rate
Defines:
 TRFCIM, used in chunk 233.
 trfcim, used in chunks 31, 32, and 132c.

213f  ⟨*variable TRFIB* 213f⟩≡ (221)
  TRFIB  = Average federal indirect business tax rate
Defines:
 TRFIB, used in chunk 233.
 trfib, used in chunk 131c.

213g  ⟨*variable TRFPM* 213g⟩≡ (221)
  TRFPM  = Marginal federal personal income tax rate (at twice median family income)
Defines:
 TRFPM, used in chunk 233.
 trfpm, used in chunk 23e.

213h  ⟨*variable TRFPTX* 213h⟩≡ (221)
  TRFPTX  = Average federal tax rate for personal income tax, trend, policy setting
Defines:
 TRFPTX, used in chunk 233.
 trfptx, used in chunk 133d.

213i  ⟨*variable TRFSI* 213i⟩≡ (221)
  TRFSI  = Average federal social insurance tax rate
Defines:
 TRFSI, used in chunk 233.
 trfsi, used in chunk 132a.

214a        ⟨*variable TRSCIT* 214a⟩≡                                                      (221)
            TRSCIT   = Average S&L corporate income tax rate, trend
            Defines:
               TRSCIT, used in chunk 233.
               trscit, used in chunk 134b.

214b        ⟨*variable TRSIBT* 214b⟩≡                                                      (221)
            TRSIBT   = Average S&L indirect business tax rate, trend
            Defines:
               TRSIBT, used in chunk 233.
               trsibt, used in chunk 134e.

214c        ⟨*variable TRSPP* 214c⟩≡                                                       (221)
            TRSPP    = Marginal S&L tax rate on personal property
            Defines:
               TRSPP, used in chunk 233.
               trspp, used in chunk 23e.

214d        ⟨*variable TRSPTX* 214d⟩≡                                                      (221)
            TRSPTX   = Average state and local tax rate for personal income, trend
            Defines:
               TRSPTX, used in chunk 233.
               trsptx, used in chunk 135e.

214e        ⟨*variable TRSSIT* 214e⟩≡                                                      (221)
            TRSSIT   = Average S&L social insurance tax rate, trend
            Defines:
               TRSSIT, used in chunk 233.
               trssit, used in chunk 136c.

214f        ⟨*variable UEMOT* 214f⟩≡                                                       (221)
            UEMOT    = Trend in ratio of EMON to XGDEN
            Defines:
               UEMOT, used in chunk 233.
               uemot, used in chunk 40b.
            Uses EMON 40d and XGDEN 70f.

214g        ⟨*variable UEMP* 214g⟩≡                                                        (221)
            UEMP     = Multiplicative factor in EMP identity
            Defines:
               UEMP, used in chunk 233.
               uemp, used in chunk 41e.
            Uses EMP 41d.

214h        ⟨*variable UFCBR* 214h⟩≡                                                       (221)
            UFCBR    = Multiplicative factor in FCBRN identity
            Defines:
               UFCBR, used in chunk 233.
               ufcbr, used in chunk 43c.
            Uses FCBRN 43b.

215a        ⟨*variable UFNIR* 215a⟩≡                                                                          (221)
            ```
            UFNIR    = Multiplicative factor in FNIRN identity
            ```
            Defines:
              UFNIR, used in chunk 233.
              ufnir, used in chunk 47e.
            Uses FNIRN 47d.

215b        ⟨*variable UFPCM* 215b⟩≡                                                                         (221)
            ```
            UFPCM    = Multiplicative factor in FPCM identity
            ```
            Defines:
              UFPCM, used in chunk 233.
              ufpcm, used in chunk 161d.
            Uses FPCM 161c.

215c        ⟨*variable UFPXM* 215c⟩≡                                                                         (221)
            ```
            UFPXM    = Multiplicative factor in FPXM identity
            ```
            Defines:
              UFPXM, used in chunk 233.
              ufpxm, used in chunk 164f.
            Uses FPXM 164e.

215d        ⟨*variable UFTCIN* 215d⟩≡                                                                        (221)
            ```
            UFTCIN   = Multiplicative factor in FTCIN identity
            ```
            Defines:
              UFTCIN, used in chunk 233.
              uftcin, used in chunk 44b.
            Uses FTCIN 44a.

215e        ⟨*variable UGFDBT* 215e⟩≡                                                                        (221)
            ```
            UGFDBT   = Multiplicative factor in GFDBTN identity
            ```
            Defines:
              UGFDBT, used in chunk 233.
              ugfdbt, used in chunk 124a.
            Uses GFDBTN 123f.

215f        ⟨*variable UGSDBT* 215f⟩≡                                                                        (221)
            ```
            UGSDBT   = Multiplicative factor in GSDBTN identity
            ```
            Defines:
              UGSDBT, used in chunk 233.
              ugsdbt, used in chunk 128a.
            Uses GSDBTN 127f.

215g        ⟨*variable UGSINT* 215g⟩≡                                                                        (221)
            ```
            UGSINT   = Multiplicative factor in GSINTN identity
            ```
            Defines:
              UGSINT, used in chunk 233.
              ugsint, used in chunk 128c.
            Uses GSINTN 128b.

216a     ⟨*variable UGSSUB* 216a⟩≡                                                          (221)
         UGSSUB    = Multiplicative factor in GSSUB identity
         Defines:
           UGSSUB, used in chunk 233.
           ugssub, used in chunk 130e.
         Uses GSSUB 130d.

216b     ⟨*variable UJCCA* 216b⟩≡                                                           (221)
         UJCCA     = Multiplicative factor in JCCAN identity
         Defines:
           UJCCA, used in chunk 233.
           ujcca, used in chunk 72c.
         Uses JCCAN 72b.

216c     ⟨*variable UJCCAC* 216c⟩≡                                                          (221)
         UJCCAC    = Multiplicative factor in JCCACN identity
         Defines:
           UJCCAC, used in chunk 233.
           ujccac, used in chunk 72a.
         Uses JCCACN 71f.

216d     ⟨*variable UJYGFE* 216d⟩≡                                                          (221)
         UJYGFE    = Multiplicative factor in JYGFEN identity
         Defines:
           UJYGFE, used in chunk 233.
           ujygfe, used in chunk 72e.
         Uses JYGFEN 72d.

216e     ⟨*variable UJYGFG* 216e⟩≡                                                          (221)
         UJYGFG    = Multiplicative factor in JYGFGN identity
         Defines:
           UJYGFG, used in chunk 233.
           ujygfg, used in chunk 73b.
         Uses JYGFGN 73a.

216f     ⟨*variable UJYGSE* 216f⟩≡                                                          (221)
         UJYGSE    = Multiplicative factor in JYGSEN identity
         Defines:
           UJYGSE, used in chunk 233.
           ujygse, used in chunk 73d.
         Uses JYGSEN 73c.

216g     ⟨*variable UJYGSG* 216g⟩≡                                                          (221)
         UJYGSG    = Multiplicative factor in JYGSGN identity
         Defines:
           UJYGSG, used in chunk 233.
           ujygsg, used in chunk 73f.
         Uses JYGSGN 73e.

217a   $\langle variable\ ULEF\ 217a\rangle\equiv$                                                    (221)
       `ULEF    = Multiplicative factor in LEF identity`

Defines:
   `ULEF`, used in chunk 233.
   `ulef`, used in chunk 63a.
Uses `LEF` 62f.

217b   $\langle variable\ ULES\ 217b\rangle\equiv$                                                   (221)
       `ULES    = Multiplicative factor in LES identity`

Defines:
   `ULES`, used in chunk 233.
   `ules`, used in chunk 63c.
Uses `LES` 63b.

217c   $\langle variable\ UPCPI\ 217c\rangle\equiv$                                                  (221)
       `UPCPI   = Multiplicative factor in PCPI identity`

Defines:
   `UPCPI`, used in chunk 233.
   `upcpi`, used in chunk 89d.
Uses `PCPI` 89c.

217d   $\langle variable\ UPCPIX\ 217d\rangle\equiv$                                                 (221)
       `UPCPIX   = Multiplicative factor in PCPIX identity`

Defines:
   `UPCPIX`, used in chunk 233.
   `upcpix`, used in chunk 89f.
Uses `PCPIX` 89e.

217e   $\langle variable\ UPGFL\ 217e\rangle\equiv$                                                  (221)
       `UPGFL    = Multiplicative factor in PGFL identity`

Defines:
   `UPGFL`, used in chunk 233.
   `upgfl`, used in chunk 107a.
Uses `PGFL` 106g.

217f   $\langle variable\ UPGSL\ 217f\rangle\equiv$                                                  (221)
       `UPGSL    = Multiplicative factor in PGSL identity`

Defines:
   `UPGSL`, used in chunk 233.
   `upgsl`, used in chunk 107c.
Uses `PGSL` 107b.

217g   $\langle variable\ UPKPD\ 217g\rangle\equiv$                                                  (221)
       `UPKPD    = Multiplicative factor in PKPDR identity`

Defines:
   `UPKPD`, used in chunk 233.
   `upkpd`, used in chunk 107e.
Uses `PKPDR` 107d.

218a       $\langle variable\ UPMP\ 218a\rangle\equiv$                                                                   (221)
```
UPMP    = Multiplicative factor in PMP identity
```
Defines:
   UPMP, used in chunk 233.
   upmp, used in chunk 102b.
Uses PMP 102a.


218b       $\langle variable\ UPXB\ 218b\rangle\equiv$                                                                   (221)
```
UPXB    = Multiplicative factor in PXB    identity
```
Defines:
   UPXB, used in chunk 233.
   upxb, used in chunk 108d.
Uses PXB 108c.


218c       $\langle variable\ UVEOA\ 218c\rangle\equiv$                                                                  (221)
```
UVEOA   = Multiplicative factor in VEOA identity
```
Defines:
   UVEOA, used in chunk 233.
   uveoa, used in chunk 54a.
Uses VEOA 53g.


218d       $\langle variable\ UVPD\ 218d\rangle\equiv$                                                                   (221)
```
UVPD    = Multiplicative factor in VPD identity
```
Defines:
   UVPD, used in chunk 233.
   uvpd, used in chunk 33d.
Uses VPD 33c.


218e       $\langle variable\ UVPI\ 218e\rangle\equiv$                                                                   (221)
```
UVPI    = Multiplicative factor in VPI identity
```
Defines:
   UVPI, used in chunk 233.
   uvpi, used in chunk 33f.
Uses VPI 33e.


218f       $\langle variable\ UVPS\ 218f\rangle\equiv$                                                                   (221)
```
UVPS    = Multiplicative factor in VPS identity
```
Defines:
   UVPS, used in chunk 233.
   uvps, used in chunk 34b.
Uses VPS 34a.


218g       $\langle variable\ UXENG\ 218g\rangle\equiv$                                                                  (221)
```
UXENG   = Multiplicative factor in XENG identity
```
Defines:
   UXENG, used in chunk 233.
   uxeng, used in chunk 55e.
Uses XENG 55d.

219a       $\langle variable\ UYD\ 219a\rangle \equiv$                                                          (221)
      `UYD       = Multiplicative factor in YDN identity`

Defines:
  UYD, used in chunk 233.
  uyd, used in chunk 77f.
Uses YDN 77e.

219b       $\langle variable\ UYHI\ 219b\rangle \equiv$                                                         (221)
      `UYHI      = Multiplicative factor in YHIN identity`

Defines:
  UYHI, used in chunk 233.
  uyhi, used in chunk 81b.
Uses YHIN 81a.

219c       $\langle variable\ UYHLN\ 219c\rangle \equiv$                                                        (221)
      `UYHLN     = Multiplicative factor in YHLN identity`

Defines:
  UYHLN, used in chunk 233.
  uyhln, used in chunk 81f.
Uses YHLN 81e.

219d       $\langle variable\ UYHPTN\ 219d\rangle \equiv$                                                       (221)
      `UYHPTN    = Multiplicative factor in YHPTN identity`

Defines:
  UYHPTN, used in chunk 233.
  uyhptn, used in chunk 83e.
Uses YHPTN 83d.

219e       $\langle variable\ UYHSN\ 219e\rangle \equiv$                                                        (221)
      `UYHSN     = Multiplicative factor in personal saving identity (accounts for transfers to foreign`

Defines:
  UYHSN, used in chunk 233.
  uyhsn, used in chunk 84d.

219f       $\langle variable\ UYHTN\ 219f\rangle \equiv$                                                        (221)
      `UYHTN     = Multiplicative factor in YHTN identity`

Defines:
  UYHTN, used in chunk 233.
  uyhtn, used in chunk 85d.
Uses YHTN 85c.

219g       $\langle variable\ UYL\ 219g\rangle \equiv$                                                          (221)
      `UYL       = Multiplicative factor in YLN identity`

Defines:
  UYL, used in chunk 233.
  uyl, used in chunk 74f.

219h       $\langle variable\ UYNI\ 219h\rangle \equiv$                                                         (221)
      `UYNI      = Multiplicative factor in YNIN identity`

Defines:
  UYNI, used in chunk 233.
  uyni, used in chunk 74d.
Uses YNIN 74c.

220a        $\langle variable\ UYNICP\ 220a\rangle \equiv$                                                                    (221)
```
UYNICP   = Multiplicative factor in YNICPN identity
```
Defines:
  UYNICP, used in chunk 233.
  uynicp, used in chunk 77b.
Uses YNICPN 77a.

220b        $\langle variable\ UYP\ 220b\rangle \equiv$                                                                       (221)
```
UYP      = Multiplicative factor in YPN identity
```
Defines:
  UYP, used in chunk 233.
  uyp, used in chunk 77d.
Uses YPN 77c.

220c        $\langle variable\ UYSEN\ 220c\rangle \equiv$                                                                     (221)
```
UYSEN    = Multiplicative factor in YSEN identity
```
Defines:
  UYSEN, used in chunk 233.
  uysen, used in chunk 75b.

220d        $\langle variable\ YMSDN\ 220d\rangle \equiv$                                                                     (221)
```
YMSDN    = Microsoft one-time dividend payout in 2004Q4
```
Defines:
  YMSDN, used in chunk 233.
  ymsdn, used in chunk 76e.

# Appendix B

# Original Files

The variables are listed in FRB/US dataset and variable listing (ZIP) (Updated database: March 17, 2016) as the *variables.txt* file and the model description in FRB/US model package (ZIP).

I'll produce the files so that they can be compared byte for byte to the originals; "variables.txt", "stdver_varinfo", "stdver_eqs.txt", and "stdver_coeffs.txt". Because of file name limitations with noweb, I've had to modify the file names that I create.

## B.1   List of Variables with the Data

221    ⟨*variables.txt* 221⟩≡
        ⟨*variable CENG* 41a⟩
        ⟨*variable D01Q4* 205a⟩
        ⟨*variable D2002* 205b⟩
        ⟨*variable D2003* 205c⟩
        ⟨*variable D69* 205d⟩
        ⟨*variable D79A* 205e⟩
        ⟨*variable D8095* 205f⟩
        ⟨*variable D81* 206a⟩
        ⟨*variable D83* 206b⟩
        ⟨*variable D86* 206c⟩
        ⟨*variable D87* 206d⟩
        ⟨*variable DCON* 206e⟩
        ⟨*variable DDOCKM* 206f⟩
        ⟨*variable DDOCKX* 206g⟩
        ⟨*variable DELRFF* 145b⟩
        ⟨*variable DEUC* 206h⟩
        ⟨*variable DFMPRR* 206i⟩
        ⟨*variable DFPDBT* 207a⟩
        ⟨*variable DFPEX* 207b⟩

⟨*variable EGSOT* 123c⟩
⟨*variable EH* 18d⟩
⟨*variable EHN* 22b⟩
⟨*variable EI* 27d⟩
⟨*variable EIN* 36c⟩
⟨*variable EM* 42d⟩
⟨*variable EMN* 42b⟩
⟨*variable EMO* 40a⟩
⟨*variable EMON* 40d⟩
⟨*variable EMP* 41d⟩
⟨*variable EMPN* 41f⟩
⟨*variable EMPT* 54c⟩
⟨*variable EPD* 25b⟩
⟨*variable EPDN* 35c⟩
⟨*variable EPI* 25e⟩
⟨*variable EPIN* 35e⟩
⟨*variable EPS* 26c⟩
⟨*variable EPSN* 36a⟩
⟨*variable EX* 39b⟩
⟨*variable EXN* 39e⟩
⟨*variable FCBN* 42f⟩
⟨*variable FCBRN* 43b⟩
⟨*variable FGDP* 158d⟩
⟨*variable FGDPT* 159a⟩
⟨*variable FNICN* 45b⟩
⟨*variable FNILN* 45d⟩
⟨*variable FNIN* 43d⟩
⟨*variable FNIRN* 47d⟩
⟨*variable FPC* 161a⟩
⟨*variable FPCM* 161c⟩
⟨*variable FPI10* 159d⟩
⟨*variable FPI10T* 160a⟩
⟨*variable FPIC* 160d⟩
⟨*variable FPITRG* 208f⟩
⟨*variable FPX* 164c⟩
⟨*variable FPXM* 164e⟩
⟨*variable FPXR* 163c⟩
⟨*variable FPXRR* 163f⟩
⟨*variable FPXRRT* 208g⟩
⟨*variable FRL10* 162f⟩
⟨*variable FRS10* 161e⟩
⟨*variable FRSTAR* 162c⟩
⟨*variable FTCIN* 44a⟩
⟨*variable FXGAP* 158a⟩
⟨*variable FYNICN* 45f⟩
⟨*variable FYNILN* 46b⟩

⟨*variable FYNIN* 44c⟩
⟨*variable GFDBTN* 123f⟩
⟨*variable GFDRT* 208h⟩
⟨*variable GFINTN* 124b⟩
⟨*variable GFS* 124d⟩
⟨*variable GFSN* 125a⟩
⟨*variable GFSRPN* 125c⟩
⟨*variable GFSRT* 209a⟩
⟨*variable GFSUB* 125e⟩
⟨*variable GFSUBN* 126c⟩
⟨*variable GFT* 126e⟩
⟨*variable GFTN* 127a⟩
⟨*variable GFTRD* 127c⟩
⟨*variable GFTRT* 209b⟩
⟨*variable GSDBTN* 127f⟩
⟨*variable GSDRT* 209c⟩
⟨*variable GSINTN* 128b⟩
⟨*variable GSSRPN* 128d⟩
⟨*variable GSSRT* 209d⟩
⟨*variable GSSUB* 130d⟩
⟨*variable GSSUBN* 129a⟩
⟨*variable GST* 129e⟩
⟨*variable GSTN* 129c⟩
⟨*variable GSTRD* 130a⟩
⟨*variable GSTRT* 209e⟩
⟨*variable HGEMP* 44e⟩
⟨*variable HGGDP* 49b⟩
⟨*variable HGGDPT* 60c⟩
⟨*variable HGPCDR* 209f⟩
⟨*variable HGPDR* 108e⟩
⟨*variable HGPIR* 109b⟩
⟨*variable HGPKIR* 109e⟩
⟨*variable HGPPSR* 110a⟩
⟨*variable HGVPD* 34c⟩
⟨*variable HGVPI* 38d⟩
⟨*variable HGVPS* 34f⟩
⟨*variable HGX* 59d⟩
⟨*variable HGYNID* 202e⟩
⟨*variable HKS* 30e⟩
⟨*variable HKSR* 209g⟩
⟨*variable HLEPT* 68c⟩
⟨*variable HLPRDT* 69b⟩
⟨*variable HMFPT* 52e⟩
⟨*variable HQLFPR* 64f⟩
⟨*variable HQLWW* 61d⟩
⟨*variable HUQPCT* 100c⟩

⟨*variable HUXB* 58d⟩
⟨*variable HXBT* 60a⟩
⟨*variable JCCACN* 71f⟩
⟨*variable JCCAN* 72b⟩
⟨*variable JKCD* 23f⟩
⟨*variable JRCD* 209h⟩
⟨*variable JRH* 210a⟩
⟨*variable JRPD* 210b⟩
⟨*variable JRPI* 210c⟩
⟨*variable JRPS* 210d⟩
⟨*variable JYGFEN* 72d⟩
⟨*variable JYGFGN* 73a⟩
⟨*variable JYGSEN* 73c⟩
⟨*variable JYGSGN* 73e⟩
⟨*variable JYNCN* 74a⟩
⟨*variable KCD* 22d⟩
⟨*variable KH* 22f⟩
⟨*variable KI* 27a⟩
⟨*variable KPD* 29f⟩
⟨*variable KPI* 30a⟩
⟨*variable KPS* 30c⟩
⟨*variable KS* 31b⟩
⟨*variable LEF* 62f⟩
⟨*variable LEFT* 67a⟩
⟨*variable LEH* 63d⟩
⟨*variable LEO* 62c⟩
⟨*variable LEP* 62a⟩
⟨*variable LEPPOT* 68a⟩
⟨*variable LES* 63b⟩
⟨*variable LEST* 67d⟩
⟨*variable LEUC* 210e⟩
⟨*variable LF* 65c⟩
⟨*variable LFPR* 64a⟩
⟨*variable LHP* 56d⟩
⟨*variable LPRDT* 68e⟩
⟨*variable LQUALT* 210f⟩
⟨*variable LUR* 65e⟩
⟨*variable LURBLS* 66a⟩
⟨*variable LURNAT* 69d⟩
⟨*variable LURTRSH* 210g⟩
⟨*variable LWW* 57d⟩
⟨*variable MEI* 155b⟩
⟨*variable MEP* 156b⟩
⟨*variable MFPT* 53b⟩
⟨*variable N16* 210h⟩
⟨*variable PCDR* 112e⟩

⟨*variable PCENG* 102f⟩
⟨*variable PCENGR* 102c⟩
⟨*variable PCER* 103b⟩
⟨*variable PCFR* 103e⟩
⟨*variable PCFRT* 210i⟩
⟨*variable PCHR* 111d⟩
⟨*variable PCNIA* 89a⟩
⟨*variable PCOR* 111b⟩
⟨*variable PCPI* 89c⟩
⟨*variable PCPIX* 89e⟩
⟨*variable PCSTAR* 211a⟩
⟨*variable PCXFE* 101c⟩
⟨*variable PGDP* 106e⟩
⟨*variable PGFIR* 93c⟩
⟨*variable PGFL* 106g⟩
⟨*variable PGFOR* 93f⟩
⟨*variable PGSIR* 94c⟩
⟨*variable PGSL* 107b⟩
⟨*variable PGSOR* 94f⟩
⟨*variable PHOUSE* 154c⟩
⟨*variable PHR* 95c⟩
⟨*variable PIC4* 113b⟩
⟨*variable PICNGR* 110d⟩
⟨*variable PICNIA* 88e⟩
⟨*variable PICX4* 112c⟩
⟨*variable PICXFE* 87a⟩
⟨*variable PIECI* 87d⟩
⟨*variable PIGDP* 110f⟩
⟨*variable PIPL* 90a⟩
⟨*variable PIPXNC* 88b⟩
⟨*variable PITARG* 211b⟩
⟨*variable PITRSH* 211c⟩
⟨*variable PKIR* 211d⟩
⟨*variable PKPDR* 107d⟩
⟨*variable PL* 90c⟩
⟨*variable PLMIN* 99a⟩
⟨*variable PLMINR* 211e⟩
⟨*variable PMO* 105d⟩
⟨*variable PMP* 102a⟩
⟨*variable POIL* 101e⟩
⟨*variable POILR* 100f⟩
⟨*variable POILRT* 211f⟩
⟨*variable PPDR* 95f⟩
⟨*variable PPIR* 96b⟩
⟨*variable PPSR* 96d⟩
⟨*variable PTR* 168c⟩

⟨*variable PWSTAR* 91a⟩
⟨*variable PXB* 108c⟩
⟨*variable PXG* 108a⟩
⟨*variable PXNC* 90e⟩
⟨*variable PXP* 93a⟩
⟨*variable PXR* 97a⟩
⟨*variable QEC* 19d⟩
⟨*variable QECD* 20d⟩
⟨*variable QECO* 20a⟩
⟨*variable QEH* 20g⟩
⟨*variable QEPD* 27f⟩
⟨*variable QEPI* 28f⟩
⟨*variable QEPS* 28c⟩
⟨*variable QKIR* 29c⟩
⟨*variable QLEOR* 211g⟩
⟨*variable QLEP* 66c⟩
⟨*variable QLF* 66e⟩
⟨*variable QLFPR* 64d⟩
⟨*variable QLHP* 57b⟩
⟨*variable QLWW* 61b⟩
⟨*variable QPCNIA* 92e⟩
⟨*variable QPL* 91g⟩
⟨*variable QPMO* 106b⟩
⟨*variable QPXG* 91d⟩
⟨*variable QPXNC* 99c⟩
⟨*variable QPXP* 92c⟩
⟨*variable QYNIDN* 76a⟩
⟨*variable RBBB* 151a⟩
⟨*variable RBBBE* 150e⟩
⟨*variable RBBBP* 150b⟩
⟨*variable RCAR* 151c⟩
⟨*variable RCCD* 23b⟩
⟨*variable RCCH* 23d⟩
⟨*variable RCGAIN* 153f⟩
⟨*variable REQ* 152f⟩
⟨*variable REQP* 152c⟩
⟨*variable RFF* 144f⟩
⟨*variable RFFALT* 140d⟩
⟨*variable RFFE* 144d⟩
⟨*variable RFFFIX* 211h⟩
⟨*variable RFFGEN* 141b⟩
⟨*variable RFFINTAY* 140a⟩
⟨*variable RFFMIN* 212a⟩
⟨*variable RFFRULE* 142c⟩
⟨*variable RFFTAY* 139a⟩
⟨*variable RFFTLR* 139d⟩

⟨*variable TRFIB* 213f⟩
⟨*variable TRFP* 132e⟩
⟨*variable TRFPM* 213g⟩
⟨*variable TRFPT* 133c⟩
⟨*variable TRFPTX* 213h⟩
⟨*variable TRFSI* 213i⟩
⟨*variable TRSCI* 134a⟩
⟨*variable TRSCIT* 214a⟩
⟨*variable TRSIB* 134d⟩
⟨*variable TRSIBT* 214b⟩
⟨*variable TRSP* 135a⟩
⟨*variable TRSPP* 214c⟩
⟨*variable TRSPT* 135d⟩
⟨*variable TRSPTX* 214d⟩
⟨*variable TRSSI* 136b⟩
⟨*variable TRSSIT* 214e⟩
⟨*variable TRYH* 138e⟩
⟨*variable TSCIN* 136e⟩
⟨*variable TSIBN* 137a⟩
⟨*variable TSPN* 137c⟩
⟨*variable TSSIN* 137e⟩
⟨*variable UCES* 104c⟩
⟨*variable UCFS* 105a⟩
⟨*variable UEMOT* 214f⟩
⟨*variable UEMP* 214g⟩
⟨*variable UFCBR* 214h⟩
⟨*variable UFNIR* 215a⟩
⟨*variable UFPCM* 215b⟩
⟨*variable UFPXM* 215c⟩
⟨*variable UFTCIN* 215d⟩
⟨*variable UGFDBT* 215e⟩
⟨*variable UGSDBT* 215f⟩
⟨*variable UGSINT* 215g⟩
⟨*variable UGSSUB* 216a⟩
⟨*variable UJCCA* 216b⟩
⟨*variable UJCCAC* 216c⟩
⟨*variable UJYGFE* 216d⟩
⟨*variable UJYGFG* 216e⟩
⟨*variable UJYGSE* 216f⟩
⟨*variable UJYGSG* 216g⟩
⟨*variable ULEF* 217a⟩
⟨*variable ULES* 217b⟩
⟨*variable UPCPI* 217c⟩
⟨*variable UPCPIX* 217d⟩
⟨*variable UPGFL* 217e⟩
⟨*variable UPGSL* 217f⟩

⟨*variable UPKPD* 217g⟩
⟨*variable UPMP* 218a⟩
⟨*variable UPXB* 218b⟩
⟨*variable UQPCT* 99f⟩
⟨*variable UVEOA* 218c⟩
⟨*variable UVPD* 218d⟩
⟨*variable UVPI* 218e⟩
⟨*variable UVPS* 218f⟩
⟨*variable UXBT* 58a⟩
⟨*variable UXENG* 218g⟩
⟨*variable UYD* 219a⟩
⟨*variable UYHI* 219b⟩
⟨*variable UYHLN* 219c⟩
⟨*variable UYHPTN* 219d⟩
⟨*variable UYHSN* 219e⟩
⟨*variable UYHTN* 219f⟩
⟨*variable UYL* 219g⟩
⟨*variable UYNI* 219h⟩
⟨*variable UYNICP* 220a⟩
⟨*variable UYP* 220b⟩
⟨*variable UYSEN* 220c⟩
⟨*variable VEO* 53e⟩
⟨*variable VEOA* 53g⟩
⟨*variable VPD* 33c⟩
⟨*variable VPI* 33e⟩
⟨*variable VPS* 34a⟩
⟨*variable WDNFCN* 86a⟩
⟨*variable WPO* 155e⟩
⟨*variable WPON* 154f⟩
⟨*variable WPS* 153d⟩
⟨*variable WPSN* 153b⟩
⟨*variable XB* 51b⟩
⟨*variable XBN* 71b⟩
⟨*variable XBO* 50d⟩
⟨*variable XBT* 54f⟩
⟨*variable XENG* 55d⟩
⟨*variable XFS* 48a⟩
⟨*variable XFSN* 70d⟩
⟨*variable XG* 51d⟩
⟨*variable XGAP* 58g⟩
⟨*variable XGAP2* 59b⟩
⟨*variable XGDE* 49d⟩
⟨*variable XGDEN* 70f⟩
⟨*variable XGDI* 55f⟩
⟨*variable XGDIN* 86d⟩
⟨*variable XGDO* 56b⟩

⟨*variable XGDP* 48c⟩
⟨*variable XGDPN* 70b⟩
⟨*variable XGDPT* 55b⟩
⟨*variable XGDPTN* 60e⟩
⟨*variable XGN* 71d⟩
⟨*variable XGO* 50a⟩
⟨*variable XGPOT* 52b⟩
⟨*variable XP* 50g⟩
⟨*variable XPN* 69f⟩
⟨*variable YCSN* 78c⟩
⟨*variable YDN* 77e⟩
⟨*variable YGFSN* 138a⟩
⟨*variable YGSSN* 138c⟩
⟨*variable YH* 79e⟩
⟨*variable YHGAP* 80a⟩
⟨*variable YHIBN* 80c⟩
⟨*variable YHIN* 81a⟩
⟨*variable YHL* 81c⟩
⟨*variable YHLN* 81e⟩
⟨*variable YHP* 82a⟩
⟨*variable YHPCD* 24d⟩
⟨*variable YHPGAP* 82c⟩
⟨*variable YHPNTN* 82e⟩
⟨*variable YHPSHR* 83b⟩
⟨*variable YHPTN* 83d⟩
⟨*variable YHSHR* 84a⟩
⟨*variable YHSN* 84c⟩
⟨*variable YHT* 84e⟩
⟨*variable YHTGAP* 85a⟩
⟨*variable YHTN* 85c⟩
⟨*variable YHTSHR* 85e⟩
⟨*variable YKIN* 78e⟩
⟨*variable YKPDN* 79a⟩
⟨*variable YKPSN* 79c⟩
⟨*variable YMSDN* 220d⟩
⟨*variable YNICPN* 77a⟩
⟨*variable YNIDN* 76d⟩
⟨*variable YNIIN* 75c⟩
⟨*variable YNILN* 74e⟩
⟨*variable YNIN* 74c⟩
⟨*variable YNISEN* 75a⟩
⟨*variable YPN* 77c⟩
⟨*variable ZDIVGR* 197e⟩
⟨*variable ZECD* 184b⟩
⟨*variable ZECO* 183a⟩
⟨*variable ZEH* 186a⟩

⟨*variable ZGAP05* 172e⟩
⟨*variable ZGAP10* 173e⟩
⟨*variable ZGAP30* 174e⟩
⟨*variable ZGAPC2* 185b⟩
⟨*variable ZLHP* 187a⟩
⟨*variable ZPI10* 177e⟩
⟨*variable ZPI10F* 178e⟩
⟨*variable ZPI5* 175e⟩
⟨*variable ZPIB5* 176e⟩
⟨*variable ZPIC30* 179c⟩
⟨*variable ZPIC58* 180b⟩
⟨*variable ZPICXFE* 180f⟩
⟨*variable ZPIECI* 181d⟩
⟨*variable ZRFF10* 170e⟩
⟨*variable ZRFF30* 171e⟩
⟨*variable ZRFF5* 169e⟩
⟨*variable ZVPD* 190d⟩
⟨*variable ZVPI* 192e⟩
⟨*variable ZVPS* 193e⟩
⟨*variable ZXBD* 194e⟩
⟨*variable ZXBI* 195e⟩
⟨*variable ZXBS* 196e⟩
⟨*variable ZYH* 199e⟩
⟨*variable ZYHP* 200e⟩
⟨*variable ZYHPST* 167c⟩
⟨*variable ZYHST* 166⟩
⟨*variable ZYHT* 201e⟩
⟨*variable ZYHTST* 167f⟩
⟨*variable ZYNID* 198e⟩

This code is written to file `variables.txt`.

## B.2   Standard Version Variable Information File

233      ⟨*stdver.varinfo* 233⟩≡

```
 1 CENG     = Consumption of crude energy (oil, coal, natural gas),  2009 $
 2 D01Q4    = Dummy, destruction of World Trade Center
 3 D2002    = Dummy,
 4 D2003    = Dummy,
 5 D69      = Dummy, post-1968 indicator
 6 D79A     = Dummy, post-1979 indicator
 7 D8095    = Dummy, 1980-1995 indicator
 8 D81      = Dummy, post-1980 indicator
 9 D83      = Dummy, post-1983 indicator
10 D86      = Dummy, post-1985 indicator
11 D87      = Dummy, post-1986 indicator
12 DCON     = Dummy, 0 prior to 1986, 1 after 1988, with a linear trend in between
13 DDOCKM   = Dock strike dummy, import equation
14 DDOCKX   = Dock strike dummy, export equation
15 DELRFF   = Federal funds rate, first diff
16 DEUC     = EUC switch:  1 for including EUC, 0 for not including
17 DFMPRR   = Dummy, Foreign monetary policy switch:  Exogenous real interest rate
18 DFPDBT   = Fiscal policy switch:  1 for debt ratio stabilization
19 DFPEX    = Fiscal policy switch:  1 for exogenous personal income trend tax rates
20 DFPSRP   = Fiscal policy switch:  1 for surplus ratio stabilization
21 DGLPRD   = Switch to control for long-run productivity growth in the government sector
22 DMPALT   = Monetary policy switch: MA rule
23 DMPEX    = Monetary policy switch:  exogenous federal funds rate
24 DMPGEN   = Monetary policy switch:  Generalized reaction function
25 DMPINTAY = Monetary policy switch:  inertial taylor rule
26 DMPRR    = Monetary policy switch:  exogenous real federal funds rate
27 DMPSTB   = Stabilization  switch:  0 for standard applications, 1 for stochastic simulation
28 DMPTAY   = Monetary policy switch:  Taylor's reaction function
29 DMPTLR   = Monetary policy switch:  Taylor's reaction function with unemployment gap
30 DMPTLUR  = Monetary policy indicator for unemployment threshold
31 DMPTMAX  = Monetary policy indicator for both thresholds
32 DMPTPI   = Monetary policy indicator for inflation threshold
33 DMPTR    = Monetary policy indicator for policy rule thresholds
34 DMPTRSH  = Monetary policy threshold switch:  0 for no threshold,  1 for threshold
35 DPADJ    = Price inflation aggregation adjustment
36 DPGAP    = Price inflation aggregation discrepancy
37 DRSTAR   = RSTAR updating switch: 1 is on, 0 is off
38 EC       = Consumption, cw 2009$ (FRB/US definition)
39 ECD      = Consumer expenditures on durable goods, cw 2009$
40 ECH      = Consumer expenditures on housing services, cw 2009$
41 ECNIA    = Personal consumption expenditures, cw 2009$ (NIPA definition)
42 ECNIAN   = Personal consumption expenditures, current $ (NIPA definition)
43 ECO      = Consumer expenditures on non-durable goods and non-housing services, cw 2009$
```

```
44 EGF      = Federal government consumption and gross investment, cw 2009$
45 EGFI     = Federal government gross investment, cw 2009$
46 EGFIN    = Federal government gross investment, current $
47 EGFIT    = Federal government gross investment, cw 2009$, trend
48 EGFL     = Federal government employee compensation, cw 2009$
49 EGFLN    = Federal government employee compensation, current $
50 EGFLT    = Federal government employee compensation, cw 2009$, trend
51 EGFN     = Federal government consumption and gross investment, current $
52 EGFO     = Federal government consumption ex. employee comp., cw 2009$
53 EGFON    = Federal government consumption ex. employee comp., current $
54 EGFOT    = Federal government consumption ex. employee comp., cw 2009$, trend
55 EGPDIN   = Gross private domestic investment
56 EGS      = S&L government consumption and gross investment, cw 2009$
57 EGSI     = S&L government gross investment, cw 2009$
58 EGSIN    = S&L government gross investment, current $
59 EGSIT    = S&L government gross investment, cw 2009$, trend
60 EGSL     = S&L government employee compensation, cw 2009$
61 EGSLN    = S&L government employee compensation, current $
62 EGSLT    = S&L government employee compensation, cw 2009$, trend
63 EGSN     = S&L government consumption and gross investment, current $
64 EGSO     = S&L government consumption ex. employee comp., cw 2009$
65 EGSON    = S&L government consumption ex. employee comp., current $
66 EGSOT    = S&L government consumption ex. employee comp., cw 2009$, trend
67 EH       = Residential investment expenditures, cw 2009$
68 EHN      = Residential investment expenditures
69 EI       = Change in private inventories, cw 2009$
70 EIN      = Change in business inventories, current $
71 EM       = Imports of goods and services, cw 2009$
72 EMN      = Imports of goods and services, current $
73 EMO      = Imports of goods and services ex. petroleum, cw 2009$
74 EMON     = Imports of goods and services ex. petroleum
75 EMP      = Petroleum imports, cw 2009$
76 EMPN     = Petroleum imports, current $
77 EMPT     = Petroleum imports trend, cw 2009$
78 EPD      = Investment in equipment, cw 2009$
79 EPDN     = Investment in equipment, current $
80 EPI      = Investment in intellectual property, cw 2009$
81 EPIN     = Investment in intellectual property, current $
82 EPS      = Investment in nonresidential structures, cw 2009$
83 EPSN     = Investment in nonresidential structures, current $
84 EX       = Exports of goods and services, cw 2009 $
85 EXN      = Exports of goods and services, current $
86 FCBN     = US current account balance, current $
87 FCBRN    = US current account balance residual, current $
88 FGDP     = Foreign aggregate GDP (world, bilateral export weights)
89 FGDPT    = Foreign aggregate GDP (world, bilateral export weights), trend
```

```
 90 FNICN   = Gross stock of claims of US residents on the rest of the world, current $
 91 FNILN   = Gross stock of liabilities of US residents to the rest of the world, current $
 92 FNIN    = Net stock of claims of US residents on the rest of the world, current $
 93 FNIRN   = Net stock of claims of US residents on the rest of the world, residual
 94 FPC     = Foreign aggregate consumer price (G39, import/export trade weights)
 95 FPCM    = Foreign aggregate consumer price (G39, bilateral non-oil import trade weights)
 96 FPI10   = Foreign consumer price inflation (G10)
 97 FPI10T  = Foreign consumer price inflation, trend (G10)
 98 FPIC    = Foreign consumer price inflation (G39, bilateral export trade weights)
 99 FPITRG  = Foreign target consumer price inflation (G10)
100 FPX     = Nominal exchange rate (G39, import/export trade weights)
101 FPXM    = Nominal exchange rate (G39, bilateral import trade weights)
102 FPXR    = Real exchange rate (G39, import/export trade weights)
103 FPXRR   = Real exchange rate residual
104 FPXRRT  = Real exchange rate residual, trend
105 FRL10   = Foreign long-term interest rate (G10)
106 FRS10   = Foreign short-term interest rate (G10)
107 FRSTAR  = Equilibrium real short-term interest rate used in foreign Taylor rule
108 FTCIN   = Corporate taxes paid to rest of world, current $
109 FXGAP   = Foreign output gap (world, bilateral export weights)
110 FYNICN  = Gross investment income received from the rest of the world, current $
111 FYNILN  = Gross investment income paid to the rest of the world, current $
112 FYNIN   = Net investment income received from the rest of the world, current $
113 GFDBTN  = Federal government debt stock, current $
114 GFDRT   = Federal government target debt-to-GDP ratio
115 GFINTN  = Federal government net interest payments, current $
116 GFS     = Federal government grants-in-aid to S&L government, deflated by PGDP
117 GFSN    = Federal government grants-in-aid to S&L government, current $
118 GFSRPN  = Federal government budget surplus, current $
119 GFSRT   = Federal government target surplus-to-GDP ratio
120 GFSUB   = Federal government subsidies less surplus, deflated by PGDP
121 GFSUBN  = Federal government subsidies less surplus, current $
122 GFT     = Federal government net transfer payments, deflated by PGDP
123 GFTN    = Federal government net transfer payments, current $
124 GFTRD   = Deviation of ratio of federal transfers to GDP from trend ratio
125 GFTRT   = Federal government, trend ratio of transfer payments to GDP
126 GSDBTN  = S&L government debt stock, current $
127 GSDRT   = S&L government target debt-to-GDP ratio
128 GSINTN  = S&L government net interest payments, current $
129 GSSRPN  = S&L government budget surplus, current $
130 GSSRT   = State and local government, target surplus-to-GDP ratio
131 GSSUB   = S&L government subsidies less surplus, deflated by PGDP
132 GSSUBN  = S&L government subsidies less surplus, current $
133 GST     = S&L government net transfer payments, deflated by PGDP
134 GSTN    = S&L government net transfer payments, current $
135 GSTRD   = Deviation of ratio of S&L transfers to GDP from trend ratio
```

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136 GSTRT    = S&L government, trend ratio of transfer payments to GDP
137 HGEMP    = Petroleum imports, cw 2009$, trend growth rate
138 HGGDP    = Growth rate of GDP, cw 2009$ (annual rate)
139 HGGDPT   = Trend growth rate of XGDP, cw 2009$ (annual rate)
140 HGPCDR   = Trend growth rate of price of consumer durable goods (relative to PCN)
141 HGPDR    = Trend Price Growth of PPDR
142 HGPIR    = Trend Price Growth of PPIR
143 HGPKIR   = Trend growth rate of PKIR
144 HGPPSR   = Trend growth rate of PPSR
145 HGVPD    = Trend Growth of VPD
146 HGVPI    = Trend growth rate of VPI
147 HGVPS    = Trend growth rate of VPS
148 HGX      = Trend growth rate of XG, cw 2009$ (annual rate)
149 HGYNID   = Growth rate of real after-tax corporate profits
150 HKS      = Growth rate of KS, cw 2009$ (compound annual rate)
151 HKSR     = Residual growth of capital services
152 HLEPT    = Trend growth rate of LEP (annual rate)
153 HLPRDT   = Trend growth rate of output per hour
154 HMFPT    = Trend growth rate of multifactor productivity
155 HQLFPR   = Drift component of change in QLFPR
156 HQLWW    = Trend growth rate of workweek
157 HUQPCT   = Drift term in stochastic component of trend ratio of PCNIA to PXP
158 HUXB     = Drift term in UXBT
159 HXBT     = Trend rate of growth of XB  , cw 2009$ (annual rate)
160 JCCACN   = Consumption of fixed capital, corporate, current $
161 JCCAN    = Consumption of fixed capital, current $
162 JKCD     = Consumption of fixed capital, consumer durables
163 JRCD     = Depreciation rate, consumer durables
164 JRH      = Depreciation rate, housing
165 JRPD     = Depreciation rate, equipment
166 JRPI     = Depreciation rate, intellectual property
167 JRPS     = Depreciation rate, nonresidential structures
168 JYGFEN   = CFC, federal government enterprises, current $
169 JYGFGN   = CFC, federal government, general, current $
170 JYGSEN   = CFC, state and local government enterprises, current $
171 JYGSGN   = CFC, state and local government, general, current $
172 JYNCN    = Noncorporate business CFC, current $
173 KCD      = Stock of consumer durables, cw 2009$
174 KH       = Stock of residential structures, cw 2009$
175 KI       = Stock of private inventories, cw 2009$
176 KPD      = Capital stock - Equipment, 2009$
177 KPI      = Capital Stock - Intellectual Property, 2009$
178 KPS      = Capital stock - nonresidential structures, 2009$
179 KS       = Capital services, 2009 $
180 LEF      = Federal civilian employment ex. gov. enterprise
181 LEFT     = Federal civilian employment ex. gov. enterprise, trend
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182 LEH      = Civilian employment (break adjusted)
183 LEO      = Difference between household and business sector payroll employment, less gov't
184 LEP      = Employment in  business sector (employee and  self-employed)
185 LEPPOT   = Potential employment in  business sector
186 LES      = S&L government employment ex. gov. enterprise
187 LEST     = S&L government employment ex. gov. enterprise, trend
188 LEUC     = Emergency unemployment compensation (EUC)
189 LF       = Civilian labor force (break adjusted)
190 LFPR     = Labor force participation rate
191 LHP      = Aggregate labor hours,  business sector (employee and  self-employed)
192 LPRDT    = Trend labor productivity
193 LQUALT   = Labor quality, trend level
194 LUR      = Civilian unemployment rate (break adjusted)
195 LURBLS   = Civilian unemployment rate (published)
196 LURNAT   = Natural rate of unemployment
197 LURTRSH  = Unemployment threshold
198 LWW      = Workweek,  business sector (employee and self-employed)
199 MEI      = Multiplicative discrepancy for the difference between XGDI and XGDO
200 MEP      = Multiplicative discrepancy for the difference between XGDP and XGDO
201 MFPT     = Multifactor productivity, trend level
202 N16      = Noninstitutional population, aged 16 and over (break adjusted)
203 PCDR     = Price index for consumer durables, cw (relative to to PCNIA)
204 PCENG    = Price index for aggregate energy consumption
205 PCENGR   = Price index for aggregate energy consumption (relative to PXB  )
206 PCER     = Price index for personal consumption expenditures on energy (relative to PCXFE)
207 PCFR     = Price index for personal consumption expenditures on food (relative to PCXFE)
208 PCFRT    = Real PCE price of food, trend
209 PCHR     = Price index for housing services, cw (relative to to PCNIA)
210 PCNIA    = Price index for personal consumption expenditures, cw (NIPA definition)
211 PCOR     = Price index for non-durable goods and non-housing services, cw (relative to to P
212 PCPI     = Consumer price index,total
213 PCPIX    = Consumer price index,excluding food and energy
214 PCSTAR   = Target consumption price level (used in RFFGEN policy rule)
215 PCXFE    = Price index for personal consumption expendits ex. food and energy, cw (NIPA def
216 PGDP     = Price index for GDP, cw
217 PGFIR    = Price index for federal gov. investment, cw (relative to PXP)
218 PGFL     = Price index for federal government employee compensation, cw
219 PGFOR    = Price index for federal governemnt consumption ex. emp. comp., cw (relative to P
220 PGSIR    = Price index for S&L government investment (relative to PXP)
221 PGSL     = Price index for S&L government employee compensation, cw
222 PGSOR    = Price index for S&L government consumption ex. emp. comp., cw (relative to PXP)
223 PHOUSE   = Loan Performance House Price Index
224 PHR      = Price index for residential investment, cw (relative to PXP)
225 PIC4     = Four-quarter percent change in PCE prices
226 PICNGR   = Weighted growth rate of relative energy price
227 PICNIA   = Inflation rate, personal consumption expenditures, cw
```

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228 PICX4    = Four-quarter percent change core in PCE prices
229 PICXFE   = Inflation rate, personal consumption expenditures, ex. food and energy
230 PIECI    = Annualized rate of growth of EI hourly compensation
231 PIGDP    = Inflation rate, GDP, cw
232 PIPL     = Rate of growth of PL
233 PIPXNC   = Inflation rate, price of adjusted final sales excluding consumption (a
234 PITARG   = Target rate of consumption price inflation (used in policy reaction fu
235 PITRSH   = Inflation threshold
236 PKIR     = Price index for stock of inventories, cw (relative to PXP)
237 PKPDR    = Ratio of price of equipment stock (KPD) to PXP
238 PL       = Compensation per hour,  business
239 PLMIN    = Minimum wage
240 PLMINR   = Ratio of hourly minimum wage to compensation per hour (times 100)
241 PMO      = Price index for imports ex. petroleum, cw
242 PMP      = Price index for petroleum imports
243 POIL     = Price of imported oil ($ per barrel)
244 POILR    = Price of imported oil, relative to price index for bus. sector output
245 POILRT   = Price of imported oil, relative to price index for bus. sector output,
246 PPDR     = Price level of EPD compared to PXP
247 PPIR     = Price level of EPI compared to PXP
248 PPSR     = Price index for nonresidential structures, cw (relative to PXP)
249 PTR      = 10-year expected PCE price inflation (Survey of Professional Forecaste
250 PWSTAR   = Equilibrium NFB price markup
251 PXB      = Price index for NFB output
252 PXG      = Price index for  business output plus oil imports
253 PXNC     = Price of adjusted final sales excluding consumption
254 PXP      = Price index for final sales plus imports less gov. labor
255 PXR      = Price index for exports, cw (relative to PXP)
256 QEC      = Desired level of consumption (FRBUS definition)
257 QECD     = Target level of consumption of durable goods, trending component
258 QECO     = Desired level of consumption of nondurable goods and nonhousing servic
259 QEH      = Target level of residential investment
260 QEPD     = Desired level of investment in equipment
261 QEPI     = Desired level of investment in intellectual property
262 QEPS     = Desired level of investment in structures
263 QKIR     = Desired Inventory Sales Ratio
264 QLEOR    = Desired ratio of employment discrepancy to the labor force
265 QLEP     = Desired level of  business employment
266 QLF      = Desired level of civilian labor force
267 QLFPR    = Trend labor force participation rate
268 QLHP     = Desired level of  business labor hours
269 QLWW     = Trend workweek,  business sector (employee and  self-employed)
270 QPCNIA   = Desired level of consumption price
271 QPL      = Desired level of compensation per hour, trending component
272 QPMO     = Random walk component of non-oil import prices
273 QPXG     = Desired price level of private output ex. energy, housing, and farm
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274 QPXNC    = Desired level of nonconsumption price
275 QPXP     = Desired price level of adjusted final sales
276 QYNIDN   = Desired level of dividends
277 RBBB     = S&P BBB corporate bond rate
278 RBBBE    = S&P BBB corporate bond rate (effective ann. yield)
279 RBBBP    = S&P BBB corporate bond rate, risk/term premium
280 RCAR     = New car loan rate at finance companies
281 RCCD     = Cost of capital for consumer durables
282 RCCH     = Cost of capital for residential investment
283 RCGAIN   = Rate of capital gain on the non-equity portion of household wealth
284 REQ      = Real expected rate of return on equity
285 REQP     = Real expected rate of return on equity, premium component
286 RFF      = Federal funds rate
287 RFFALT   = Value of eff. federal funds rate given by estimated policy rule
288 RFFE     = Federal funds rate (effective ann. yield)
289 RFFFIX   = Federal funds rate given by fixed, pre-determined funds rate path
290 RFFGEN   = Value of eff. federal funds rate given by the generalized reaction function
291 RFFINTAY = Value of eff. federal funds rate given by the inertial Taylor rule
292 RFFMIN   = Minimum nominal funds rate (set at 0 to impose zero lower bound)
293 RFFRULE  = Federal funds rate (effective ann. yield)
294 RFFTAY   = Value of eff. federal funds rate given by the Taylor rule with output gap
295 RFFTLR   = Value of eff. federal funds rate given by the Taylor rule with unemployment gap
296 RFNICT   = Residual in FNICN equation
297 RFRS10   = Real foreign short-term interest rate
298 RFYNIC   = Average yield earned on gross claims of US residents on the rest of the world
299 RFYNIL   = Average yield earned on liabilities of US residents on the rest of the world
300 RG10     = 10-year Treasury bond rate
301 RG10E    = 10-year Treasury bond rate (effective ann. yield)
302 RG10P    = 10-year Treasury bond rate, term premium
303 RG30     = 30-year Treasury bond rate
304 RG30E    = 30-year Treasury bond rate (effective ann. yield)
305 RG30P    = 30-year Treasury bond rate, term premium
306 RG5      = 5-year Treasury note rate
307 RG5E     = 5-year Treasury note rate (effective ann. yield)
308 RG5P     = 5-year Treasury note rate. term premium
309 RGFINT   = Average rate of interest on existing federal debt
310 RGW      = Approximate average rate of interest on new federal debt
311 RME      = Interest rate on conventional mortgages (effective ann. yield)
312 RPD      = After-tax real financial cost of capital for business investment
313 RRFFE    = Real federal funds rate (effective ann. yield)
314 RRFIX    = Real federal funds rate given by fixed, pre-determined real funds rate path
315 RRMET    = Real mortgage rate, trend
316 RRTR     = Expected long-run real federal funds rate
317 RSPNIA   = Personal saving rate
318 RSTAR    = Equilibrium real federal funds rate (for monetary policy reaction functions)
319 RTB      = 3-month Treasury bill rate
```

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320 RTBE     = 3-month Treasury bill rate (effective ann. yield)
321 RTINV    = User cost of capital for inventories
322 RTPD     = User cost of capital for equipment
323 RTPI     = User cost of capital for intellectual property
324 RTPS     = User cost of capital for nonresidential structures
325 RTR      = Expected federal funds rate in the long run (Blue Chip)
326 T47      = Time trend, begins in 1947q1 (0 before)
327 TAPDAD   = Proportion of investment in equipment using accelerated depreciation
328 TAPDD    = Present value of depreciation allowances for equipment
329 TAPDDP   = Proportion of investment tax credit deducted from depr. base
330 TAPDS    = Tax service life of equipment
331 TAPDT    = Investment tax credit rate for equipment
332 TAPSAD   = Proportion of investment in nonresidential structures using accelerate
333 TAPSDA   = Present value of depreciation allowances for nonresidential structures
334 TAPSSL   = Tax service life of nonresidential structures
335 TFCIN    = Federal corporate income tax accruals, current $
336 TFDIV    = Federal income receipts on assets, dividends, current $
337 TFIBN    = Federal indirect business tax receipts, current $
338 TFPN     = Federal personal income tax and nontax receipts, current $
339 TFSIN    = Federal social insurance tax receipts
340 TRFCI    = Average federal corporate income tax rate
341 TRFCIM   = Marginal federal corporate income tax rate
342 TRFIB    = Average federal indirect business tax rate
343 TRFP     = Average federal tax rate for personal income tax and nontax receipts
344 TRFPM    = Marginal federal personal income tax rate (at twice median family inco
345 TRFPT    = Average federal tax rate for personal income tax, trend
346 TRFPTX   = Average federal tax rate for personal income tax, trend, policy settin
347 TRFSI    = Average federal social insurance tax rate
348 TRSCI    = Average S&L corporate income tax rate
349 TRSCIT   = Average S&L corporate income tax rate, trend
350 TRSIB    = Average S&L indirect business tax rate
351 TRSIBT   = Average S&L indirect business tax rate, trend
352 TRSP     = Average S&L tax rate for personal income tax and nontax receipts
353 TRSPP    = Marginal S&L tax rate on personal property
354 TRSPT    = Trend S&L personal income tax rate
355 TRSPTX   = Average state and local tax rate for personal income, trend
356 TRSSI    = Average S&L social insurance tax rate
357 TRSSIT   = Average S&L social insurance tax rate, trend
358 TRYH     = Average tax rate on household income
359 TSCIN    = S&L corporate income tax accruals, current $
360 TSIBN    = S&L indirect business tax receipts, current $
361 TSPN     = S&L personal income tax and nontax receipts, current $
362 TSSIN    = S&L social insurance tax receipts, current $
363 UCES     = Energy share of nominal consumption expenditures
364 UCFS     = Food share of nominal consumption expenditures
365 UEMOT    = Trend in ratio of EMON to XGDEN
```

```
366 UEMP     = Multiplicative factor in EMP identity
367 UFCBR    = Multiplicative factor in FCBRN identity
368 UFNIR    = Multiplicative factor in FNIRN identity
369 UFPCM    = Multiplicative factor in FPCM identity
370 UFPXM    = Multiplicative factor in FPXM identity
371 UFTCIN   = Multiplicative factor in FTCIN identity
372 UGFDBT   = Multiplicative factor in GFDBTN identity
373 UGSDBT   = Multiplicative factor in GSDBTN identity
374 UGSINT   = Multiplicative factor in GSINTN identity
375 UGSSUB   = Multiplicative factor in GSSUB identity
376 UJCCA    = Multiplicative factor in JCCAN identity
377 UJCCAC   = Multiplicative factor in JCCACN identity
378 UJYGFE   = Multiplicative factor in JYGFEN identity
379 UJYGFG   = Multiplicative factor in JYGFGN identity
380 UJYGSE   = Multiplicative factor in JYGSEN identity
381 UJYGSG   = Multiplicative factor in JYGSGN identity
382 ULEF     = Multiplicative factor in LEF identity
383 ULES     = Multiplicative factor in LES identity
384 UPCPI    = Multiplicative factor in PCPI identity
385 UPCPIX   = Multiplicative factor in PCPIX identity
386 UPGFL    = Multiplicative factor in PGFL identity
387 UPGSL    = Multiplicative factor in PGSL identity
388 UPKPD    = Multiplicative factor in PKPDR identity
389 UPMP     = Multiplicative factor in PMP identity
390 UPXB     = Multiplicative factor in PXB   identity
391 UQPCT    = Stochastic component of trend ratio of PCNIA to PXP
392 UVEOA    = Multiplicative factor in VEOA identity
393 UVPD     = Multiplicative factor in VPD identity
394 UVPI     = Multiplicative factor in VPI identity
395 UVPS     = Multiplicative factor in VPS identity
396 UXBT     = Stochastic component of trend ratio of XGDPT to XBT
397 UXENG    = Multiplicative factor in XENG identity
398 UYD      = Multiplicative factor in YDN identity
399 UYHI     = Multiplicative factor in YHIN identity
400 UYHLN    = Multiplicative factor in YHLN identity
401 UYHPTN   = Multiplicative factor in YHPTN identity
402 UYHSN    = Multiplicative factor in personal saving identity (accounts for transfers to for
403 UYHTN    = Multiplicative factor in YHTN identity
404 UYL      = Multiplicative factor in YLN identity
405 UYNI     = Multiplicative factor in YNIN identity
406 UYNICP   = Multiplicative factor in YNICPN identity
407 UYP      = Multiplicative factor in YPN identity
408 UYSEN    = Multiplicative factor in YSEN identity
409 VEO      = Desired energy-output ratio
410 VEOA     = Average energy-output ratio of existing capital stock
411 VPD      = Desired equipment-output ratio
```

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412 VPI      = Desired intellectual property-output ratio
413 VPS      = Desired structures-output ratio
414 WDNFCN   = Net financial liabilities, nonfinancial nonfarm corporations
415 WPO      = Household property wealth ex. stock market, real
416 WPON     = Household property wealth ex. stock market, current $
417 WPS      = Household stock market wealth, real
418 WPSN     = Household stock market wealth, current $
419 XB       = Business output (BEA definition), cw 2009$
420 XBN      = Business output (BEA definition), current $
421 XBO      = Business output, adjusted for measurement error, cw  2009$
422 XBT      = Potential business output, cw 2009$
423 XENG     = Crude energy production, cw 2009$
424 XFS      = Final sales of gross domestic product, cw 2009$
425 XFSN     = Final sales of gross domestic product, current $
426 XG       = Output of  business sector plus oil imports, cw 2009$
427 XGAP     = Output gap for  business plus oil imports  (100*log(actual/potential)
428 XGAP2    = Output gap for GDP (100*log(actual/potential)
429 XGDE     = Domestic absorption, cw 2009$
430 XGDEN    = Nominal Absorption, current $
431 XGDI     = Gross domestic income, cw 2009$
432 XGDIN    = Gross domestic income, current $
433 XGDO     = Gross domestic product, adjusted for measurement error, cw 2009$
434 XGDP     = GDP, cw 2009$
435 XGDPN    = GDP, current $
436 XGDPT    = Potential GDP, cw 2009$
437 XGDPTN   = Potential GDP, current $
438 XGN      = Output of  business sector plus oil imports, current $
439 XGO      = Output of business sector plus oil imports, adjusted for measurement e
440 XGPOT    = Potential output of  business sector plus oil imports,  cw 2009$
441 XP       = Final sales plus imports less government labor, cw 2009$
442 XPN      = Final sales plus imports less government labor, current $
443 YCSN     = Net corporate cash flow with IVA and CCA
444 YDN      = Disposable income
445 YGFSN    = Federal government saving
446 YGSSN    = State and Local government saving
447 YH       = Income, household, total (real after-tax)
448 YHGAP    = Income, household, total, ratio to XGDP, cyclical component (real afte
449 YHIBN    = Consumer interest payments to business
450 YHIN     = Income, household, net interest and rent
451 YHL      = Income, household, labor compensation (real after-tax)
452 YHLN     = Income, household, labor compensation
453 YHP      = Income, household, property (real after-tax)
454 YHPCD    = Imputed income of the stock of consumer durables, 2009$
455 YHPGAP   = Income, household, property, ratio to YH, cyclical component (real aft
456 YHPNTN   = Income, household, property, non-taxable component
457 YHPSHR   = Income, household, property, ratio to YH (real after-tax)
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458 YHPTN    = Income, household, property, taxable component
459 YHSHR    = Income, household, total, ratio to XGDP (real after-tax)
460 YHSN     = Personal saving
461 YHT      = Income, household, transfer (real after-tax), net basis
462 YHTGAP   = Income, household, transfer, ratio to YH, cyclical component (real after-tax)
463 YHTN     = Income, household, transfer payments. net basis
464 YHTSHR   = Income, household, transfer, ratio to YH (real after-tax)
465 YKIN     = Income from stock of inventories
466 YKPDN    = Income from stock of equipment
467 YKPSN    = Income from stock of nonresidential structures
468 YMSDN    = Microsoft one-time dividend payout in 2004Q4
469 YNICPN   = Corporate profits (national income component)
470 YNIDN    = Dividends (national income component)
471 YNIIN    = Net interest and rental income (national income component)
472 YNILN    = Labor income (national income component)
473 YNIN     = National income
474 YNISEN   = Propprietors' income (national income component)
475 YPN      = Personal income
476 ZDIVGR   = Expected growth rate of real dividends, for WPSN eq. (VAR exp.)
477 ZECD     = Expected growth rate of target durable consumption, for ECD eq. (VAR exp.)
478 ZECO     = Expected growth rate of target nondurables and nonhousing services, for ECO eq (
479 ZEH      = Expected growth rate of target residential investment, for EH eq. (VAR exp.)
480 ZGAP05   = Expected output gap, for RG5E eq. (VAR exp.)
481 ZGAP10   = Expected output gap, for RG10E eq. (VAR exp.)
482 ZGAP30   = Expected output gap, for RG30E eq. (VAR exp.)
483 ZGAPC2   = Expected output gap, for ECD eq. (VAR exp.)
484 ZLHP     = Expected growth rate of target aggregate hours (VAR exp.)
485 ZPI10    = Expected cons. price infl., for RCCH, RRMET, and YHPNTN eqs. (10-yr mat.) (VAR e
486 ZPI10F   = Expected cons. price infl., for FPXR eq. (10-yr mat.) (VAR exp.)
487 ZPI5     = Expected cons. price infl., for RCCD eq. (5-yr mat.) (VAR exp.)
488 ZPIB5    = Expected output price infl., for RPD eq. (5-yr mat.) (VAR exp.)
489 ZPIC30   = Expected cons. price infl., for REQ eq. (30-yr mat.) (VAR exp.)
490 ZPIC58   = Expected 4-qtr consumer price inflation (8 qtrs. in the future) (VAR exp.)
491 ZPICXFE  = Expected value of picxfe in the next quarter (VAR exp.)
492 ZPIECI   = Expected value of pieci in the next quarter (VAR exp.)
493 ZRFF10   = Expected federal funds rate, for RG10E eq. (10-yr mat.) (VAR exp.)
494 ZRFF30   = Expected federal funds rate, for RG30E eq. (30-yr mat.) (VAR exp.)
495 ZRFF5    = Expected federal funds rate, for RG5E eq. (5-yr mat.) (VAR exp.)
496 ZVPD     = Expected growth rate of capital-output ratio, for EPD (VAR exp.)
497 ZVPI     = Expected growth rate of capital-output ratio, for EPI (VAR exp.)
498 ZVPS     = Expected growth rate of des. capital-output ratio, for EPS eq. (VAR exp.)
499 ZXBD     = Expected growth rate of buisiness output for EPD (VAR exp.)
500 ZXBI     = Expected growth rate of business output, for EPI (VAR exp.)
501 ZXBS     = Expected growth rate of business output, for EPS (VAR exp.)
502 ZYH      = Expected level of real after-tax household income, for QEC eq. (VAR exp.)
503 ZYHP     = Expected level of real after-tax property income, for QEC eq. (VAR exp.)
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504 ZYHPST   = Expected trend share of property income in household income
505 ZYHST    = Expected trend ratio of household income to GDP
506 ZYHT     = Expected level of real transfer income, for QEC eq. (VAR exp.)
507 ZYHTST   = Expected trend share of transfer income in household income
508 ZYNID    = Expected rate of growth of target real dividends, for YNIDN eq. (VAR e
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This code is written to file `stdver.varinfo`.

Uses CENG 41a, D01Q4 205a, D2002 205b, D2003 205c, D69 205d, D79A 205e, D8095 205f, D81 206a, D83 206b, D86 206c, D87 206d, DCON 206e, DDOCKM 206f, DDOCKX 206g, DELRFF 145b, DEUC 206h, DFMPRR 206i, DFPDBT 207a, DFPEX 207b, DFPSRP 207c, DGLPRD 207d, DMPALT 207e, DMPEX 207f, DMPGEN 207g, DMPINTAY 207h, DMPRR 207i, DMPSTB 208a, DMPTAY 208b, DMPTLR 208c, DMPTLUR 143a, DMPTMAX 143g, DMPTPI 143d, DMPTR 144b, DMPTRSH 208d, DPADJ 98b, DPGAP 97d, DRSTAR 208e, EC 24b, ECD 18a, ECH 19a, ECNIA 21c, ECNIAN 21e, ECO 17a, EGF 113d, EGFI 114c, EGFIN 114f, EGFIT 115b, EGFL 115e, EGFLN 116c, EGFLT 116e, EGFN 114a, EGFO 117c, EGFON 118a, EGFOT 118c, EGPDIN 38b, EGS 118f, EGSI 119d, EGSIN 120b, EGSIT 120d, EGSL 121a, EGSLN 121d, EGSLT 121f, EGSN 119b, EGSO 122c, EGSON 123a, EGSOT 123c, EH 18d, EHN 22b, EI 27d, EIN 36c, EM 42d, EMN 42b, EMO 40a, EMON 40d, EMP 41d, emp 41e, EMPN 41f, EMPT 54c, EPD 25b, EPDN 35c, EPI 25e, EPIN 35e, EPS 26c, EPSN 36a, EX 39b, ex 39c, EXN 39e, FCBN 42f, FCBRN 43b, FGDP 158d, FGDPT 159a, FNICN 45b, FNILN 45d, FNIN 43d, FNIRN 47d, FPC 161a, FPCM 161c, FPI10 159d, FPI10T 160a, FPIC 160d, FPITRG 208f, FPX 164c, FPXM 164e, FPXR 163c, FPXRR 163f, FPXRRT 208g, FRL10 162f, FRS10 161e, FRSTAR 162c, FTCIN 44a, FXGAP 158a, FYNICN 45f, FYNILN 46b, FYNIN 44c, GFDBTN 123f, GFDRT 208h, GFINTN 124b, GFS 124d, GFSN 125a, GFSRPN 125c, GFSRT 209a, GFSUB 125e, GFSUBN 126c, GFT 126e, GFTN 127a, GFTRD 127c, GFTRT 209b, GSDBTN 127f, GSDRT 209c, GSINTN 128b, GSSRPN 128d, GSSRT 209d, GSSUB 130d, GSSUBN 129a, GST 129e, GSTN 129c, GSTRD 130a, GSTRT 209e, HGEMP 44e, HGGDP 49b, HGGDPT 60c, HGPCDR 209f, HGPDR 108e, HGPIR 109b, HGPKIR 109e, HGPPSR 110a, HGVPD 34c,

## B.3   Standard Version Equations File

254        ⟨*stdver.eqs.txt* 254⟩≡
           ⟨*stdverEqs ceng* 41b⟩
           ⟨*stdverEqs delrff* 145c⟩
           ⟨*stdverEqs dmptlur* 143b⟩
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theend

This code is written to file `stdver.eqs.txt`.

# B.4   Standard Version Coefficients File

263     ⟨*stdver.coeffs.txt* 263⟩≡

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theend

This code is written to file `stdver.coeffs.txt`.

# Appendix C

# Notes, Bibliography and Indexes

## C.1 Chunks

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⟨*stdverEqs qlep* 66d⟩
⟨*stdverEqs qlf* 66f⟩
⟨*stdverEqs qlfpr* 64e⟩
⟨*stdverEqs qlhp* 57c⟩
⟨*stdverEqs qlww* 61c⟩
⟨*stdverEqs qpcnia* 92f⟩
⟨*stdverEqs qpl* 92a⟩
⟨*stdverEqs qpmo* 106c⟩
⟨*stdverEqs qpxg* 91e⟩
⟨*stdverEqs qpxnc* 99d⟩
⟨*stdverEqs qpxp* 92d⟩
⟨*stdverEqs qynidn* 76b⟩
⟨*stdverEqs rbbb* 151b⟩
⟨*stdverEqs rbbbe* 150f⟩
⟨*stdverEqs rbbbp* 150c⟩
⟨*stdverEqs rcar* 151d⟩
⟨*stdverEqs rccd* 23c⟩
⟨*stdverEqs rcch* 23e⟩
⟨*stdverEqs rcgain* 154a⟩
⟨*stdverEqs req* 153a⟩
⟨*stdverEqs reqp* 152d⟩

⟨*stdverEqs rff* 145a⟩
⟨*stdverEqs rffalt* 140e⟩
⟨*stdverEqs rffe* 144e⟩
⟨*stdverEqs rffgen* 141c⟩
⟨*stdverEqs rffintay* 140b⟩
⟨*stdverEqs rffrule* 142d⟩
⟨*stdverEqs rfftay* 139b⟩
⟨*stdverEqs rfftlr* 139e⟩
⟨*stdverEqs rfynic* 46e⟩
⟨*stdverEqs rfynil* 47b⟩
⟨*stdverEqs rg10* 148f⟩
⟨*stdverEqs rg10e* 148d⟩
⟨*stdverEqs rg10p* 148a⟩
⟨*stdverEqs rg30* 150a⟩
⟨*stdverEqs rg30e* 149e⟩
⟨*stdverEqs rg30p* 149b⟩
⟨*stdverEqs rg5* 147e⟩
⟨*stdverEqs rg5e* 147c⟩
⟨*stdverEqs rg5p* 146f⟩
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⟨*stdverEqs rgw* 156f⟩
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⟨*stdverEqs rrffe* 145e⟩
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⟨*stdverEqs rrtr* 169a⟩
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⟨*stdverEqs tapsda* 37a⟩
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⟨*stdverEqs tfibn* 131c⟩
⟨*stdverEqs tfpn* 131e⟩
⟨*stdverEqs tfsin* 132a⟩
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⟨*stdverEqs trsib* 134e⟩

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⟨*stdverEqs tspn* 137d⟩
⟨*stdverEqs tssin* 137f⟩
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⟨*stdverEqs uqpct* 100a⟩
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⟨*stdverEqs veoa* 54a⟩
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⟨*stdverEqs vpi* 33f⟩
⟨*stdverEqs vps* 34b⟩
⟨*stdverEqs wdnfcn* 86b⟩
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⟨*stdverEqs wpon* 155a⟩
⟨*stdverEqs wps* 153e⟩
⟨*stdverEqs wpsn* 153c⟩
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⟨*stdverEqs xbn* 71c⟩
⟨*stdverEqs xbo* 50e⟩
⟨*stdverEqs xbt* 55a⟩
⟨*stdverEqs xeng* 55e⟩
⟨*stdverEqs xfs* 48b⟩
⟨*stdverEqs xfsn* 70e⟩
⟨*stdverEqs xg* 52a⟩
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⟨*stdverEqs xgap2* 59c⟩
⟨*stdverEqs xgde* 49e⟩
⟨*stdverEqs xgden* 71a⟩
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⟨*stdverEqs xgdpn* 70c⟩
⟨*stdverEqs xgdpt* 55c⟩
⟨*stdverEqs xgdptn* 61a⟩
⟨*stdverEqs xgn* 71e⟩
⟨*stdverEqs xgo* 50b⟩
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⟨*stdverEqs xp* 51a⟩
⟨*stdverEqs xpn* 70a⟩

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⟨*stdverEqs ydn* 77f⟩
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⟨*stdverEqs ygssn* 138d⟩
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⟨*stdverEqs yhibn* 80d⟩
⟨*stdverEqs yhin* 81b⟩
⟨*stdverEqs yhl* 81d⟩
⟨*stdverEqs yhln* 81f⟩
⟨*stdverEqs yhp* 82b⟩
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⟨*stdverEqs yhpgap* 82d⟩
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⟨*stdverEqs yhpshr* 83c⟩
⟨*stdverEqs yhptn* 83e⟩
⟨*stdverEqs yhshr* 84b⟩
⟨*stdverEqs yhsn* 84d⟩
⟨*stdverEqs yht* 84f⟩
⟨*stdverEqs yhtgap* 85b⟩
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⟨*stdverEqs ykpdn* 79b⟩
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⟨*stdverEqs ynin* 74d⟩
⟨*stdverEqs ynisen* 75b⟩
⟨*stdverEqs ypn* 77d⟩
⟨*stdverEqs zdivgr* 198a⟩
⟨*stdverEqs zecd* 184c⟩
⟨*stdverEqs zeco* 183b⟩
⟨*stdverEqs zeh* 186b⟩
⟨*stdverEqs zgap05* 173a⟩
⟨*stdverEqs zgap10* 174a⟩
⟨*stdverEqs zgap30* 175a⟩
⟨*stdverEqs zgapc2* 185c⟩
⟨*stdverEqs zlhp* 187b⟩
⟨*stdverEqs zpi10* 178a⟩
⟨*stdverEqs zpi10f* 178f⟩
⟨*stdverEqs zpi5* 176a⟩
⟨*stdverEqs zpib5* 177a⟩
⟨*stdverEqs zpic30* 179d⟩

⟨*stdverEqs zpic58* 180c⟩
⟨*stdverEqs zpicxfe* 181a⟩
⟨*stdverEqs zpieci* 182a⟩
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⟨*stdverEqs zrff30* 172a⟩
⟨*stdverEqs zrff5* 170a⟩
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⟨*stdverEqs zvps* 194a⟩
⟨*stdverEqs zxbd* 195a⟩
⟨*stdverEqs zxbi* 196a⟩
⟨*stdverEqs zxbs* 197a⟩
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⟨*stdverEqs zyhst* 167a⟩
⟨*stdverEqs zyht* 202a⟩
⟨*stdverEqs zyhtst* 168a⟩
⟨*stdverEqs zynid* 199a⟩
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⟨*stdver_Coeffs y_dmptlur* 143c⟩
⟨*stdver_Coeffs y_dmptpi* 143f⟩
⟨*stdver_Coeffs y_dpadj* 98d⟩
⟨*stdver_Coeffs y_ecd* 18c⟩
⟨*stdver_Coeffs y_ech* 19c⟩
⟨*stdver_Coeffs y_eco* 17c⟩
⟨*stdver_Coeffs y_egfi* 114e⟩
⟨*stdver_Coeffs y_egfit* 115d⟩
⟨*stdver_Coeffs y_egfl* 116b⟩
⟨*stdver_Coeffs y_egflt* 117b⟩
⟨*stdver_Coeffs y_egfo* 117e⟩
⟨*stdver_Coeffs y_egfot* 118e⟩
⟨*stdver_Coeffs y_egsi* 120a⟩
⟨*stdver_Coeffs y_egsit* 120f⟩
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⟨*stdver_Coeffs y_egsot* 123e⟩
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⟨*stdver_Coeffs y_emo* 40c⟩
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⟨*stdver_Coeffs y_epd* 25d⟩
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⟨*stdver_Coeffs y_eps* 26e⟩
⟨*stdver_Coeffs y_ex* 39d⟩
⟨*stdver_Coeffs y_fgdpt* 159c⟩

⟨*stdver_Coeffs y_fpi10* 159f⟩
⟨*stdver_Coeffs y_fpi10t* 160c⟩
⟨*stdver_Coeffs y_fpic* 160f⟩
⟨*stdver_Coeffs y_fpxr* 163e⟩
⟨*stdver_Coeffs y_fpxrr* 164b⟩
⟨*stdver_Coeffs y_frl10* 163b⟩
⟨*stdver_Coeffs y_frs10* 162b⟩
⟨*stdver_Coeffs y_frstar* 162e⟩
⟨*stdver_Coeffs y_fxgap* 158c⟩
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⟨*stdver_Coeffs y_hgpkir* 109g⟩
⟨*stdver_Coeffs y_hgppsr* 110c⟩
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⟨*stdver_Coeffs y_hgvpi* 39a⟩
⟨*stdver_Coeffs y_hgvps* 35b⟩
⟨*stdver_Coeffs y_hmfpt* 53a⟩
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⟨*stdver_Coeffs y_hqlww* 61f⟩
⟨*stdver_Coeffs y_huqpct* 100e⟩
⟨*stdver_Coeffs y_huxb* 58f⟩
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⟨*stdver_Coeffs y_left* 67c⟩
⟨*stdver_Coeffs y_leo* 62e⟩
⟨*stdver_Coeffs y_lest* 67f⟩
⟨*stdver_Coeffs y_lfpr* 64c⟩
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⟨*stdver_Coeffs y_lww* 57f⟩
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⟨*stdver_Coeffs y_mep* 156d⟩
⟨*stdver_Coeffs y_mfpt* 53d⟩
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⟨*stdver_Coeffs y_pchr* 112b⟩
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⟨*stdver_Coeffs y_pgsor* 95b⟩
⟨*stdver_Coeffs y_phouse* 154e⟩

⟨*stdver_Coeffs y_phr* 95e⟩
⟨*stdver_Coeffs y_picxfe* 87c⟩
⟨*stdver_Coeffs y_pieci* 88a⟩
⟨*stdver_Coeffs y_pipxnc* 88d⟩
⟨*stdver_Coeffs y_pmo* 106a⟩
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⟨*stdver_Coeffs y_ppdr* 96a⟩
⟨*stdver_Coeffs y_ppsr* 96f⟩
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⟨*stdver_Coeffs y_pwstar* 91c⟩
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⟨*stdver_Coeffs y_rg30p* 149c⟩
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⟨*stdver_Coeffs y_rgw* 157a⟩
⟨*stdver_Coeffs y_rme* 152b⟩
⟨*stdver_Coeffs y_rrmet* 157g⟩
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⟨*stdver_Coeffs y_rstar* 142b⟩
⟨*stdver_Coeffs y_rtbe* 146b⟩
⟨*stdver_Coeffs y_trfci* 132d⟩

⟨*stdver_Coeffs y_trfp* 133b⟩
⟨*stdver_Coeffs y_trfpt* 133e⟩
⟨*stdver_Coeffs y_trsci* 134c⟩
⟨*stdver_Coeffs y_trsib* 134f⟩
⟨*stdver_Coeffs y_trsp* 135c⟩
⟨*stdver_Coeffs y_trspt* 136a⟩
⟨*stdver_Coeffs y_trssi* 136d⟩
⟨*stdver_Coeffs y_uces* 104e⟩
⟨*stdver_Coeffs y_ucfs* 105c⟩
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⟨*stdver_Coeffs y_veoa* 54b⟩
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⟨*stdver_Coeffs y_xbo* 50f⟩
⟨*stdver_Coeffs y_xgo* 50c⟩
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⟨*stdver_Coeffs y_yniin* 75e⟩
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⟨*stdver_Coeffs y_zrff30* 172b⟩
⟨*stdver_Coeffs y_zrff5* 170b⟩
⟨*stdver_Coeffs y_zvpd* 191b⟩
⟨*stdver_Coeffs y_zvpi* 193b⟩
⟨*stdver_Coeffs y_zvps* 194b⟩
⟨*stdver_Coeffs y_zxbd* 195b⟩
⟨*stdver_Coeffs y_zxbi* 196b⟩
⟨*stdver_Coeffs y_zxbs* 197b⟩
⟨*stdver_Coeffs y_zyh* 200b⟩

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$\langle stdver\_Coeffs\ y\_zyhpst\ 167e\rangle$
$\langle stdver\_Coeffs\ y\_zyhst\ 167b\rangle$
$\langle stdver\_Coeffs\ y\_zyht\ 202b\rangle$
$\langle stdver\_Coeffs\ y\_zyhtst\ 168b\rangle$
$\langle stdver\_Coeffs\ y\_zynid\ 199b\rangle$
$\langle variable\ CENG\ 41a\rangle$
$\langle variable\ D01Q4\ 205a\rangle$
$\langle variable\ D2002\ 205b\rangle$
$\langle variable\ D2003\ 205c\rangle$
$\langle variable\ D69\ 205d\rangle$
$\langle variable\ D79A\ 205e\rangle$
$\langle variable\ D8095\ 205f\rangle$
$\langle variable\ D81\ 206a\rangle$
$\langle variable\ D83\ 206b\rangle$
$\langle variable\ D86\ 206c\rangle$
$\langle variable\ D87\ 206d\rangle$
$\langle variable\ DCON\ 206e\rangle$
$\langle variable\ DDOCKM\ 206f\rangle$
$\langle variable\ DDOCKX\ 206g\rangle$
$\langle variable\ DELRFF\ 145b\rangle$
$\langle variable\ DEUC\ 206h\rangle$
$\langle variable\ DFMPRR\ 206i\rangle$
$\langle variable\ DFPDBT\ 207a\rangle$
$\langle variable\ DFPEX\ 207b\rangle$
$\langle variable\ DFPSRP\ 207c\rangle$
$\langle variable\ DGLPRD\ 207d\rangle$
$\langle variable\ DMPALT\ 207e\rangle$
$\langle variable\ DMPEX\ 207f\rangle$
$\langle variable\ DMPGEN\ 207g\rangle$
$\langle variable\ DMPINTAY\ 207h\rangle$
$\langle variable\ DMPRR\ 207i\rangle$
$\langle variable\ DMPSTB\ 208a\rangle$
$\langle variable\ DMPTAY\ 208b\rangle$
$\langle variable\ DMPTLR\ 208c\rangle$
$\langle variable\ DMPTLUR\ 143a\rangle$
$\langle variable\ DMPTMAX\ 143g\rangle$
$\langle variable\ DMPTPI\ 143d\rangle$
$\langle variable\ DMPTR\ 144b\rangle$
$\langle variable\ DMPTRSH\ 208d\rangle$
$\langle variable\ DPADJ\ 98b\rangle$
$\langle variable\ DPGAP\ 97d\rangle$
$\langle variable\ DRSTAR\ 208e\rangle$
$\langle variable\ EC\ 24b\rangle$
$\langle variable\ ECD\ 18a\rangle$
$\langle variable\ ECH\ 19a\rangle$

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⟨*variable ECNIAN* 21e⟩
⟨*variable ECO* 17a⟩
⟨*variable EGF* 113d⟩
⟨*variable EGFI* 114c⟩
⟨*variable EGFIN* 114f⟩
⟨*variable EGFIT* 115b⟩
⟨*variable EGFL* 115e⟩
⟨*variable EGFLN* 116c⟩
⟨*variable EGFLT* 116e⟩
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