```
  ___  ____  ____  ____  ____ (R)
 /__    /   ____/   /   ____/
___/   /   /___/   /   /___/   13.0   Copyright 1985-2013 StataCorp LP
  Statistics/Data Analysis            StataCorp
                                      4905 Lakeway Drive
     MP - Parallel Edition            College Station, Texas 77845 USA
                                      800-STATA-PC        http://www.stata.com
                                      979-696-4600        stata@stata.com
                                      979-696-4601 (fax)


Notes:
      1.  (/v# option or -set maxvar-) 5000 maximum variables

. *(8 variables, 47 observations pasted into data editor)

. drop tariffrates

. rename ( bop1000us exchangerateinr inflationgdpdeflatorannual
inflationconsumerpricesannual gdpcurrentus botcurrentus) (bop exr
> igd icp gdp bot)

. gen time=[1]+_n-1

. tsset time, yearly
        time variable:  time, 1 to 47
                delta:  1 year

. varsoc bop

   Selection-order criteria
   Sample:  5 - 47                              Number of obs      =        43
  +---------------------------------------------------------------------------+
  |lag |    LL      LR      df    p      FPE       AIC      HQIC      SBIC    |
  |----+----------------------------------------------------------------------|
  |  0 | -1086.03                        5.3e+20   50.5598   50.5749   50.6007  |
  |  1 | -1075.24  21.597*   1  0.000  3.4e+20*   50.104*  50.1342*  50.1859* |
  |  2 | -1075.23  .00452    1  0.946  3.5e+20   50.1504   50.1957   50.2733  |
  |  3 |  -1073.4  3.6604    1  0.056  3.4e+20   50.1118   50.1722   50.2757  |
  |  4 |  -1073.2  .41077    1  0.522  3.5e+20   50.1488   50.2243   50.3536  |
  +---------------------------------------------------------------------------+
   Endogenous:  bop
    Exogenous:  _cons

. dfuller bop, trend regress lags(1)

Augmented Dickey-Fuller test for unit root         Number of obs   =        45

                                 ---------- Interpolated Dickey-Fuller ---------
                    Test         1% Critical       5% Critical      10% Critical
                Statistic           Value             Value             Value
------------------------------------------------------------------------------
 Z(t)             -3.689            -4.196            -3.520            -3.192
------------------------------------------------------------------------------
MacKinnon approximate p-value for Z(t) = 0.0231

------------------------------------------------------------------------------
D.bop        |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
```

```
-------------+----------------------------------------------------------------
         bop |
         L1. |  -.6051458   .1640248    -3.69   0.001    -.9364007    -.273891
         LD. |   .2155935   .1956161     1.10   0.277    -.1794612    .6106481
      _trend |  -5.90e+08   2.56e+08    -2.31   0.026    -1.11e+09   -7.31e+07
       _cons |   5.52e+09   5.62e+09     0.98   0.332    -5.83e+09    1.69e+10
------------------------------------------------------------------------------

. varsoc exr

   Selection-order criteria
   Sample:  5 - 47                               Number of obs      =        43
  +---------------------------------------------------------------------------+
  |lag |    LL      LR      df    p      FPE       AIC      HQIC      SBIC    |
  |----+----------------------------------------------------------------------|
  |  0 | -190.448                      431.248   8.90455   8.91966   8.94551  |
  |  1 | -95.1658  190.56*   1  0.000  5.37376*  4.51934*  4.54955*  4.60125* |
  |  2 | -94.6755   .9806    1  0.322  5.50356   4.54305   4.58836   4.66592  |
  |  3 | -94.6564  .03807    1  0.845  5.76228   4.58867   4.64909    4.7525  |
  |  4 | -93.5218  2.2693    1  0.132  5.72927   4.58241   4.65793    4.7872  |
  +---------------------------------------------------------------------------+
   Endogenous:  exr
    Exogenous:  _cons

. dfuller exr, trend regress lags(1)

Augmented Dickey-Fuller test for unit root         Number of obs   =        45

                              ---------- Interpolated Dickey-Fuller ---------
                 Test         1% Critical       5% Critical      10% Critical
               Statistic           Value             Value             Value
------------------------------------------------------------------------------
 Z(t)             -2.323            -4.196            -3.520            -3.192
------------------------------------------------------------------------------
MacKinnon approximate p-value for Z(t) = 0.4212

------------------------------------------------------------------------------
D.exr        |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         exr |
         L1. |  -.1680053   .0723211    -2.32   0.025    -.3140608   -.0219499
         LD. |   .2187626   .1504742     1.45   0.154    -.0851263    .5226515
      _trend |   .2801368   .1124326     2.49   0.017     .0530745    .5071991
       _cons |   .3600526   .6750977     0.53   0.597    -1.003335     1.72344
------------------------------------------------------------------------------

. gen d1exr=D1.exr
(1 missing value generated)

. varsoc d1exr

   Selection-order criteria
   Sample:  6 - 47                               Number of obs      =        42
  +---------------------------------------------------------------------------+
  |lag |    LL      LR      df    p      FPE       AIC      HQIC      SBIC    |
  |----+----------------------------------------------------------------------|
  |  0 | -93.2835                      5.21647*  4.48969*  4.50485*  4.53106* |
  |  1 | -92.8162  .93445    1  0.334  5.35085   4.51506   4.54539   4.59781  |
  |  2 | -92.8004  .03175    1  0.859  5.60853   4.56192   4.60742   4.68604  |
```

```
  |  3 | -91.7114  2.1779    1  0.140   5.5867   4.55769   4.61835   4.72318  |
  |  4 | -91.6163  .19021    1  0.663  5.83594   4.60078    4.6766   4.80764  |
  +------------------------------------------------------------------------------+
   Endogenous:  d1exr
    Exogenous:  _cons

. dfuller d1exr, trend regress lags(0)

Dickey-Fuller test for unit root                   Number of obs   =        45

                              ---------- Interpolated Dickey-Fuller ---------
                 Test         1% Critical       5% Critical      10% Critical
               Statistic           Value             Value             Value
------------------------------------------------------------------------------
 Z(t)             -5.507            -4.196            -3.520            -3.192
------------------------------------------------------------------------------
MacKinnon approximate p-value for Z(t) = 0.0000

------------------------------------------------------------------------------
D.d1exr      |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       d1exr |
         L1. |  -.8526461   .1548189    -5.51   0.000    -1.165083   -.5402089
      _trend |   .0254287   .0261556     0.97   0.337    -.0273555    .0782129
       _cons |   .6434278   .6785194     0.95   0.348    -.7258799    2.012735
------------------------------------------------------------------------------

. gen d1igd=D1.igd
(1 missing value generated)

. twoway (line gdp time)

. gen d1gdp=D1.gdp
(1 missing value generated)

. varsoc d1gdp

   Selection-order criteria
   Sample:  6 - 47                         Number of obs      =        42
  +------------------------------------------------------------------------------+
  |lag |    LL      LR      df    p      FPE       AIC      HQIC      SBIC     |
  |----+-------------------------------------------------------------------------|
  |  0 | -1130.07                       1.4e+22   53.8606   53.8757   53.9019* |
  |  1 | -1130.07  .00013    1  0.991  1.5e+22   53.9082   53.9385   53.9909  |
  |  2 | -1128.81  2.5291    1  0.112  1.5e+22   53.8956   53.9411   54.0197  |
  |  3 | -1128.62  .36868    1  0.544  1.6e+22   53.9344   53.9951   54.0999  |
  |  4 | -1124.15  8.9484*   1  0.003  1.3e+22*   53.769*  53.8448*  53.9758  |
  +------------------------------------------------------------------------------+
   Endogenous:  d1gdp
    Exogenous:  _cons

. varsoc d1gdp, maxlag(3)

   Selection-order criteria
   Sample:  5 - 47                         Number of obs      =        43
  +------------------------------------------------------------------------------+
  |lag |    LL      LR      df    p      FPE       AIC      HQIC      SBIC     |
  |----+-------------------------------------------------------------------------|
  |  0 | -1156.59                       1.4e+22*  53.8412*  53.8563*  53.8822* |
```

```
  |  1 | -1156.59  .00205    1  0.964  1.5e+22   53.8877   53.9179   53.9696  |
  |  2 | -1155.25  2.6624    1  0.103  1.5e+22   53.8723   53.9176   53.9952  |
  |  3 | -1155.05  .40867    1  0.523  1.5e+22   53.9093   53.9697   54.0731  |
  +-------------------------------------------------------------------------------+
   Endogenous:  d1gdp
    Exogenous:  _cons

. dfuller d1gdp, trend regress lags(4)

Augmented Dickey-Fuller test for unit root         Number of obs   =        41

                                 ---------- Interpolated Dickey-Fuller ---------
                    Test         1% Critical       5% Critical      10% Critical
                Statistic           Value             Value             Value
------------------------------------------------------------------------------
 Z(t)             -2.860            -4.233            -3.536            -3.202
------------------------------------------------------------------------------
MacKinnon approximate p-value for Z(t) = 0.1757

------------------------------------------------------------------------------
D.d1gdp      |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       d1gdp |
         L1. |  -1.487899   .5201987    -2.86   0.007     -2.54507   -.4307283
         LD. |   .1583406   .4709913     0.34   0.739    -.7988288    1.11551
        L2D. |   .1109199   .4250704     0.26   0.796     -.752927    .9747669
        L3D. |  -.2051646   .3242568    -0.63   0.531    -.8641338    .4538046
        L4D. |    .070683   .2729522     0.26   0.797    -.4840227    .6253886
      _trend |   6.78e+09   2.60e+09     2.61   0.014     1.49e+09    1.21e+10
       _cons |  -6.68e+10   4.45e+10    -1.50   0.142    -1.57e+11    2.36e+10
------------------------------------------------------------------------------

. dfuller d1gdp, trend regress lags(0)

Dickey-Fuller test for unit root                   Number of obs   =        45

                                 ---------- Interpolated Dickey-Fuller ---------
                    Test         1% Critical       5% Critical      10% Critical
                Statistic           Value             Value             Value
------------------------------------------------------------------------------
 Z(t)             -7.421            -4.196            -3.520            -3.192
------------------------------------------------------------------------------
MacKinnon approximate p-value for Z(t) = 0.0000

------------------------------------------------------------------------------
D.d1gdp      |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       d1gdp |
         L1. |  -1.309939   .1765263    -7.42   0.000    -1.666183   -.9536942
      _trend |   5.34e+09   1.27e+09     4.20   0.000     2.78e+09    7.90e+09
       _cons |  -3.69e+10   3.02e+10    -1.22   0.229    -9.78e+10    2.40e+10
------------------------------------------------------------------------------

. drop d1gdp

. gen d1lngdp=D1.(ln(gdp))
unknown function D1.()
r(133);
```

```
. gen lngdp=ln(gdp)

. gen d1lngdp=D1.lngdp
(1 missing value generated)

. gen d1bot=D1.bot
(1 missing value generated)

. varsoc d1lngdp

   Selection-order criteria
   Sample:  6 - 47                                 Number of obs      =        42
  +---------------------------------------------------------------------------+
  |lag |    LL      LR      df    p      FPE       AIC      HQIC      SBIC    |
  |----+----------------------------------------------------------------------|
  |  0 |  47.0936                      .006521* -2.19493* -2.17977* -2.15356* |
  |  1 |  47.0938  .00038    1  0.984  .006839  -2.14732  -2.11699  -2.06458  |
  |  2 |  47.7922   1.397    1  0.237  .006939  -2.13296  -2.08747  -2.00884  |
  |  3 |  47.7935  .00253    1  0.960  .007279   -2.0854  -2.02475  -1.91991  |
  |  4 |  47.8662  .14549    1  0.703  .007612  -2.04125  -1.96543  -1.83438  |
  +---------------------------------------------------------------------------+
   Endogenous:  d1lngdp
    Exogenous:  _cons

. dfuller d1lngdp, trend regress lags(0)

Dickey-Fuller test for unit root                   Number of obs   =        45

                              ---------- Interpolated Dickey-Fuller ---------
                 Test         1% Critical       5% Critical      10% Critical
               Statistic           Value             Value             Value
------------------------------------------------------------------------------
 Z(t)             -6.307            -4.196            -3.520            -3.192
------------------------------------------------------------------------------
MacKinnon approximate p-value for Z(t) = 0.0000

------------------------------------------------------------------------------
D.d1lngdp    |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     d1lngdp |
         L1. |  -.9893522   .1568536    -6.31   0.000    -1.305896   -.6728088
      _trend |   .0000522   .0009262     0.06   0.955     -.001817    .0019213
       _cons |   .0742544   .0272534     2.72   0.009     .0192549    .1292539
------------------------------------------------------------------------------

. varsoc bop d1exr d1igd icp d1lngdp d1bot

   Selection-order criteria
   Sample:  6 - 47                                 Number of obs      =        42
  +---------------------------------------------------------------------------+
  |lag |    LL      LR      df    p      FPE       AIC      HQIC      SBIC    |
  |----+----------------------------------------------------------------------|
  |  0 | -2329.24                      7.9e+40   111.202   111.293    111.45  |
  |  1 | -2242.72  173.04   36  0.000  7.3e+39*  108.796   109.433*  110.534* |
  |  2 |  -2213.9  57.637   36  0.012  1.1e+40   109.138   110.321   112.365  |
  |  3 |  -2179.6  68.597   36  0.001  1.7e+40   109.219   110.948   113.936  |
  |  4 | -2124.53  110.15*  36  0.000  1.3e+40   108.311*  110.586   114.517  |
  +---------------------------------------------------------------------------+
   Endogenous:  bop d1exr d1igd icp d1lngdp d1bot
```

```
    Exogenous:  _cons

. var bop d1exr d1igd icp d1lngdp d1bot, lags(1)

Vector autoregression

Sample:  3 - 47                                   No. of obs      =        45
Log likelihood = -2423.756                        AIC             =  109.5892
FPE            =  1.61e+40                        HQIC            =  110.2178
Det(Sigma_ml)  =  2.45e+39                        SBIC            =  111.2754

Equation           Parms      RMSE     R-sq      chi2     P>chi2
------------------------------------------------------------------
bop                    7     1.8e+10   0.4654   39.18102   0.0000
d1exr                  7     1.77916   0.4496   18.70058   0.0047
d1igd                  7     2.43956   0.3921    25.5258   0.0003
icp                    7     2.90381   0.2226    12.2265   0.0571
d1lngdp                7     .070746   0.3042   15.46035   0.0170
d1bot                  7     1.8e+10   0.3154    20.7293   0.0021
------------------------------------------------------------------

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
bop          |
         bop |
          L1. |   .6079237   .1272692     4.78   0.000     .3584806    .8573668
             |
       d1exr |
          L1. |   2.68e+08   2.00e+09     0.13   0.894    -3.65e+09    4.19e+09
             |
       d1igd |
          L1. |  -8.02e+08   8.53e+08    -0.94   0.347    -2.47e+09    8.71e+08
             |
         icp |
          L1. |  -7.80e+08   6.88e+08    -1.13   0.257    -2.13e+09    5.69e+08
             |
     d1lngdp |
          L1. |  -2.99e+10   5.18e+10    -0.58   0.565    -1.31e+11    7.18e+10
             |
       d1bot |
          L1. |    .172736   .1583517     1.09   0.275    -.1376277    .4830996
             |
       _cons |   1.85e+09   7.57e+09     0.24   0.806    -1.30e+10    1.67e+10
-------------+----------------------------------------------------------------
d1exr        |
         bop |
          L1. |  -5.13e-11   1.28e-11    -4.01   0.000    -7.64e-11   -2.63e-11
             |
       d1exr |
          L1. |  -.4993319     .20108    -2.48   0.013    -.8934415   -.1052224
             |
       d1igd |
          L1. |  -.1793173   .0857628    -2.09   0.037    -.3474092   -.0112254
             |
         icp |
          L1. |   .1063413   .0691565     1.54   0.124     -.029203    .2418856
             |
     d1lngdp |
```

```
         L1. |  -19.57064   5.211028    -3.76   0.000    -29.78407   -9.357217
             |
       d1bot |
         L1. |  -9.75e-12   1.59e-11    -0.61   0.540    -4.09e-11    2.14e-11
             |
       _cons |   2.211243   .7607796     2.91   0.004     .7201424    3.702344
-------------+----------------------------------------------------------------
d1igd        |
         bop |
         L1. |   1.89e-11   1.75e-11     1.08   0.280    -1.54e-11    5.33e-11
             |
       d1exr |
         L1. |  -.2254934   .2757185    -0.82   0.413    -.7658917    .3149049
             |
       d1igd |
         L1. |  -.4461944   .1175969    -3.79   0.000      -.67668   -.2157088
             |
         icp |
         L1. |  -.3199446   .0948266    -3.37   0.001    -.5058014   -.1340879
             |
     d1lngdp |
         L1. |   .8767432     7.1453     0.12   0.902    -13.12779    14.88127
             |
       d1bot |
         L1. |   2.44e-11   2.18e-11     1.12   0.264    -1.84e-11    6.72e-11
             |
       _cons |    2.98647   1.043172     2.86   0.004     .9418909     5.03105
-------------+----------------------------------------------------------------
icp          |
         bop |
         L1. |  -3.18e-12   2.09e-11    -0.15   0.879    -4.41e-11    3.77e-11
             |
       d1exr |
         L1. |  -.0516961   .3281879    -0.16   0.875    -.6949326    .5915404
             |
       d1igd |
         L1. |   .2399005   .1399756     1.71   0.087    -.0344467    .5142477
             |
         icp |
         L1. |   .3603688   .1128722     3.19   0.001     .1391434    .5815942
             |
     d1lngdp |
         L1. |  -3.143881   8.505056    -0.37   0.712    -19.81348    13.52572
             |
       d1bot |
         L1. |  -2.27e-11   2.60e-11    -0.87   0.383    -7.36e-11    2.82e-11
             |
       _cons |   5.152161   1.241688     4.15   0.000     2.718497    7.585826
-------------+----------------------------------------------------------------
d1lngdp      |
         bop |
         L1. |   1.02e-12   5.09e-13     2.01   0.044     2.60e-14    2.02e-12
             |
       d1exr |
         L1. |   .0185697   .0079956     2.32   0.020     .0028986    .0342409
             |
       d1igd |
         L1. |   .0101921   .0034102     2.99   0.003     .0035082     .016876
             |
```

```
         icp |
          L1. |  -.0045038   .0027499    -1.64   0.101    -.0098936    .0008859
              |
     d1lngdp |
          L1. |    .432267   .2072086     2.09   0.037     .0261456    .8383883
              |
       d1bot |
          L1. |   2.65e-14   6.33e-13     0.04   0.967    -1.21e-12    1.27e-12
              |
       _cons |   .0614659   .0302512     2.03   0.042     .0021745    .1207572
-------------+----------------------------------------------------------------
d1bot        |
         bop |
          L1. |   -.287338   .1282364    -2.24   0.025    -.5386768   -.0359993
              |
       d1exr |
          L1. |   2.28e+09   2.02e+09     1.13   0.258    -1.67e+09    6.23e+09
              |
       d1igd |
          L1. |  -1.59e+09   8.60e+08    -1.85   0.065    -3.27e+09    9.73e+07
              |
         icp |
          L1. |  -1.04e+09   6.93e+08    -1.51   0.132    -2.40e+09    3.15e+08
              |
     d1lngdp |
          L1. |  -2.29e+10   5.22e+10    -0.44   0.661    -1.25e+11    7.95e+10
              |
       d1bot |
          L1. |  -.1281556   .1595552    -0.80   0.422     -.440878    .1845668
              |
       _cons |   1.06e+09   7.63e+09     0.14   0.889    -1.39e+10    1.60e+10
------------------------------------------------------------------------------

. var bop d1exr d1igd d1lngdp d1bot, lags(1)

Vector autoregression

Sample:  3 - 47                                 No. of obs      =        45
Log likelihood = -2330.659                      AIC             =  104.9182
FPE            =  2.55e+39                      HQIC            =  105.3672
Det(Sigma_ml)  =  6.67e+38                      SBIC            =  106.1226

Equation           Parms      RMSE     R-sq      chi2     P>chi2
------------------------------------------------------------------
bop                    6     1.8e+10   0.4502   36.84414   0.0000
d1exr                  6     1.80175   0.4207   15.52057   0.0084
d1igd                  6     2.69552   0.2383    11.2867   0.0460
d1lngdp                6     .071884   0.2628   12.05906   0.0340
d1bot                  6     1.8e+10   0.2809   17.57495   0.0035
------------------------------------------------------------------

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
bop          |
         bop |
          L1. |   .6093953   .1290667     4.72   0.000     .3564293    .8623613
              |
       d1exr |
```

L1.	-1.91e+08	1.99e+09	-0.10	0.923	-4.09e+09	3.70e+09
d1igd						
L1.	-6.27e+08	8.51e+08	-0.74	0.461	-2.30e+09	1.04e+09
d1lngdp						
L1.	-3.50e+10	5.24e+10	-0.67	0.504	-1.38e+11	6.76e+10
d1bot						
L1.	.1770632	.1605498	1.10	0.270	-.1376087	.4917351
_cons	-2.77e+09	6.47e+09	-0.43	0.668	-1.54e+10	9.90e+09
d1exr						
bop						
L1.	-5.15e-11	1.31e-11	-3.93	0.000	-7.73e-11	-2.58e-11
d1exr						
L1.	-.436733	.2020231	-2.16	0.031	-.8326909	-.040775
d1igd						
L1.	-.2031048	.0865439	-2.35	0.019	-.3727276	-.0334819
d1lngdp						
L1.	-18.86631	5.325487	-3.54	0.000	-29.30407	-8.428544
d1bot						
L1.	-1.03e-11	1.63e-11	-0.63	0.526	-4.23e-11	2.17e-11
_cons	2.841782	.6574315	4.32	0.000	1.55324	4.130324
d1igd						
bop						
L1.	1.95e-11	1.96e-11	1.00	0.320	-1.89e-11	5.80e-11
d1exr						
L1.	-.4138323	.3022379	-1.37	0.171	-1.006208	.1785431
d1igd						
L1.	-.3746262	.1294745	-2.89	0.004	-.6283916	-.1208607
d1lngdp						
L1.	-1.242373	7.967229	-0.16	0.876	-16.85785	14.37311
d1bot						
L1.	2.62e-11	2.44e-11	1.07	0.284	-2.17e-11	7.40e-11
_cons	1.089392	.9835546	1.11	0.268	-.8383392	3.017124
d1lngdp						
bop						
L1.	1.03e-12	5.24e-13	1.97	0.049	5.32e-15	2.06e-12
d1exr						
L1.	.0159185	.0080601	1.97	0.048	.0001211	.0317159
d1igd						
L1.	.0111996	.0034528	3.24	0.001	.0044322	.017967

```
     d1lngdp |
         L1. |   .4024363   .2124694     1.89   0.058    -.0139962    .8188688
             |
       d1bot |
         L1. |   5.15e-14   6.51e-13     0.08   0.937    -1.22e-12    1.33e-12
             |
       _cons |   .0347609   .0262294     1.33   0.185    -.0166477    .0861694
-------------+----------------------------------------------------------------
d1bot        |
         bop |
         L1. |  -.2853678    .131422    -2.17   0.030    -.5429502   -.0277854
             |
       d1exr |
         L1. |   1.67e+09   2.02e+09     0.82   0.410    -2.30e+09    5.63e+09
             |
       d1igd |
         L1. |  -1.35e+09   8.67e+08    -1.56   0.118    -3.05e+09    3.45e+08
             |
     d1lngdp |
         L1. |  -2.98e+10   5.33e+10    -0.56   0.576    -1.34e+11    7.47e+10
             |
       d1bot |
         L1. |  -.1223622   .1634797    -0.75   0.454    -.4427766    .1980521
             |
       _cons |  -5.13e+09   6.58e+09    -0.78   0.436    -1.80e+10    7.78e+09
------------------------------------------------------------------------------
```

```
. varlmar

   Lagrange-multiplier test
  +--------------------------------------+
  | lag  |      chi2    df   Prob > chi2 |
  |------+------------------------------|
  |   1  |   25.7542    25     0.42081   |
  |   2  |   18.2309    25     0.83243   |
  +--------------------------------------+
   H0: no autocorrelation at lag order

. varstable

   Eigenvalue stability condition
  +---------------------------------------+
  |        Eigenvalue         |   Modulus   |
  |---------------------------+-------------|
  |  -.2910174 +  .2393647i   |   .376811   |
  |  -.2910174 -  .2393647i   |   .376811   |
  |   .3701447                |   .370145   |
  |   .1450002 +  .2250454i   |   .267713   |
  |   .1450002 -  .2250454i   |   .267713   |
  +---------------------------------------+
   All the eigenvalues lie inside the unit circle.
   VAR satisfies stability condition.

. vargranger

   Granger causality Wald tests
  +-------------------------------------------------------------------+
  |          Equation           Excluded |   chi2     df Prob > chi2 |
  |--------------------------------------+----------------------------|
```

bop	d1exr	.00929	1	0.923
bop	d1igd	.54305	1	0.461
bop	d1lngdp	.44716	1	0.504
bop	d1bot	1.2163	1	0.270
bop	ALL	3.7478	4	0.441
d1exr	bop	.	0	.
d1exr	d1igd	5.5077	1	0.019
d1exr	d1lngdp	12.55	1	0.000
d1exr	d1bot	.	0	.
d1exr	ALL	14.774	2	0.001
d1igd	bop	.	0	.
d1igd	d1exr	1.8748	1	0.171
d1igd	d1lngdp	.02432	1	0.876
d1igd	d1bot	.	0	.
d1igd	ALL	3.5507	2	0.169
d1lngdp	bop	.	0	.
d1lngdp	d1exr	3.9006	1	0.048
d1lngdp	d1igd	10.521	1	0.001
d1lngdp	d1bot	.	0	.
d1lngdp	ALL	11.942	2	0.003
d1bot	bop	4.7149	1	0.030
d1bot	d1exr	.67787	1	0.410
d1bot	d1igd	2.4412	1	0.118
d1bot	d1lngdp	.31307	1	0.576
d1bot	ALL	17.081	4	0.002

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