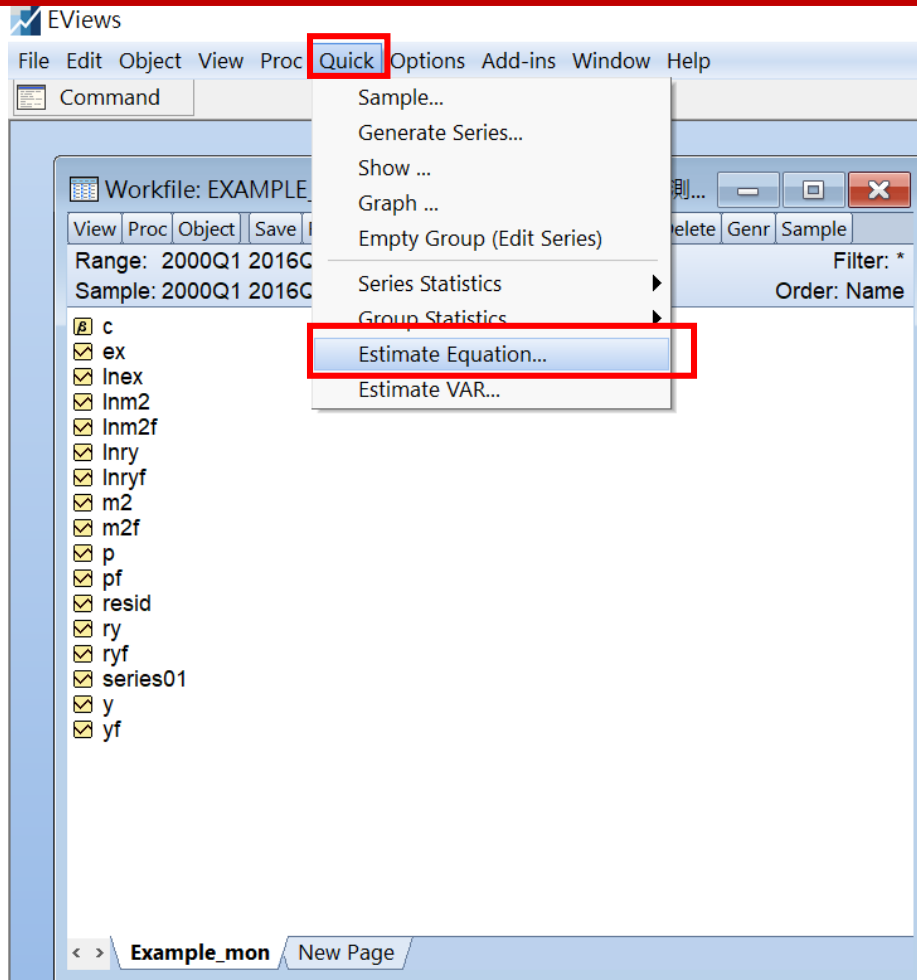


樣本外預測之操作步驟

AR(1)模型 之估計



AR(1)模型 之估計

EViews

File Edit Object View Proc Quick Options Add-ins Window Help

Command

Workfile: EXAMPLE_MON - (c:\users\user\desktop\預測...

View Proc Object Save Freeze Details+/- Show Fetch Store Delete Genr Sample

Range: 2000Q1 2016Q4 -- 68 obs

Sample: Equation Estimation

☒ c
☒ ex
☒ lnex
☒ lnexf
☒ ln2
☒ ln2f
☒ lnry
☒ lnryf
☒ m2
☒ m2f
☒ p
☒ pf
☒ resid
☒ ry
☒ ryf
☒ series
☒ y
☒ yf

Specification

Options

Equation specification

Dependent variable followed by list of regressors including ARMA and PDL terms, OR an explicit equation like $Y=c(1)+c(2)*X$.

Inex c ar(1)

Estimation settings

Method: LS - Least Squares (NLS and ARMA)

Sample: 2001q1 2012q4

確定

取消

AR(1)模型 之預測

EViews

File Edit Object View Proc Quick Options Add-ins Window Help

Command

Workfile: EXAMPLE_MON - (c:\users\user\desktop\預測...)

View Proc Object Save Freeze Details+/- Show Fetch Store Delete Genr Sample

Range: 2000Q1 2016Q4 -- 68 obs Filter: *

Sample: 200

Equation: UNTITLED Workfile: EXAMPLE_MON::Exa...

View Proc Object Print Name Freeze Estimate Forecast Stats Resids

Dep Specify/Estimate...
Me Forecast...
Dat Make Residual Series...
Sam Make Regressor Group
Incl Make Gradient Group
Con Make Derivative Group
Coe Make Model
Update Coefs from Equation
Add-ins

		S.D. Error	t-Statistic	Prob.
		1.12663	2.154965	0.0349
AR(1)	0.997814	0.039918	23.98933	0.0000
SIGMASQ	0.001897	0.000340	5.578545	0.0000

R-squared	0.919852	Mean dependent var	0.183423
Adjusted R-squared	0.917386	S.D. dependent var	0.154971
S.E. of regression	0.044543	Akaike info criterion	-3.305010
Sum squared resid	0.128964	Schwarz criterion	-3.207090
Log likelihood	115.3703	Hannan-Quinn criter.	-3.266211
F-statistic	373.0002	Durbin-Watson stat	1.680339
Prob(F-statistic)	0.000000		

Inverted AR Roots .96

AR(1)模型 之預測

Workfile: EXAMPLE_MON - (c:\users\user\desktop\預測...)

View Proc Object Save Freeze Details+/- Show Fetch Store Delete Genr Sample

Range: 2000Q1 2016Q4 -- 68 obs Filter: *

Sample: 200

Equation: UNTITLED Workfile: EXAMPLE_MON::Exa...

View Proc Object Print Name Freeze Estimate Forecast Stats Resids

Dependent Variable: LNEX

Forecast

Forecast of
Equation: UNTITLED Series: LNEX

Series names
Forecast name: lnexf
S.E. (optional):
GARCH(optional):

Method
☒ Dynamic forecast
☐ Static forecast
☐ Structural (ignore ARMA)
☒ Coef uncertainty in S.E. calc

Forecast sample
2013q1 2016q4

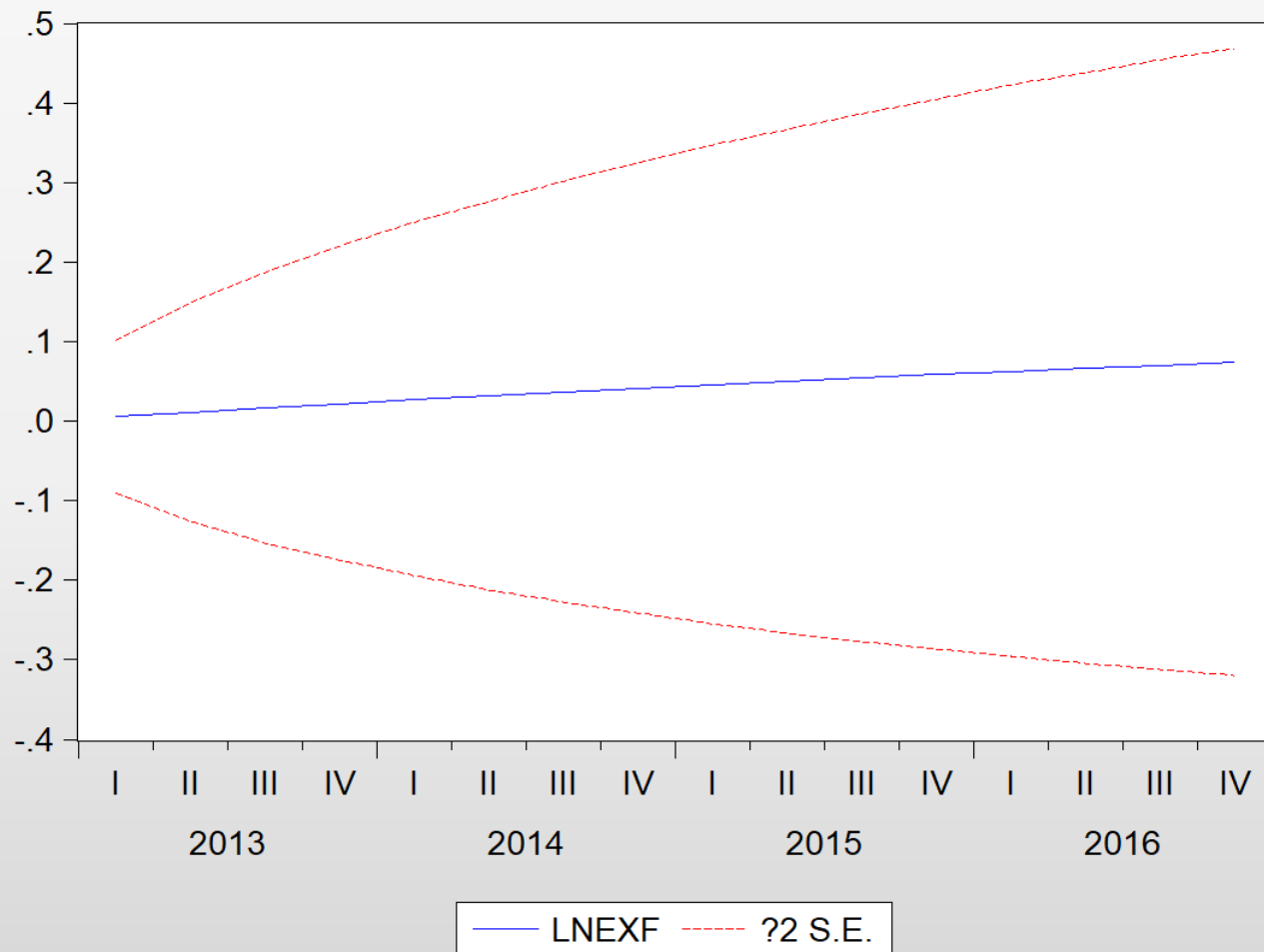
Output
☒ Forecast graph
☒ Forecast evaluation

☒ Insert actuals for out-of-sample observations

OK Cancel

Inverted AR Roots .97

AR(1)模型 之預測結果



Forecast: LNEXF

Actual: LNEX

Forecast sample: 2013Q1 2016Q4

Included observations: 16

Root Mean Squared Error 0.155209

Mean Absolute Error 0.129718

Mean Abs. Percent Error 71.55015

Theil Inequality Coefficient 0.626165

Bias Proportion 0.698507

Variance Proportion 0.290393

Covariance Proportion 0.011100

Path = c:\users\user\documents\views addons\lsunit DB = fred WF = example_mon

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模型2：AR(4)模型之估計

EVIEWS

File Edit Object View Proc Quick Options Add-ins Window Help

Command

View Proc Object Print Name Freeze Estimate Forecast Stats Resids

Dependent Variable: LNEY

Method: ARMA N Equation Estimation

Date: 12/05/20

Sample: 2000Q1

Included observations

Convergence achieved

Coefficient covariance matrix

Variable
C
AR(4)
SIGMASQ

R-squared

Adjusted R-squared

S.E. of regression

Sum squared residuals

Log likelihood

F-statistic

Prob(F-statistic)

Inverted AR Roots

Specification Options

Equation specification

Dependent variable followed by list of regressors including ARMA and PDL terms, OR an explicit equation like $Y=c(1)+c(2)*X$.

Inex c ar(4)

Estimation settings

Method: LS - Least Squares (NLS and ARMA)

Sample: 2000q1 2012q4

確定 取消

模型2：AR(4)模型之預測

EViews - [Equation: UNTITLED Workfile: EXAMPLE_MON::Example_mon\]

File Edit Object View Proc Quick Options Add-ins Window Help

Command

View Proc Object Print Name Freeze Estimate Forecast Stats Resids

Dep Specify/Estimate...
Me Forecast... - BHHH)

Dat Make Residual Series...
Sam Make Regressor Group
Incl Make Gradient Group
Con Make Derivative Group
Coe Make Model
Update Coefs from Equation

			Standard Error	t-Statistic	Prob.
AR(4)	0.897952	0.093176	9.207841	0.0000	
SIGMASQ	0.008205	0.002151	3.815168	0.0004	

R-squared	0.701904	Mean dependent var	0.187043
Adjusted R-squared	0.689737	S.D. dependent var	0.167520
S.E. of regression	0.093311	Akaike info criterion	-1.747329
Sum squared resid	0.426639	Schwarz criterion	-1.634758
Log likelihood	48.43056	Hannan-Quinn criter.	-1.704172
F-statistic	57.68840	Durbin-Watson stat	0.399164
Prob(F-statistic)	0.000000		

Inverted AR Roots	.96	.00-.96i	-.00+.96i	-.96
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模型2：AR(4)模型之預測

EViews - [Equation: UNTITLED Workfile: EXAMPLE_MON::Example_mon\]

File Edit Object View Proc Quick Options Add-ins Window Help

Command

View Proc Object Print Name Freeze Estimate Forecast Stats Resids

Dependent Variable: LNEX

Method: ARMA Maximum Likelihood (OPG - BHHH)

Date: 12/05/20 Time: 16:35

Sample: 2000Q1 2012Q4

Included observations: 5 Forecast

Convergence achieved a
Coefficient covariance co

Variable

C
AR(4)
SIGMASQ

R-squared
Adjusted R-squared
S.E. of regression
Sum squared resid
Log likelihood
F-statistic
Prob(F-statistic)

Inverted AR Roots

Forecast of
Equation: UNTITLED Series: LNEX

Series names
Forecast name: Inexf
S.E. (optional):
GARCH(optional):

Method
☒ Dynamic forecast
☐ Static forecast
☐ Structural (ignore ARMA)
☒ Coef uncertainty in S.E. calc

Forecast sample
2013q1 2016q4

Output
☒ Forecast graph
☒ Forecast evaluation

☒ Insert actuals for out-of-sample observations

OK Cancel

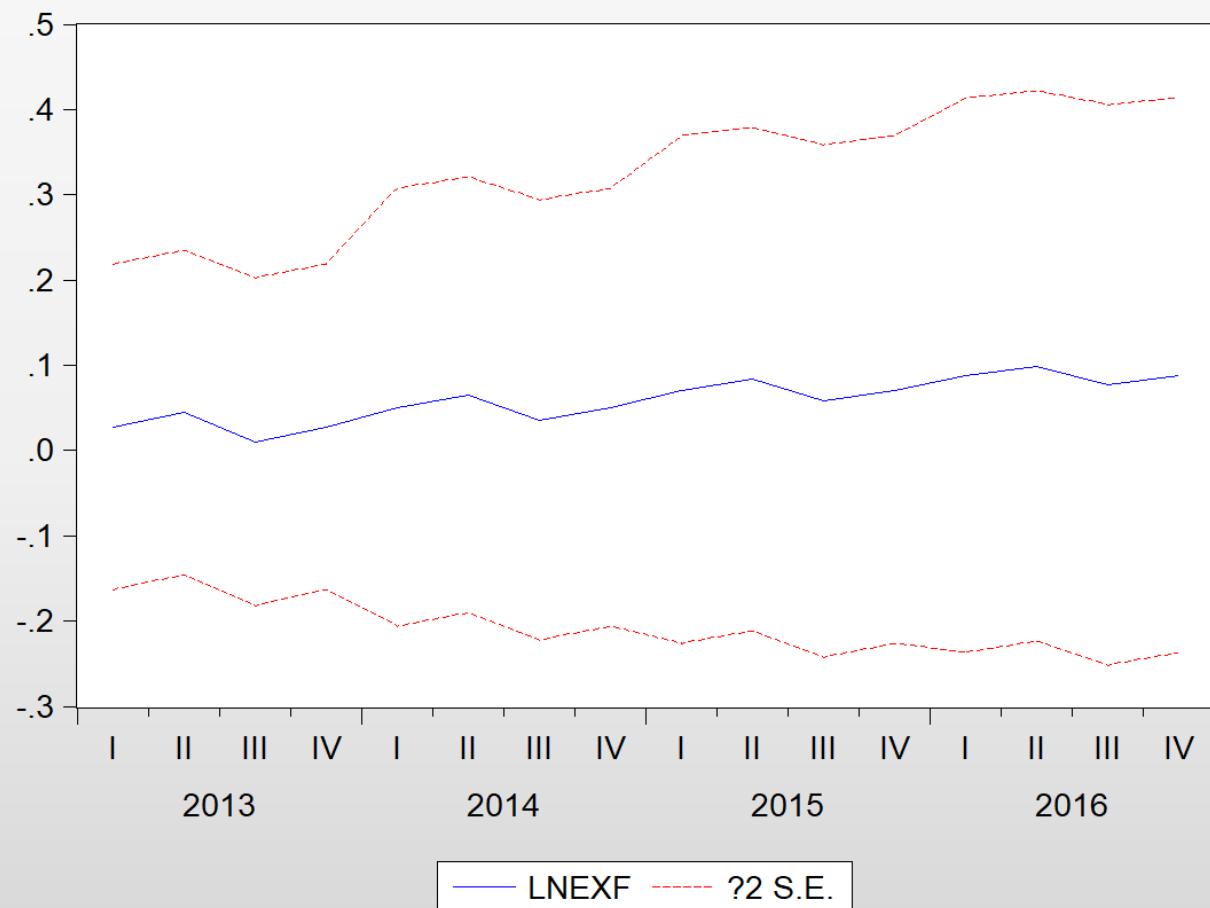
模型2：AR(4)模型 之預測結果

EViews - [Equation: UNTITLED Workfile: EXAMPLE_MON::Example_mon\]

File Edit Object View Proc Quick Options Add-ins Window Help

Command

View Proc Object Print Name Freeze Estimate Forecast Stats Resids



Forecast: LNEXF

Actual: LNEX

Forecast sample: 2013Q1 2016Q4

Included observations: 16

Root Mean Squared Error 0.141420

Mean Absolute Error 0.113456

Mean Abs. Percent Error 57.23139

Theil Inequality Coefficient 0.533439

Bias Proportion 0.633048

Variance Proportion 0.318506

Covariance Proportion 0.048447

模型3：PPP模型 之FMOLS估計

EViews - [Equation: UNTITLED Workfile: EXAMPLE_MON::Example_mon\]

File Edit Object View Proc Quick Options Add-ins Window Help

Command

View Proc Object Print Name Freeze Estimate Forecast Stats Resids

Equation Estimation

Specification

Options

Equation specification

Dependent variable followed by list of cointegrating regressors

Inex Inp Inpf

Trend specification

Quadratic trend

Deterministic regressors

Cointegrating regressors specification

Additional trends

None

Additional deterministic regressors

☐ Estimate using differenced data

Nonstationary estimation settings

Method: Fully-modified OLS (FMOLS)

Long-run variance calculation:

Options

Estimation settings

Method: COINTREG - Cointegrating Regression

Sample: 2000q1 2012q4

確定

取消

Forecast: LNEXF

Actual: LNEX

Forecast sample: 2013Q1 2016Q4

Included observations: 16

Root Mean Squared Error 0.090375

Mean Absolute Error 0.077307

Mean Abs. Percent Error 46.30065

Theil Inequality Coefficient 0.285244

Bias Proportion 0.731711

Variance Proportion 0.170991

Covariance Proportion 0.097298

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2016

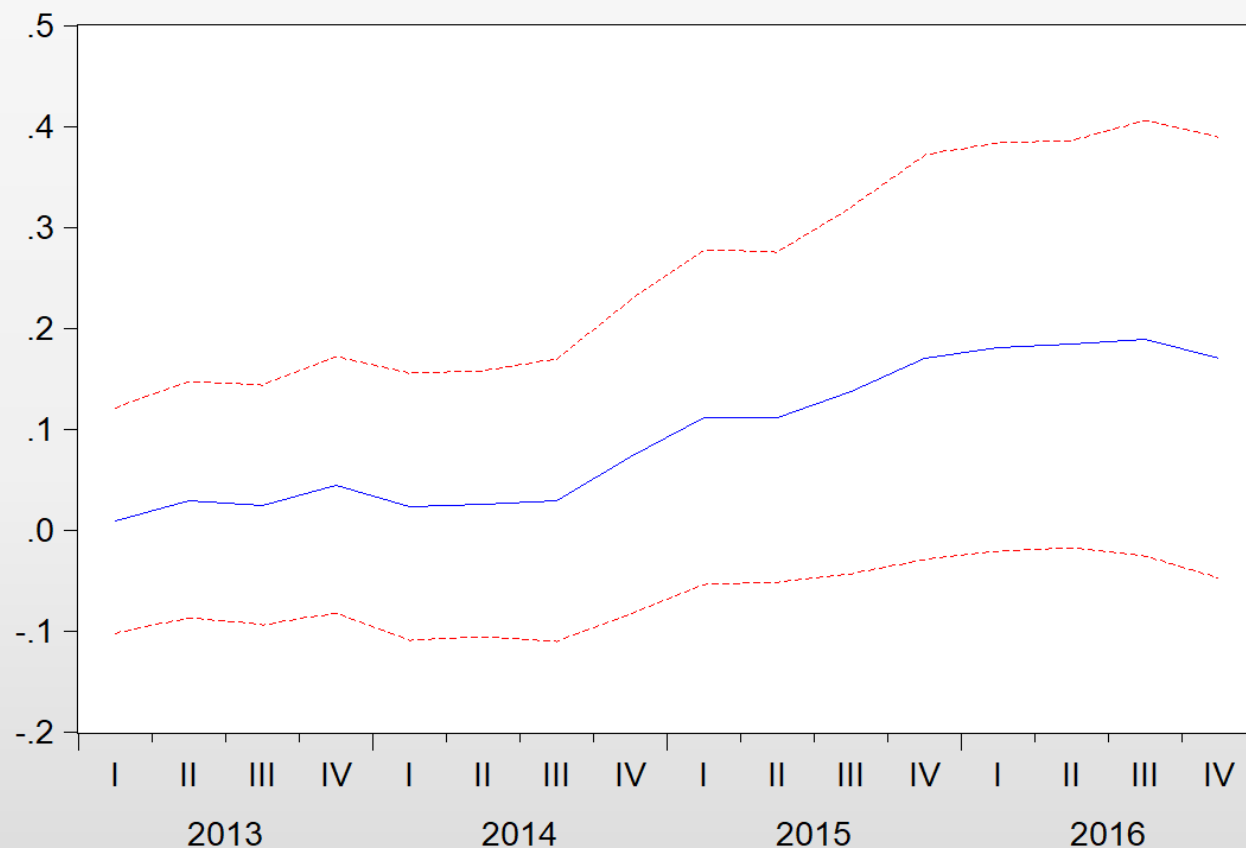
模型3：PPP模型之FMOLS的預測結果

EViews - [Equation: UNTITLED Workfile: EXAMPLE_MON::Example_mon]

File Edit Object View Proc Quick Options Add-ins Window Help

Command

View Proc Object Print Name Freeze Estimate Forecast Stats Resids



— LNEXF - - - ?2 S.E.

Forecast: LNEXF
Actual: LNEX
Forecast sample: 2013Q1 2016Q4
Included observations: 16

Root Mean Squared Error	0.090375
Mean Absolute Error	0.077307
Mean Abs. Percent Error	46.30065
Theil Inequality Coefficient	0.285244
Bias Proportion	0.731711
Variance Proportion	0.170991
Covariance Proportion	0.097298

模型4：貨幣分析法模型 之FMOLS估計

EViews - [Equation: UNTITLED Workfile: EXAMPLE_MON::Example_mon\]

File Edit Object View Proc Quick Options Add-ins Window Help

Command

View Proc Object Print Name Freeze Estimate Forecast Stats Resids

Equation Estimation

Specification

Options

Equation specification

Dependent variable followed by list of cointegrating regressors

lnex ln2 ln2f lnry lnryf

Trend specification

Quadratic trend

Deterministic regressors

Cointegrating regressors specification

Additional trends

None

Additional deterministic regressors

☐ Estimate using differenced data

Nonstationary estimation settings

Method:

Fully-modified OLS (FMOLS)

Long-run variance calculation:

Options

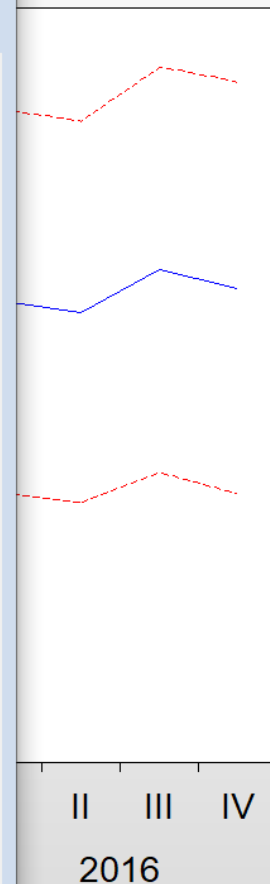
Estimation settings

Method:

COINTREG - Cointegrating Regression

Sample:

2000q1 2012q4



Forecast: LNEXTF

Actual: LNEXT

Forecast sample: 2013Q1 2016Q4

Included observations: 16

Root Mean Squared Error 0.105699

Mean Absolute Error 0.091804

Mean Abs. Percent Error 60.45499

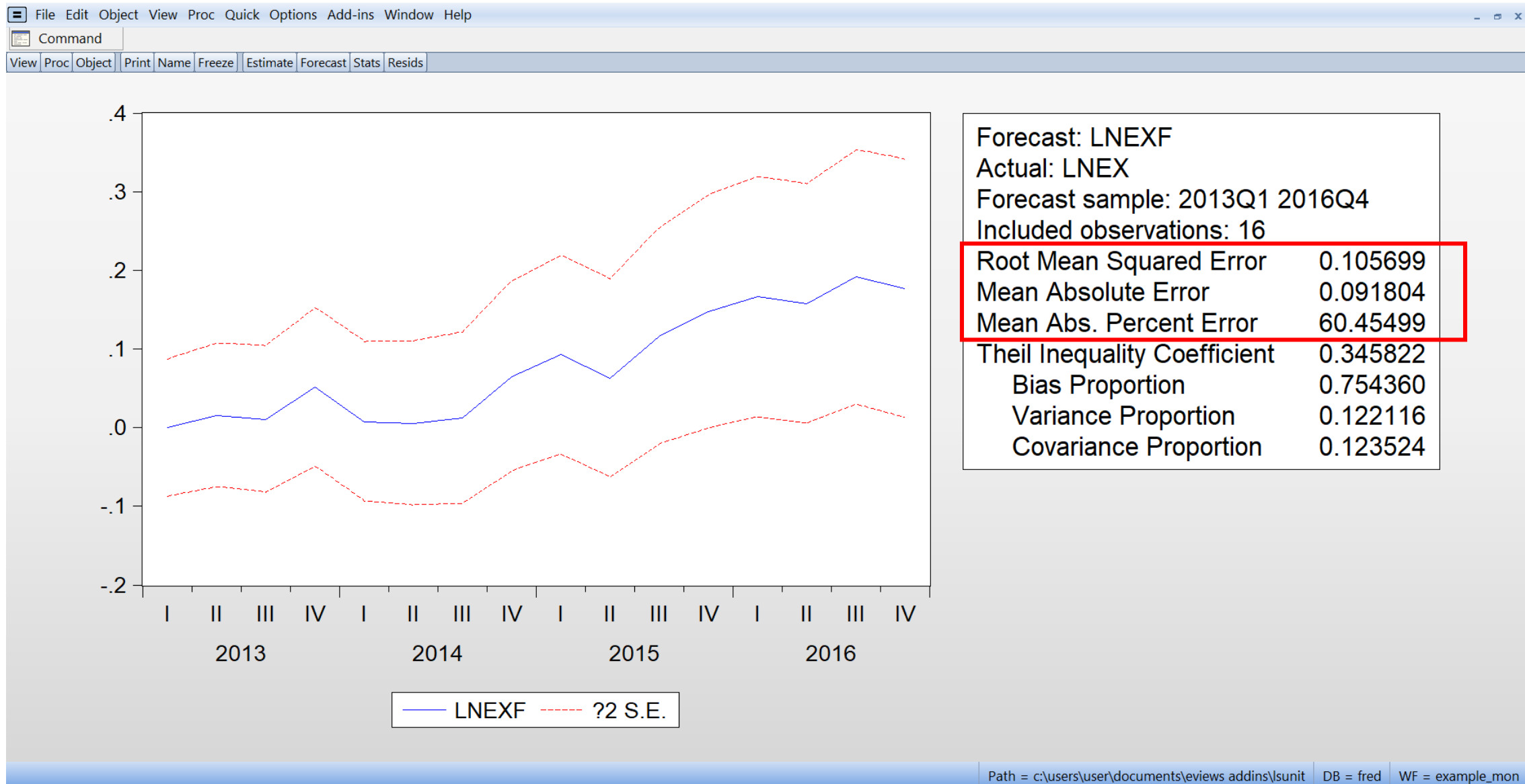
Theil Inequality Coefficient 0.345822

Bias Proportion 0.754360

Variance Proportion 0.122116

Covariance Proportion 0.123524

模型4：貨幣分析法模型 之FMOLS估計



Dynamic Forecasting

If you select dynamic forecasting, EViews will perform a multi-step forecast of Y , beginning at the start of the forecast sample. For our single lag specification above:

- The initial observation in the forecast sample will use the actual value of lagged Y . Thus, if S is the first observation in the forecast sample, EViews will compute:

$$\hat{y}_S = \hat{c}(1) + \hat{c}(2)x_S + \hat{c}(3)z_S + \hat{c}(4)y_{S-1}, \quad (23.6)$$

where y_{S-1} is the value of the lagged endogenous variable in the period prior to the start of the forecast sample. This is the one-step ahead forecast.

- Forecasts for subsequent observations will use the previously *forecasted* values of Y :

$$\hat{y}_{S+k} = \hat{c}(1) + \hat{c}(2)x_{S+k} + \hat{c}(3)z_{S+k} + \hat{c}(4)\hat{y}_{S+k-1}. \quad (23.7)$$

Static Forecasting

Static forecasting performs a series of one-step ahead forecasts of the dependent variable:

- For each observation in the forecast sample, EViews computes:

$$\hat{y}_{S+k} = \hat{c}(1) + \hat{c}(2)x_{S+k} + \hat{c}(3)z_{S+k} + \hat{c}(4)y_{S+k-1} \quad (23.8)$$

always using the actual value of the lagged endogenous variable.