ภาคผนวก

ภาคผนวก ก

ผลการทดสอบยูนิทรูท (Unit Root Test) ด้วยวิธี Augmented Dickey – Fuller Test

1. ผลการทดสอบ Unit Root Test ของอัตราแลกเปลี่ยนเงินบาทต่อดอลล่าห์สหรัฐฯ

1.1 Level with intercept

Null Hypothesis: EX has a unit root
Exogenous: Constant
Lag Length: 2 (Automatic based on SIC, MAXLAG=27)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-0.493194	0.8901
Test critical values:	1% level	-3.432508	
	5% level	-2.862379	
	10% level	-2.567261	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(EX)
Method: Least Squares
Date: 09/14/11 Time: 01:30
Sample (adjusted): 4 2786
Included observations: 2783 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EX(-1)	-0.000356	0.000721	-0.493194	0.6219
D(EX(-1))	-0.212803	0.018911	-11.25269	0.0000
D(EX(-2))	-0.070293	0.018899	-3.719400	0.0002
C	0.007152	0.027225	0.262689	0.7928

R-squared	0.044527	Mean dependent var	-0.004773
Adjusted R-squared	0.043495	S.D. dependent var	0.187111
S.E. of regression	0.182996	Akaike info criterion	-0.557265
Sum squared resid	93.06219	Schwarz criterion	-0.548740
Log likelihood	779.4344	Hannan-Quinn criter.	-0.554187
F-statistic	43.16872	Durbin-Watson stat	1.997654
Prob(F-statistic)	0.000000		

1.2 Level with intercept and Trend

Null Hypothesis: EX has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 2 (Automatic based on SIC, MAXLAG=27)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.353784	0.4040
Test critical values:	1% level	-3.961340	
	5% level	-3.411422	
	10% level	-3.127564	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(EX)
Method: Least Squares
Date: 09/14/11 Time: 01:55
Sample (adjusted): 4 2786
Included observations: 2783 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EX(-1)	-0.004814	0.002045	-2.353784	0.0187
D(EX(-1))	-0.210346	0.018926	-11.11434	0.0000
D(EX(-2))	-0.068611	0.018898	-3.630637	0.0003
C	0.213880	0.092830	2.303998	0.0213
@TREND(1)	-2.85E-05	1.22E-05	-2.329214	0.0199

R-squared	0.046389	Mean dependent var	-0.004773
Adjusted R-squared	0.045016	S.D. dependent var	0.187111
S.E. of regression	0.182851	Akaike info criterion	-0.558497
Sum squared resid	92.88080	Schwarz criterion	-0.547841
Log likelihood	782.1493	Hannan-Quinn criter.	-0.554650
F-statistic	33.78440	Durbin-Watson stat	1.997577
Prob(F-statistic)	0.000000		

1.3 Level without intercept and Trend

Null Hypothesis: EX has a unit root
Exogenous: None
Lag Length: 2 (Automatic based on SIC, MAXLAG=27)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.824709	0.0648
Test critical values:	1% level	-2.565793	
	5% level	-1.940938	
	10% level	-1.616623	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(EX)
Method: Least Squares
Date: 09/14/11 Time: 02:00
Sample (adjusted): 4 2786
Included observations: 2783 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EX(-1)	-0.000168	9.19E-05	-1.824709	0.0682
D(EX(-1))	-0.212953	0.018899	-11.26768	0.0000
D(EX(-2))	-0.070414	0.018890	-3.727534	0.0002

R-squared	0.044503	Mean dependent var	-0.004773
Adjusted R-squared	0.043816	S.D. dependent var	0.187111
S.E. of regression	0.182966	Akaike info criterion	-0.557959
Sum squared resid	93.06450	Schwarz criterion	-0.551565
Log likelihood	779.3999	Hannan-Quinn criter.	-0.555650
Durbin-Watson stat	1.997678		

2. ผลการทดสอบ Unit Root Test ของดัชนีตลาดหลักทรัพย์แห่งประเทศไทย

2.1 Level with intercept

Null Hypothesis: S has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic based on SIC, MAXLAG=27)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-0.931136	0.7788
Test critical values:	1% level	-3.432507	
	5% level	-2.862378	
	10% level	-2.567261	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(S)
Method: Least Squares
Date: 09/14/11 Time: 23:20
Sample (adjusted): 2 2786
Included observations: 2785 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
S(-1)	-0.000732	0.000786	-0.931136	0.3519
C	0.747514	0.528649	1.414008	0.1575

R-squared	0.000311	Mean dependent var	0.280086
Adjusted R-squared	-0.000048	S.D. dependent var	8.746206
S.E. of regression	8.746415	Akaike info criterion	7.175883
Sum squared resid	212898.9	Schwarz criterion	7.180143
Log likelihood	-9990.417	Hannan-Quinn criter.	7.177421
F-statistic	0.867014	Durbin-Watson stat	1.990613
Prob(F-statistic)	0.351864		

2.2 Level with intercept and Trend

Null Hypothesis: S has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=27)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.682024	0.7592
Test critical values:	1% level	-3.961338	
	5% level	-3.411421	
	10% level	-3.127563	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(S)
Method: Least Squares
Date: 09/14/11 Time: 23:25
Sample (adjusted): 2 2786
Included observations: 2785 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
S(-1)	-0.002116	0.001258	-1.682024	0.0927
C	0.984176	0.554603	1.774558	0.0761
@TREND(1)	0.000465	0.000330	1.408947	0.1590

R-squared	0.001024	Mean dependent var	0.280086
Adjusted R-squared	0.000306	S.D. dependent var	8.746206
S.E. of regression	8.744868	Akaike info criterion	7.175888
Sum squared resid	212747.1	Schwarz criterion	7.182278
Log likelihood	-9989.424	Hannan-Quinn criter.	7.178195
F-statistic	1.426226	Durbin-Watson stat	1.989279
Prob(F-statistic)	0.240389		

2.3 Level without intercept and Trend

Null Hypothesis: S has a unit root
Exogenous: None
Lag Length: 0 (Automatic based on SIC, MAXLAG=27)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		1.312597	0.9527
Test critical values:	1% level	-2.565793	
	5% level	-1.940938	
	10% level	-1.616623	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(S)
Method: Least Squares
Date: 09/14/11 Time: 23:27
Sample (adjusted): 2 2786
Included observations: 2785 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
S(-1)	0.000323	0.000246	1.312597	0.1894

R-squared	-0.000407	Mean dependent var	0.280086
Adjusted R-squared	-0.000407	S.D. dependent var	8.746206
S.E. of regression	8.747985	Akaike info criterion	7.175883
Sum squared resid	213051.8	Schwarz criterion	7.178013
Log likelihood	-9991.417	Hannan-Quinn criter.	7.176652
Durbin-Watson stat	1.991283		

3. ผลการทดสอบ Unit Root Test ของอัตราดอกเบี้ยเงินฝากภายในประเทศไทย

3.1 Level with intercept

Null Hypothesis: I has a unit root
Exogenous: Constant
Lag Length: 22 (Automatic based on SIC, MAXLAG=27)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.337873	0.1601
Test critical values:	1% level	-3.432566	
	5% level	-2.862405	
	10% level	-2.567275	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(I)
Method: Least Squares
Date: 09/22/11 Time: 02:38
Sample (adjusted): 24 2739
Included observations: 2716 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
I(-1)	-0.002713	0.001160	-2.337873	0.0195
D(I(-1))	0.001208	0.018335	0.065860	0.9475
D(I(-2))	0.001208	0.018335	0.065860	0.9475
D(I(-3))	0.001208	0.018335	0.065860	0.9475
D(I(-4))	0.001208	0.018335	0.065860	0.9475
D(I(-5))	0.001208	0.018335	0.065860	0.9475
D(I(-6))	0.001208	0.018335	0.065860	0.9475
D(I(-7))	0.001208	0.018335	0.065860	0.9475
D(I(-8))	0.001208	0.018335	0.065860	0.9475
D(I(-9))	0.001208	0.018335	0.065860	0.9475
D(I(-10))	0.001208	0.018335	0.065860	0.9475
D(I(-11))	0.001208	0.018335	0.065860	0.9475
D(I(-12))	0.001208	0.018335	0.065860	0.9475
D(I(-13))	0.001208	0.018335	0.065860	0.9475
D(I(-14))	0.001208	0.018335	0.065860	0.9475
D(I(-15))	0.001208	0.018335	0.065860	0.9475
D(I(-16))	0.001208	0.018335	0.065860	0.9475
D(I(-17))	0.001208	0.018335	0.065860	0.9475
D(I(-18))	0.001208	0.018335	0.065860	0.9475
D(I(-19))	0.001208	0.018335	0.065860	0.9475
D(I(-20))	0.001208	0.018335	0.065860	0.9475
D(I(-21))	0.001208	0.018335	0.065860	0.9475
D(I(-22))	0.307843	0.018335	16.79001	0.0000
C	0.003247	0.002047	1.586404	0.1128

R-squared	0.095826	Mean dependent var	-0.000644
Adjusted R-squared	0.088101	S.D. dependent var	0.070919
S.E. of regression	0.067723	Akaike info criterion	-2.537980
Sum squared resid	12.34665	Schwarz criterion	-2.485784
Log likelihood	3470.577	Hannan-Quinn criter.	-2.519110
F-statistic	12.40445	Durbin-Watson stat	1.984006
Prob(F-statistic)	0.000000		

3.2 Level with intercept and Trend

Null Hypothesis: I has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 22 (Automatic based on SIC, MAXLAG=27)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.392895	0.3831
Test critical values:	1% level	-3.961422	
	5% level	-3.411462	
	10% level	-3.127587	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(I)
Method: Least Squares
Date: 09/22/11 Time: 02:42
Sample (adjusted): 24 2739
Included observations: 2716 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
I(-1)	-0.002914	0.001218	-2.392895	0.0168
D(I(-1))	0.001352	0.018339	0.073731	0.9412
D(I(-2))	0.001352	0.018339	0.073724	0.9412
D(I(-3))	0.001352	0.018339	0.073717	0.9412
D(I(-4))	0.001352	0.018339	0.073711	0.9412
D(I(-5))	0.001352	0.018339	0.073704	0.9413
D(I(-6))	0.001352	0.018339	0.073697	0.9413
D(I(-7))	0.001351	0.018339	0.073691	0.9413
D(I(-8))	0.001351	0.018339	0.073684	0.9413
D(I(-9))	0.001351	0.018339	0.073678	0.9413
D(I(-10))	0.001351	0.018339	0.073671	0.9413
D(I(-11))	0.001351	0.018339	0.073664	0.9413
D(I(-12))	0.001351	0.018339	0.073658	0.9413
D(I(-13))	0.001351	0.018339	0.073651	0.9413
D(I(-14))	0.001351	0.018339	0.073645	0.9413
D(I(-15))	0.001350	0.018339	0.073638	0.9413
D(I(-16))	0.001350	0.018339	0.073631	0.9413
D(I(-17))	0.001350	0.018339	0.073625	0.9413
D(I(-18))	0.001350	0.018339	0.073618	0.9413
D(I(-19))	0.001350	0.018339	0.073611	0.9413
D(I(-20))	0.001350	0.018339	0.073605	0.9413
D(I(-21))	0.001350	0.018339	0.073598	0.9413
D(I(-22))	0.307985	0.018339	16.79387	0.0000
C	0.004831	0.003554	1.359257	0.1742
@TREND(1)	-9.48E-07	1.74E-06	-0.545158	0.5857

R-squared	0.095926	Mean dependent var	-0.000644
Adjusted R-squared	0.087863	S.D. dependent var	0.070919
S.E. of regression	0.067732	Akaike info criterion	-2.537354
Sum squared resid	12.34529	Schwarz criterion	-2.482983
Log likelihood	3470.727	Hannan-Quinn criter.	-2.517698
F-statistic	11.89688	Durbin-Watson stat	1.984114
Prob(F-statistic)	0.000000		

3.3 Level without intercept and Trend

Null Hypothesis: I has a unit root
Exogenous: None
Lag Length: 22 (Automatic based on SIC, MAXLAG=27)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.750902	0.0759
Test critical values:	1% level	-2.565814	
	5% level	-1.940940	
	10% level	-1.616621	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(I)
Method: Least Squares
Date: 09/22/11 Time: 02:44
Sample (adjusted): 24 2739
Included observations: 2716 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
I(-1)	-0.001291	0.000738	-1.750902	0.0801
D(I(-1))	0.000377	0.018333	0.020553	0.9836
D(I(-2))	0.000377	0.018333	0.020553	0.9836
D(I(-3))	0.000377	0.018333	0.020553	0.9836
D(I(-4))	0.000377	0.018333	0.020553	0.9836
D(I(-5))	0.000377	0.018333	0.020553	0.9836
D(I(-6))	0.000377	0.018333	0.020553	0.9836
D(I(-7))	0.000377	0.018333	0.020553	0.9836
D(I(-8))	0.000377	0.018333	0.020553	0.9836
D(I(-9))	0.000377	0.018333	0.020553	0.9836
D(I(-10))	0.000377	0.018333	0.020553	0.9836
D(I(-11))	0.000377	0.018333	0.020553	0.9836
D(I(-12))	0.000377	0.018333	0.020553	0.9836
D(I(-13))	0.000377	0.018333	0.020553	0.9836
D(I(-14))	0.000377	0.018333	0.020553	0.9836
D(I(-15))	0.000377	0.018333	0.020553	0.9836
D(I(-16))	0.000377	0.018333	0.020553	0.9836
D(I(-17))	0.000377	0.018333	0.020553	0.9836
D(I(-18))	0.000377	0.018333	0.020553	0.9836
D(I(-19))	0.000377	0.018333	0.020553	0.9836
D(I(-20))	0.000377	0.018333	0.020553	0.9836
D(I(-21))	0.000377	0.018333	0.020553	0.9836
D(I(-22))	0.307012	0.018333	16.74682	0.0000

R-squared	0.094980	Mean dependent var	-0.000644
Adjusted R-squared	0.087587	S.D. dependent var	0.070919
S.E. of regression	0.067742	Akaike info criterion	-2.537782
Sum squared resid	12.35820	Schwarz criterion	-2.487760
Log likelihood	3469.308	Hannan-Quinn criter.	-2.519698
Durbin-Watson stat	1.983323		

4. ผลการทดสอบ Unit Root Test ของอัตราแลกเปลี่ยนเงินบาทต่อดอลล่าห์สหรัฐฯ

4.1 1st difference with intercept

Null Hypothesis: D(EX) has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic based on SIC, MAXLAG=27)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-43.83674	0.0000
Test critical values:	1% level	-3.432508	
	5% level	-2.862379	
	10% level	-2.567261	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(EX,2)
Method: Least Squares
Date: 09/14/11 Time: 23:34
Sample (adjusted): 4 2786
Included observations: 2783 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EX(-1))	-1.283533	0.029280	-43.83674	0.0000
D(EX(-1),2)	0.070484	0.018892	3.730811	0.0002
C	-0.006166	0.003471	-1.776252	0.0758

R-squared	0.602018	Mean dependent var	0.000174
Adjusted R-squared	0.601732	S.D. dependent var	0.289932
S.E. of regression	0.182971	Akaike info criterion	-0.557896
Sum squared resid	93.07034	Schwarz criterion	-0.551502
Log likelihood	779.3126	Hannan-Quinn criter.	-0.555588
F-statistic	2102.624	Durbin-Watson stat	1.997696
Prob(F-statistic)	0.000000		

4.2 1st difference with intercept and Trend

Null Hypothesis: D(EX) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 1 (Automatic based on SIC, MAXLAG=27)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-43.83130	0.0000
Test critical values:	1% level	-3.961340	
	5% level	-3.411422	
	10% level	-3.127564	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(EX,2)
Method: Least Squares
Date: 09/14/11 Time: 23:48
Sample (adjusted): 4 2786
Included observations: 2783 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EX(-1))	-1.283606	0.029285	-43.83130	0.0000
D(EX(-1),2)	0.070523	0.018896	3.732218	0.0002
C	-0.004010	0.006948	-0.577117	0.5639
@TREND(1)	-1.55E-06	4.32E-06	-0.358268	0.7202

R-squared	0.602037	Mean dependent var	0.000174
Adjusted R-squared	0.601607	S.D. dependent var	0.289932
S.E. of regression	0.183000	Akaike info criterion	-0.557224
Sum squared resid	93.06604	Schwarz criterion	-0.548699
Log likelihood	779.3769	Hannan-Quinn criter.	-0.554146
F-statistic	1401.353	Durbin-Watson stat	1.997720
Prob(F-statistic)	0.000000		

4.3 1st difference without intercept and Trend

Null Hypothesis: D(EX) has a unit root
Exogenous: None
Lag Length: 1 (Automatic based on SIC, MAXLAG=27)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-43.78379	0.0001
Test critical values:	1% level	-2.565793	
	5% level	-1.940938	
	10% level	-1.616623	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(EX,2)
Method: Least Squares
Date: 09/14/11 Time: 23:49
Sample (adjusted): 4 2786
Included observations: 2783 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EX(-1))	-1.281392	0.029266	-43.78379	0.0000
D(EX(-1),2)	0.069424	0.018890	3.675109	0.0002

R-squared	0.601567	Mean dependent var	0.000174
Adjusted R-squared	0.601424	S.D. dependent var	0.289932
S.E. of regression	0.183042	Akaike info criterion	-0.557481
Sum squared resid	93.17596	Schwarz criterion	-0.553218
Log likelihood	777.7343	Hannan-Quinn criter.	-0.555942
Durbin-Watson stat	1.997606		

5. ผลการทดสอบ Unit Root Test ของดัชนีตลาดหลักทรัพย์แห่งประเทศไทย

5.1 1st difference with intercept

Null Hypothesis: D(S) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic based on SIC, MAXLAG=27)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-52.51940	0.0001
Test critical values:	1% level	-3.432507	
	5% level	-2.862379	
	10% level	-2.567261	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(S,2)
Method: Least Squares
Date: 09/14/11 Time: 23:53
Sample (adjusted): 3 2786
Included observations: 2784 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(S(-1))	-0.996339	0.018971	-52.51940	0.0000
C	0.279140	0.165909	1.682487	0.0926

R-squared	0.497860	Mean dependent var	-0.005729
Adjusted R-squared	0.497679	S.D. dependent var	12.34475
S.E. of regression	8.749289	Akaike info criterion	7.176540
Sum squared resid	212962.3	Schwarz criterion	7.180801
Log likelihood	-9987.744	Hannan-Quinn criter.	7.178079
F-statistic	2758.287	Durbin-Watson stat	1.999096
Prob(F-statistic)	0.000000		

5.2 1st difference with intercept and Trend

Null Hypothesis: D(S) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic based on SIC, MAXLAG=27)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-52.51035	0.0000
Test critical values:	1% level	-3.961339	
	5% level	-3.411421	
	10% level	-3.127563	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(S,2)
Method: Least Squares
Date: 09/14/11 Time: 23:55
Sample (adjusted): 3 2786
Included observations: 2784 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(S(-1))	-0.996350	0.018974	-52.51035	0.0000
C	0.235828	0.331995	0.710336	0.4776
@TREND(1)	3.11E-05	0.000206	0.150625	0.8803

R-squared	0.497864	Mean dependent var	-0.005729
Adjusted R-squared	0.497503	S.D. dependent var	12.34475
S.E. of regression	8.750827	Akaike info criterion	7.177250
Sum squared resid	212960.5	Schwarz criterion	7.183642
Log likelihood	-9987.733	Hannan-Quinn criter.	7.179558
F-statistic	1378.670	Durbin-Watson stat	1.999088
Prob(F-statistic)	0.000000		

5.3 1st difference without intercept and Trend

Null Hypothesis: D(S) has a unit root
Exogenous: None
Lag Length: 0 (Automatic based on SIC, MAXLAG=27)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-52.47520	0.0001
Test critical values:	1% level	-2.565793	
	5% level	-1.940938	
	10% level	-1.616623	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(S,2)
Method: Least Squares
Date: 09/14/11 Time: 23:57
Sample (adjusted): 3 2786
Included observations: 2784 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(S(-1))	-0.995295	0.018967	-52.47520	0.0000

R-squared	0.497349	Mean dependent var	-0.005729
Adjusted R-squared	0.497349	S.D. dependent var	12.34475
S.E. of regression	8.752167	Akaike info criterion	7.176839
Sum squared resid	213179.0	Schwarz criterion	7.178969
Log likelihood	-9989.160	Hannan-Quinn criter.	7.177608
Durbin-Watson stat	1.999254		

6. ผลการทดสอบ Unit Root Test ของอัตราดอกเบี้ยเงินฝากภายในประเทศไทย

6.1 1st difference with intercept

Null Hypothesis: D(I) has a unit root
Exogenous: Constant
Lag Length: 21 (Automatic based on SIC, MAXLAG=27)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-8.067054	0.0000
Test critical values:	1% level	-3.432566	
	5% level	-2.862405	
	10% level	-2.567275	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(I,2)
Method: Least Squares
Date: 09/22/11 Time: 02:46
Sample (adjusted): 24 2739
Included observations: 2716 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(I(-1))	-0.694627	0.086107	-8.067054	0.0000
D(I(-1),2)	-0.305431	0.084123	-3.630744	0.0003
D(I(-2),2)	-0.305488	0.082093	-3.721258	0.0002
D(I(-3),2)	-0.305545	0.080011	-3.818804	0.0001
D(I(-4),2)	-0.305603	0.077874	-3.924347	0.0001
D(I(-5),2)	-0.305660	0.075676	-4.039044	0.0001
D(I(-6),2)	-0.305717	0.073414	-4.164305	0.0000
D(I(-7),2)	-0.305775	0.071080	-4.301860	0.0000
D(I(-8),2)	-0.305832	0.068667	-4.453868	0.0000
D(I(-9),2)	-0.305889	0.066166	-4.623055	0.0000
D(I(-10),2)	-0.305947	0.063568	-4.812929	0.0000
D(I(-11),2)	-0.306004	0.060859	-5.028090	0.0000
D(I(-12),2)	-0.306061	0.058024	-5.274712	0.0000
D(I(-13),2)	-0.306119	0.055044	-5.561306	0.0000
D(I(-14),2)	-0.306176	0.051894	-5.900005	0.0000
D(I(-15),2)	-0.306234	0.048541	-6.308813	0.0000
D(I(-16),2)	-0.306291	0.044938	-6.815855	0.0000
D(I(-17),2)	-0.306348	0.041021	-7.468102	0.0000
D(I(-18),2)	-0.306406	0.036689	-8.351500	0.0000
D(I(-19),2)	-0.306463	0.031772	-9.645686	0.0000
D(I(-20),2)	-0.306520	0.025941	-11.81620	0.0000
D(I(-21),2)	-0.306578	0.018342	-16.71445	0.0000
C	-0.000448	0.001302	-0.343821	0.7310

R-squared	0.547032	Mean dependent var	0.000000
Adjusted R-squared	0.543332	S.D. dependent var	0.100299
S.E. of regression	0.067779	Akaike info criterion	-2.536688
Sum squared resid	12.37172	Schwarz criterion	-2.486667
Log likelihood	3467.823	Hannan-Quinn criter.	-2.518604
F-statistic	147.8290	Durbin-Watson stat	1.982863
Prob(F-statistic)	0.000000		

6.2 1st difference with intercept and Trend

Null Hypothesis: D(I) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 21 (Automatic based on SIC, MAXLAG=27)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-8.067799	0.0000
Test critical values:	1% level	-3.961422	
	5% level	-3.411462	
	10% level	-3.127587	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(I,2)
Method: Least Squares
Date: 09/22/11 Time: 02:47
Sample (adjusted): 24 2739
Included observations: 2716 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(I(-1))	-0.694986	0.086143	-8.067799	0.0000
D(I(-1),2)	-0.305088	0.084158	-3.625172	0.0003
D(I(-2),2)	-0.305162	0.082126	-3.715794	0.0002
D(I(-3),2)	-0.305236	0.080042	-3.813451	0.0001
D(I(-4),2)	-0.305310	0.077903	-3.919106	0.0001
D(I(-5),2)	-0.305384	0.075704	-4.033916	0.0001
D(I(-6),2)	-0.305458	0.073440	-4.159292	0.0000
D(I(-7),2)	-0.305532	0.071104	-4.296963	0.0000
D(I(-8),2)	-0.305606	0.068689	-4.449089	0.0000
D(I(-9),2)	-0.305679	0.066187	-4.618395	0.0000
D(I(-10),2)	-0.305753	0.063587	-4.808391	0.0000
D(I(-11),2)	-0.305827	0.060877	-5.023675	0.0000
D(I(-12),2)	-0.305901	0.058041	-5.270421	0.0000
D(I(-13),2)	-0.305974	0.055060	-5.557140	0.0000
D(I(-14),2)	-0.306048	0.051908	-5.895963	0.0000
D(I(-15),2)	-0.306121	0.048553	-6.304895	0.0000
D(I(-16),2)	-0.306195	0.044949	-6.812056	0.0000
D(I(-17),2)	-0.306268	0.041030	-7.464414	0.0000
D(I(-18),2)	-0.306342	0.036697	-8.347905	0.0000
D(I(-19),2)	-0.306415	0.031779	-9.642143	0.0000
D(I(-20),2)	-0.306488	0.025946	-11.81261	0.0000
D(I(-21),2)	-0.306562	0.018346	-16.71041	0.0000
C	-0.000879	0.002636	-0.333414	0.7388
@TREND(1)	3.12E-07	1.66E-06	0.188186	0.8507

R-squared	0.547038	Mean dependent var	0.000000
Adjusted R-squared	0.543168	S.D. dependent var	0.100299
S.E. of regression	0.067791	Akaike info criterion	-2.535965
Sum squared resid	12.37156	Schwarz criterion	-2.483768
Log likelihood	3467.841	Hannan-Quinn criter.	-2.517095
F-statistic	141.3525	Durbin-Watson stat	1.982856
Prob(F-statistic)	0.000000		

6.3 1st difference without intercept and Trend

Null Hypothesis: D(I) has a unit root
Exogenous: None
Lag Length: 21 (Automatic based on SIC, MAXLAG=27)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-8.061043	0.0000
Test critical values:	1% level	-2.565814	
	5% level	-1.940940	
	10% level	-1.616621	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(I,2)
Method: Least Squares
Date: 09/22/11 Time: 02:49
Sample (adjusted): 24 2739
Included observations: 2716 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(I(-1))	-0.693365	0.086014	-8.061043	0.0000
D(I(-1),2)	-0.306635	0.084037	-3.648823	0.0003
D(I(-2),2)	-0.306635	0.082011	-3.738931	0.0002
D(I(-3),2)	-0.306635	0.079935	-3.836062	0.0001
D(I(-4),2)	-0.306635	0.077803	-3.941180	0.0001
D(I(-5),2)	-0.306635	0.075611	-4.055440	0.0001
D(I(-6),2)	-0.306635	0.073353	-4.180252	0.0000
D(I(-7),2)	-0.306635	0.071024	-4.317346	0.0000
D(I(-8),2)	-0.306635	0.068616	-4.468878	0.0000
D(I(-9),2)	-0.306635	0.066120	-4.637573	0.0000
D(I(-10),2)	-0.306635	0.063526	-4.826939	0.0000
D(I(-11),2)	-0.306635	0.060821	-5.041574	0.0000
D(I(-12),2)	-0.306635	0.057991	-5.287647	0.0000
D(I(-13),2)	-0.306635	0.055015	-5.573670	0.0000
D(I(-14),2)	-0.306635	0.051869	-5.911769	0.0000
D(I(-15),2)	-0.306635	0.048519	-6.319947	0.0000
D(I(-16),2)	-0.306635	0.044920	-6.826323	0.0000
D(I(-17),2)	-0.306635	0.041006	-7.477862	0.0000
D(I(-18),2)	-0.306635	0.036677	-8.360504	0.0000
D(I(-19),2)	-0.306635	0.031763	-9.653879	0.0000
D(I(-20),2)	-0.306635	0.025934	-11.82354	0.0000
D(I(-21),2)	-0.306635	0.018338	-16.72101	0.0000

R-squared	0.547013	Mean dependent var	0.000000
Adjusted R-squared	0.543481	S.D. dependent var	0.100299
S.E. of regression	0.067768	Akaike info criterion	-2.537381
Sum squared resid	12.37227	Schwarz criterion	-2.489534
Log likelihood	3467.763	Hannan-Quinn criter.	-2.520083
Durbin-Watson stat	1.982892		

ภาคผนวก ข

ผลการประมาณแบบจำลอง Autoregressive integrated moving average (ARIMA(p,d,q))

1. ผลการประมาณแบบจำลอง ARIMA(p,d,q) ของอัตราแลกเปลี่ยน บาทต่อดอลล่าห์สหรัฐฯ

Dependent Variable: D(EX)
Method: Least Squares
Date: 10/20/11 Time: 14:53
Sample (adjusted): 3 2786
Included observations: 2784 after adjustments
Convergence achieved after 4 iterations
MA Backcast: 1 2

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.004914	0.002661	-1.846734	0.0649
AR(1)	-0.212877	0.018922	-11.25030	0.0000
MA(2)	-0.070177	0.019329	-3.630570	0.0003

R-squared	0.044652	Mean dependent var	-0.004942
Adjusted R-squared	0.043965	S.D. dependent var	0.187289
S.E. of regression	0.183126	Akaike info criterion	-0.556209
Sum squared resid	93.26112	Schwarz criterion	-0.549817
Log likelihood	777.2423	Hannan-Quinn criter.	-0.553901
F-statistic	64.99097	Durbin-Watson stat	1.997316
Prob(F-statistic)	0.000000		

Inverted AR Roots	-.21	
Inverted MA Roots	.26	-.26

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.125312	Prob. F(2,2779)	0.8822
Obs*R-squared	0.251046	Prob. Chi-Square(2)	0.8820

2. ผลการประมาณแบบจำลอง ARIMA(p,d,q) ของดัชนีตลาดหลักทรัพย์ของตลาดหลักทรัพย์แห่งประเทศไทย

Dependent Variable: D(S)
Method: Least Squares
Date: 10/20/11 Time: 14:55
Sample (adjusted): 4 2786
Included observations: 2783 after adjustments
Convergence achieved after 4 iterations
MA Backcast: -2 3

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.278203	0.163862	1.697790	0.0897
AR(2)	0.049722	0.018954	2.623235	0.0088
MA(6)	-0.058752	0.018988	-3.094109	0.0020

R-squared	0.005992	Mean dependent var	0.279267
Adjusted R-squared	0.005277	S.D. dependent var	8.749213
S.E. of regression	8.726098	Akaike info criterion	7.171591
Sum squared resid	211682.5	Schwarz criterion	7.177985
Log likelihood	-9976.269	Hannan-Quinn criter.	7.173900
F-statistic	8.379382	Durbin-Watson stat	1.991246
Prob(F-statistic)	0.000235		

Inverted AR Roots	.22	-.22		
Inverted MA Roots	.62	.31+.54i	.31-.54i	-.31-.54i
	-.31+.54i	-.62		

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.038545	Prob. F(2,2778)	0.9622
Obs*R-squared	0.077217	Prob. Chi-Square(2)	0.9621

3.ผลการประมาณแบบจำลอง ARIMA(p,d,q) ของอัตราดอกเบี้ยเงินฝากภายในประเทศไทย

Dependent Variable: D(I)
Method: Least Squares
Date: 10/20/11 Time: 14:57
Sample (adjusted): 4 2786
Included observations: 2783 after adjustments
Convergence achieved after 18 iterations
MA Backcast: 2 3

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.000334	0.001857	-0.179718	0.8574
AR(2)	0.964204	0.028392	33.96036	0.0000
MA(2)	-0.950739	0.033291	-28.55811	0.0000

R-squared	0.003179	Mean dependent var	-0.000582
Adjusted R-squared	0.002462	S.D. dependent var	0.070104
S.E. of regression	0.070017	Akaike info criterion	-2.479067
Sum squared resid	13.62879	Schwarz criterion	-2.472674
Log likelihood	3452.622	Hannan-Quinn criter.	-2.476759
F-statistic	4.433243	Durbin-Watson stat	2.000558
Prob(F-statistic)	0.011960		

Inverted AR Roots	.98	-.98
Inverted MA Roots	.98	-.98

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.466027	Prob. F(2,2778)	0.6275
Obs*R-squared	0.933264	Prob. Chi-Square(2)	0.6271

ภาคผนวก ค

ผลการประมาณแบบจำลอง Generalized Autoregressive Conditional Heteroscedasticity: GARCH(p,q)

1. ผลการประมาณแบบจำลอง GARCH(3,4) ของอัตราแลกเปลี่ยน บาทต่อดอลล่าห์สหรัฐฯ

Dependent Variable: D(EX)
Method: ML - ARCH (Marquardt) - Normal distribution
Date: 10/20/11 Time: 15:01
Sample (adjusted): 3 2786
Included observations: 2784 after adjustments
Convergence achieved after 36 iterations
MA Backcast: 1 2
Presample variance: backcast (parameter = 0.7)
GARCH = C(4) + C(5)*RESID(-1)^2 + C(6)*RESID(-2)^2 + C(7)*RESID(-3)^2 + C(8)*RESID(-4)^2 + C(9)*GARCH(-1) + C(10)*GARCH(-2) + C(11)*GARCH(-3)

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-0.004808	0.001631	-2.947506	0.0032
AR(1)	-0.012449	0.018387	-0.677071	0.4984
MA(2)	-0.012926	0.018050	-0.716134	0.4739
Variance Equation				
C	3.09E-05	7.78E-06	3.975300	0.0001
RESID(-1)^2	0.256215	0.023444	10.92890	0.0000
RESID(-2)^2	-0.397884	0.051765	-7.686328	0.0000
RESID(-3)^2	0.469320	0.040095	11.70525	0.0000
RESID(-4)^2	-0.303270	0.014941	-20.29729	0.0000
GARCH(-1)	1.812546	0.038918	46.57294	0.0000
GARCH(-2)	-1.091406	0.053492	-20.40318	0.0000
GARCH(-3)	0.259155	0.016652	15.56303	0.0000

R-squared	0.005468	Mean dependent var	-0.004942
Adjusted R-squared	0.001882	S.D. dependent var	0.187289
S.E. of regression	0.187113	Akaike info criterion	-1.245324
Sum squared resid	97.08625	Schwarz criterion	-1.221887
Log likelihood	1744.490	Hannan-Quinn criter.	-1.236861
F-statistic	1.524715	Durbin-Watson stat	2.377711
Prob(F-statistic)	0.123992		

Inverted AR Roots	-.01	
Inverted MA Roots	.11	-.11

Heteroskedasticity Test: ARCH

F-statistic	0.126630	Prob. F(1,2781)	0.7220
Obs*R-squared	0.126715	Prob. Chi-Square(1)	0.7219

2. ผลการประมาณแบบจำลอง GARCH(4,4) ของดัชนีตลาดหลักทรัพย์ของตลาดหลักทรัพย์แห่งประเทศไทย

Dependent Variable: D(S)
Method: ML - ARCH (Marquardt) - Normal distribution
Date: 10/20/11 Time: 15:08
Sample (adjusted): 4 2786
Included observations: 2783 after adjustments
Convergence achieved after 24 iterations
MA Backcast: -2 3
Presample variance: backcast (parameter = 0.7)
GARCH = C(4) + C(5)*RESID(-1)^2 + C(6)*RESID(-2)^2 + C(7)*RESID(-3)^2 + C(8)*RESID(-4)^2 + C(9)*RESID(-5)^2 + C(10)*RESID(-6)^2 + C(11)*GARCH(-1) + C(12)*GARCH(-2) + C(13)*GARCH(-3) + C(14)*GARCH(-4)

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	0.734437	0.134413	5.464046	0.0000
AR(2)	0.029494	0.020679	1.426280	0.1538
MA(6)	-0.093710	0.020480	-4.575565	0.0000
Variance Equation				
C	2.816201	0.548667	5.132805	0.0000
RESID(-1)^2	0.212888	0.027235	7.816766	0.0000
RESID(-2)^2	-0.136592	0.043611	-3.132069	0.0017
RESID(-3)^2	0.159471	0.045061	3.539014	0.0004
RESID(-4)^2	-0.123570	0.036343	-3.400146	0.0007
RESID(-5)^2	0.098810	0.024769	3.989224	0.0001
RESID(-6)^2	-0.081096	0.015230	-5.324601	0.0000
GARCH(-1)	1.115209	0.100149	11.13546	0.0000
GARCH(-2)	-0.879083	0.140261	-6.267498	0.0000
GARCH(-3)	0.386160	0.131329	2.940410	0.0033
GARCH(-4)	0.227616	0.077030	2.954908	0.0031

R-squared	0.001239	Mean dependent var	0.279267
Adjusted R-squared	-0.003450	S.D. dependent var	8.749213
S.E. of regression	8.764291	Akaike info criterion	6.984683
Sum squared resid	212694.6	Schwarz criterion	7.014521
Log likelihood	-9705.186	Hannan-Quinn criter.	6.995457
F-statistic	0.264329	Durbin-Watson stat	1.982346
Prob(F-statistic)	0.995816		

Inverted AR Roots	.17	-.17		
Inverted MA Roots	.67	.34-.58i	.34+.58i	-.34-.58i
	-.34+.58i	-.67		

Heteroskedasticity Test: ARCH

F-statistic	0.000332	Prob. F(1,2780)	0.9855
Obs*R-squared	0.000332	Prob. Chi-Square(1)	0.9855

3. ผลการประมาณแบบจำลอง GARCH(1,8) ของอัตราดอกเบี้ยเงินฝากภายในประเทศไทย

Dependent Variable: D(I)
Method: ML - ARCH (Marquardt) - Normal distribution
Date: 10/20/11 Time: 15:04
Sample (adjusted): 4 2786
Included observations: 2783 after adjustments
Convergence achieved after 15 iterations
MA Backcast: 2 3
Presample variance: backcast (parameter = 0.7)
GARCH = C(4) + C(5)*RESID(-1)^2

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-0.000404	0.001296	-0.311491	0.7554
AR(2)	-0.000138	6724.498	-2.04E-08	1.0000
MA(2)	-0.000132	6724.497	-1.96E-08	1.0000
Variance Equation				
C	0.003250	2.64E-06	1232.747	0.0000
RESID(-1)^2	-0.000520	7.28E-07	-714.4194	0.0000

R-squared	-0.000007	Mean dependent var	-0.000582
Adjusted R-squared	-0.001446	S.D. dependent var	0.070104
S.E. of regression	0.070154	Akaike info criterion	-2.380006
Sum squared resid	13.67235	Schwarz criterion	-2.369349
Log likelihood	3316.778	Hannan-Quinn criter.	-2.376158
Durbin-Watson stat	2.000125		

Inverted MA Roots	.01	-.01

Heteroskedasticity Test: ARCH

F-statistic	0.001532	Prob. F(1,2780)	0.9688
Obs*R-squared	0.001533	Prob. Chi-Square(1)	0.9688

ภาคผนวก ง

ผลการประมาณแบบจำลอง Multivariate GARCH และ DCC

1.ผลการประมาณค่าโดยแบบจำลอง VARMA GARCH(0,2) ความสัมพันธ์ระหว่างความผันผวนของอัตราแลกเปลี่ยนเงินบาทต่อเงินดอลลาร์สหรัฐฯ และความผันผวนของดัชนีตลาดหลักทรัพย์แห่งประเทศไทย

MV_GARCH, CC - Estimation by BFGS

Convergence in 107 Iterations. Final criterion was 0.0000000 < 0.0000100

Robust Standard Error Calculations

Usable Observations 2784

Log Likelihood -9158.01493282

Variable	Coeff	Std Error	T-Stat	Signif
1. Constant	0.05733357	0.02784017	2.05938	0.03945758
2. EX{1}	0.99841525	0.00070176	1422.72259	0.00000000
3. Mvg Avge{2}	-0.15961815	0.06833639	-2.33577	0.01950319
4. Constant	1.14108222	0.60098345	1.89869	0.05760504
5. S{2}	1.00006917	0.00117845	848.62739	0.00000000
6. Mvg Avge	11.26728356	2.49376764	4.51818	0.00000624
7. C(1)	0.00827121	0.00118275	6.99321	0.00000000
8. C(2)	62.68625949	5.40646208	11.59469	0.00000000

9. A{1}(1,1)	0.84634060	0.29129733	2.90542	0.00366762
10. A{1}(1,2)	-0.00010811	0.00194511	-0.05558	0.95567769
11. A{1}(2,1)	-7.14297187	2.67188251	-2.67339	0.00750899
12. A{1}(2,2)	0.52882324	0.04520444	11.69848	0.00000000
13. A{2}(1,1)	0.42296801	0.14006455	3.01981	0.00252935
14. A{2}(1,2)	0.00148840	0.00098896	1.50502	0.13232008
15. A{2}(2,1)	2.06878250	0.58460752	3.53875	0.00040202
16. A{2}(2,2)	0.14511851	0.02590569	5.60180	0.00000002
17. R(2,1)	-0.30403516	0.03472750	-8.75488	0.00000000

2. ผลการประมาณค่าโดยแบบจำลอง Varma GARCH(2,0) ความสัมพันธ์ระหว่างความผันผวนของอัตราดอกเบี้ยและความผันผวนของดัชนีตลาดหลักทรัพย์แห่งประเทศไทย

MV_GARCH, CC - Estimation by BFGS

Convergence in 71 Iterations. Final criterion was 0.0000000 < 0.0000100

Robust Standard Error Calculations

Usable Observations 2784

Log Likelihood -8467.43865006

Variable	Coeff	Std Error	T-Stat	Signif

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1. Constant	0.0042780	0.0099223	0.43115	0.66635671
2. IN{2}	0.9962868	0.0090007	110.68970	0.00000000

3. Mvg Avge{2}	-0.0024440	0.0127464	-0.19174	0.84794540
4. Constant	1.3161426	0.0504345	26.09606	0.00000000
5. S{2}	0.9987604	0.0004258	2345.68302	0.00000000
6. Mvg Avge{6}	-1.0630696	2.8845516	-0.36854	0.71247141
7. C(1)	0.0230088	0.0083917	2.74186	0.00610922
8. C(2)	128.9808423	12.8575201	10.03155	0.00000000
9. B{1}(1,1)	-1.2615014	0.0032278	-390.82852	0.00000000
10. B{1}(1,2)	-0.0341132	0.0000737	-462.84250	0.00000000
11. B{1}(2,1)	11.2571612	1.9599244	5.74367	0.00000001
12. B{1}(2,2)	0.1541041	0.0338306	4.55516	0.00000523
13. B{2}(1,1)	-0.2995201	0.1132727	-2.64424	0.00818747
14. B{2}(1,2)	-0.0093859	0.0029259	-3.20790	0.00133708
15. B{2}(2,1)	32.6026105	12.2173704	2.66855	0.00761804
16. B{2}(2,2)	0.0173564	0.0204625	0.84821	0.39632350
17. R(2,1)	-0.0418347	0.0012139	-34.46214	0.00000000

3. ผลการประมาณค่าโดยแบบจำลอง DCC ความสัมพันธ์ระหว่างความผันผวนของอัตราแลกเปลี่ยนเงินบาทต่อเงินดอลลาร์สหรัฐฯ และความผันผวนของดัชนีตลาดหลักทรัพย์แห่งประเทศไทย

MV_GARCH, DCC - Estimation by BFGS

Convergence in 62 Iterations. Final criterion was 0.0000000 < 0.0000100

Robust Standard Error Calculations

Usable Observations 2784

Log Likelihood -9013.55237064

Variable	Coeff	Std Error	T-Stat	Signif
1. Constant	0.01494425	0.01544966	0.96729	0.33340077
2. EX{1}	0.99943114	0.00041348	2417.13128	0.00000000
3. Mvg Avge{2}	-0.04056036	0.02553620	-1.58835	0.11220779
4. Constant	0.85477183	0.38396043	2.22620	0.02600094
5. S{2}	1.00080818	0.00058572	1708.69320	0.00000000
6. Mvg Avge	68.43854487	5.12423255	13.35586	0.00000000
7. C(1)	0.00097661	0.00033899	2.88089	0.00396558
8. C(2)	27.11771593	10.02837353	2.70410	0.00684899
9. A(1)	0.28839519	0.11232294	2.56755	0.01024189
10. A(2)	0.31246965	0.06297832	4.96154	0.00000070
11. B(1)	0.75000207	0.05569172	13.46703	0.00000000

12. B(2) 0.67315825 0.06480325 10.38772 0.00000000

13. DCC(1) 0.83979196 0.00234518 358.09258 0.00000000

14. DCC(2) 0.14991776 0.00265896 56.38210 0.00000000

4. ผลการประมาณค่าโดยแบบจำลอง DCC ความสัมพันธ์ระหว่างความผันผวนของอัตราดอกเบี้ยและความผันผวนของดัชนีตลาดหลักทรัพย์แห่งประเทศไทย

MV_GARCH, DCC - Estimation by BFGS

Convergence in 31 Iterations. Final criterion was 0.0000026 < 0.0000100

Robust Standard Error Calculations

Usable Observations 2784

Log Likelihood -8497.60207712

Variable	Coeff	Std Error	T-Stat	Signif
1. Constant	0.0053918	0.0046750	1.15333	0.24877700
2. IN{2}	0.9959809	0.0039814	250.16155	0.00000000
3. Mvg Avge{2}	0.0010980	0.0033769	0.32515	0.74506880
4. Constant	1.6764770	0.6781920	2.47198	0.01343670
5. S{2}	0.9983046	0.0011019	905.99752	0.00000000
6. Mvg Avge{6}	0.3581728	0.9870993	0.36285	0.71671406

7. C(1)	0.0101227	0.0037584	2.69336	0.00707348
8. C(2)	158.0090827	8.0304904	19.67614	0.00000000
9. B(1)	-0.0080139	0.0029536	-2.71325	0.00666265
10. B(2)	-0.0034956	0.0001784	-19.59417	0.00000000
11. DCC(1)	0.4860779	0.0195170	24.90531	0.00000000
12. DCC(2)	0.4711755	0.0005676	830.16561	0.00000000

ประวัติผู้เขียน

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