



ภาคผนวก

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ภาคผนวก ก
ผลการทดสอบความนิ่งของข้อมูล (Unit Root Test)

1. การทดสอบความนิ่งด้วยวิธี Augmented Dickey-Fuller (ADF)

1) การทดสอบความนิ่งของผลตอบแทนของกองทุน MS-ASIAN SM

ในรูป Intercept ที่ระดับ 0

Null Hypothesis: D(MSASIASSM) has a unit root
Exogenous: Constant
Lag Length: 5 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-11.01837	0.0000
Test critical values:		
1% level	-3.462737	
5% level	-2.875680	
10% level	-2.574385	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(MSASIASSM,2)
Method: Least Squares
Date: 11/05/14 Time: 11:48
Sample (adjusted): 8 209
Included observations: 202 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(MSASIASSM(-1))	-4.241842	0.384979	-11.01837	0.0000
D(MSASIASSM(-1),2)	2.449781	0.346165	7.076921	0.0000
D(MSASIASSM(-2),2)	1.695418	0.286552	5.916619	0.0000
D(MSASIASSM(-3),2)	1.111483	0.215590	5.155536	0.0000
D(MSASIASSM(-4),2)	0.586363	0.139881	4.191884	0.0000
D(MSASIASSM(-5),2)	0.238007	0.069813	3.409209	0.0008
C	-0.011481	0.053260	-0.215563	0.8296
R-squared	0.795223	Mean dependent var		-0.002028
Adjusted R-squared	0.788922	S.D. dependent var		1.647353
S.E. of regression	0.756848	Akaike info criterion		2.314729
Sum squared resid	111.6996	Schwarz criterion		2.429372
Log likelihood	-226.7877	Hannan-Quinn criter.		2.361114
F-statistic	126.2089	Durbin-Watson stat		2.031613
Prob(F-statistic)	0.000000			

ในรูป Trend and Intercept ที่ระดับ 0

Null Hypothesis: D(MSASIASSM) has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 5 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-11.00272	0.0000
Test critical values:		
1% level	-4.004132	
5% level	-3.432226	
10% level	-3.139858	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(MSASIASSM,2)
 Method: Least Squares
 Date: 11/05/14 Time: 11:48
 Sample (adjusted): 8 209
 Included observations: 202 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(MSASIASSM(-1))	-4.247855	0.386073	-11.00272	0.0000
D(MSASIASSM(-1),2)	2.455080	0.347139	7.072330	0.0000
D(MSASIASSM(-2),2)	1.700083	0.287384	5.915726	0.0000
D(MSASIASSM(-3),2)	1.115118	0.216228	5.157138	0.0000
D(MSASIASSM(-4),2)	0.588555	0.140279	4.195612	0.0000
D(MSASIASSM(-5),2)	0.238834	0.069990	3.412385	0.0008
C	-0.052259	0.112040	-0.466430	0.6414
@TREND("1")	0.000379	0.000916	0.413947	0.6794
R-squared	0.795403	Mean dependent var		-0.002028
Adjusted R-squared	0.788021	S.D. dependent var		1.647353
S.E. of regression	0.758461	Akaike info criterion		2.323747
Sum squared resid	111.6010	Schwarz criterion		2.454768
Log likelihood	-226.6985	Hannan-Quinn criter.		2.376759
F-statistic	107.7439	Durbin-Watson stat		2.032122
Prob(F-statistic)	0.000000			

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ในรูปแบบ None ที่ระดับ 0

Null Hypothesis: D(MSASIASSM) has a unit root
 Exogenous: None
 Lag Length: 5 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-11.04320	0.0000
Test critical values:		
1% level	-2.576460	
5% level	-1.942407	
10% level	-1.615654	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(MSASIASSM,2)
 Method: Least Squares
 Date: 11/05/14 Time: 11:49
 Sample (adjusted): 8 209
 Included observations: 202 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(MSASIASSM(-1))	-4.240453	0.383988	-11.04320	0.0000
D(MSASIASSM(-1),2)	2.448550	0.345275	7.091599	0.0000
D(MSASIASSM(-2),2)	1.694454	0.285819	5.928414	0.0000
D(MSASIASSM(-3),2)	1.110796	0.215042	5.165494	0.0000
D(MSASIASSM(-4),2)	0.585951	0.139527	4.199556	0.0000
D(MSASIASSM(-5),2)	0.237861	0.069640	3.415599	0.0008
R-squared	0.795174	Mean dependent var		-0.002028
Adjusted R-squared	0.789949	S.D. dependent var		1.647353
S.E. of regression	0.755004	Akaike info criterion		2.305067
Sum squared resid	111.7262	Schwarz criterion		2.403332
Log likelihood	-226.8117	Hannan-Quinn criter.		2.344825
Durbin-Watson stat	2.031420			

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2) การทดสอบความนิ่งของผลตอบแทนของกองทุน PHATRA GHC

ในรูป Intercept ที่ระดับ 0

Null Hypothesis: D(PHATRAGHC) has a unit root

Exogenous: Constant

Lag Length: 8 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.486413	0.0000
Test critical values:		
1% level	-3.463235	
5% level	-2.875898	
10% level	-2.574501	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(PHATRAGHC,2)

Method: Least Squares

Date: 11/05/14 Time: 11:49

Sample (adjusted): 11 209

Included observations: 199 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PHATRAGHC(-1))	-7.161032	0.754872	-9.486413	0.0000
D(PHATRAGHC(-1),2)	5.173779	0.716473	7.221179	0.0000
D(PHATRAGHC(-2),2)	4.261747	0.651248	6.543964	0.0000
D(PHATRAGHC(-3),2)	3.415514	0.565123	6.043846	0.0000
D(PHATRAGHC(-4),2)	2.477279	0.466147	5.314368	0.0000
D(PHATRAGHC(-5),2)	1.715917	0.359138	4.777876	0.0000
D(PHATRAGHC(-6),2)	1.095153	0.259005	4.228314	0.0000
D(PHATRAGHC(-7),2)	0.594705	0.161496	3.682469	0.0003
D(PHATRAGHC(-8),2)	0.189673	0.073531	2.579480	0.0107
C	-0.008923	0.071668	-0.124498	0.9011
R-squared	0.845116	Mean dependent var		-0.001098
Adjusted R-squared	0.837741	S.D. dependent var		2.506871
S.E. of regression	1.009802	Akaike info criterion		2.906331
Sum squared resid	192.7234	Schwarz criterion		3.071824
Log likelihood	-279.1799	Hannan-Quinn criter.		2.973310
F-statistic	114.5858	Durbin-Watson stat		2.036319
Prob(F-statistic)	0.000000			

ในรูป Trend and Intercept ที่ระดับ 0

Null Hypothesis: D(PHATRAGHC) has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 8 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.463583	0.0000
Test critical values:		
1% level	-4.004836	
5% level	-3.432566	
10% level	-3.140059	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(PHATRAGHC,2)
 Method: Least Squares
 Date: 11/05/14 Time: 11:50
 Sample (adjusted): 11 209
 Included observations: 199 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PHATRAGHC(-1))	-7.162111	0.756808	-9.463583	0.0000
D(PHATRAGHC(-1),2)	5.174572	0.718303	7.203887	0.0000
D(PHATRAGHC(-2),2)	4.262155	0.652906	6.527981	0.0000
D(PHATRAGHC(-3),2)	3.415747	0.566559	6.028933	0.0000
D(PHATRAGHC(-4),2)	2.477554	0.467333	5.301470	0.0000
D(PHATRAGHC(-5),2)	1.716084	0.360051	4.766223	0.0000
D(PHATRAGHC(-6),2)	1.095140	0.259663	4.217550	0.0000
D(PHATRAGHC(-7),2)	0.594647	0.161907	3.672777	0.0003
D(PHATRAGHC(-8),2)	0.189696	0.073718	2.573255	0.0108
C	-0.037337	0.154008	-0.242436	0.8087
@TREND("1")	0.000261	0.001250	0.208593	0.8350
R-squared	0.845152	Mean dependent var		-0.001098
Adjusted R-squared	0.836916	S.D. dependent var		2.506871
S.E. of regression	1.012367	Akaike info criterion		2.916150
Sum squared resid	192.6788	Schwarz criterion		3.098192
Log likelihood	-279.1569	Hannan-Quinn criter.		2.989827
F-statistic	102.6096	Durbin-Watson stat		2.036208
Prob(F-statistic)	0.000000			

ในรูปแบบ None ที่ระดับ 0

Null Hypothesis: D(PHATRAGHC) has a unit root

Exogenous: None

Lag Length: 8 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.514818	0.0000
Test critical values:		
1% level	-2.576634	
5% level	-1.942431	
10% level	-1.615638	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(PHATRAGHC,2)

Method: Least Squares

Date: 11/05/14 Time: 11:50

Sample (adjusted): 11 209

Included observations: 199 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PHATRAGHC(-1))	-7.156894	0.752184	-9.514818	0.0000
D(PHATRAGHC(-1),2)	5.169752	0.713886	7.241709	0.0000
D(PHATRAGHC(-2),2)	4.257994	0.648863	6.562241	0.0000
D(PHATRAGHC(-3),2)	3.412232	0.563043	6.060340	0.0000
D(PHATRAGHC(-4),2)	2.474581	0.464435	5.328149	0.0000
D(PHATRAGHC(-5),2)	1.713823	0.357813	4.789713	0.0000
D(PHATRAGHC(-6),2)	1.093660	0.258056	4.238078	0.0000
D(PHATRAGHC(-7),2)	0.593857	0.160934	3.690066	0.0003
D(PHATRAGHC(-8),2)	0.189375	0.073302	2.583497	0.0105
R-squared	0.845104	Mean dependent var		-0.001098
Adjusted R-squared	0.838582	S.D. dependent var		2.506871
S.E. of regression	1.007183	Akaike info criterion		2.896363
Sum squared resid	192.7392	Schwarz criterion		3.045306
Log likelihood	-279.1881	Hannan-Quinn criter.		2.956644
Durbin-Watson stat	2.036322			

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3) การทดสอบความนิ่งของผลตอบแทนของกองทุน KK PROP

ในรูป Intercept ที่ระดับ 0

Null Hypothesis: D(KKPROP) has a unit root

Exogenous: Constant

Lag Length: 5 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-12.06093	0.0000
Test critical values:		
1% level	-3.462737	
5% level	-2.875680	
10% level	-2.574385	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(KKPROP,2)

Method: Least Squares

Date: 11/05/14 Time: 11:51

Sample (adjusted): 8 209

Included observations: 202 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(KKPROP(-1))	-4.174472	0.346115	-12.06093	0.0000
D(KKPROP(-1),2)	2.429218	0.309991	7.836402	0.0000
D(KKPROP(-2),2)	1.833941	0.256120	7.160474	0.0000
D(KKPROP(-3),2)	1.249916	0.196028	6.376208	0.0000
D(KKPROP(-4),2)	0.734928	0.133098	5.521716	0.0000
D(KKPROP(-5),2)	0.357864	0.070781	5.055928	0.0000
C	0.004981	0.043824	0.113651	0.9096
R-squared	0.799027	Mean dependent var		0.000640
Adjusted R-squared	0.792844	S.D. dependent var		1.368316
S.E. of regression	0.622781	Akaike info criterion		1.924796
Sum squared resid	75.63205	Schwarz criterion		2.039439
Log likelihood	-187.4044	Hannan-Quinn criter.		1.971181
F-statistic	129.2136	Durbin-Watson stat		2.029648
Prob(F-statistic)	0.000000			

ในรูป Trend and Intercept ที่ระดับ 0

Null Hypothesis: D(KKPROP) has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 5 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-12.03316	0.0000
Test critical values:		
1% level	-4.004132	
5% level	-3.432226	
10% level	-3.139858	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(KKPROP,2)
 Method: Least Squares
 Date: 11/05/14 Time: 11:51
 Sample (adjusted): 8 209
 Included observations: 202 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(KKPROP(-1))	-4.176170	0.347055	-12.03316	0.0000
D(KKPROP(-1),2)	2.430708	0.310830	7.820056	0.0000
D(KKPROP(-2),2)	1.834970	0.256794	7.145701	0.0000
D(KKPROP(-3),2)	1.250433	0.196524	6.362747	0.0000
D(KKPROP(-4),2)	0.735271	0.133434	5.510373	0.0000
D(KKPROP(-5),2)	0.357938	0.070956	5.044536	0.0000
C	-0.012411	0.092158	-0.134676	0.8930
@TREND("1")	0.000162	0.000754	0.214683	0.8302
R-squared	0.799075	Mean dependent var		0.000640
Adjusted R-squared	0.791825	S.D. dependent var		1.368316
S.E. of regression	0.624310	Akaike info criterion		1.934460
Sum squared resid	75.61409	Schwarz criterion		2.065480
Log likelihood	-187.3805	Hannan-Quinn criter.		1.987471
F-statistic	110.2193	Durbin-Watson stat		2.029705
Prob(F-statistic)	0.000000			

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ในรูปแบบ None ที่ระดับ 0

Null Hypothesis: D(KKPROP) has a unit root

Exogenous: None

Lag Length: 5 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-12.09108	0.0000
Test critical values:		
1% level	-2.576460	
5% level	-1.942407	
10% level	-1.615654	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(KKPROP,2)

Method: Least Squares

Date: 11/05/14 Time: 11:51

Sample (adjusted): 8 209

Included observations: 202 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(KKPROP(-1))	-4.174330	0.345240	-12.09108	0.0000
D(KKPROP(-1),2)	2.429107	0.309208	7.855889	0.0000
D(KKPROP(-2),2)	1.833851	0.255473	7.178254	0.0000
D(KKPROP(-3),2)	1.249882	0.195534	6.392162	0.0000
D(KKPROP(-4),2)	0.734888	0.132762	5.535395	0.0000
D(KKPROP(-5),2)	0.357890	0.070602	5.069098	0.0000
R-squared	0.799014	Mean dependent var		0.000640
Adjusted R-squared	0.793887	S.D. dependent var		1.368316
S.E. of regression	0.621211	Akaike info criterion		1.914962
Sum squared resid	75.63706	Schwarz criterion		2.013227
Log likelihood	-187.4111	Hannan-Quinn criter.		1.954720
Durbin-Watson stat	2.029580			

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4) การทดสอบความนิ่งของผลตอบแทนของกองทุน TISCOUS

ในรูป Intercept ที่ระดับ 0

Null Hypothesis: D(TISCOUS) has a unit root

Exogenous: Constant

Lag Length: 5 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-11.56559	0.0000
Test critical values:		
1% level	-3.462737	
5% level	-2.875680	
10% level	-2.574385	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(TISCOUS,2)

Method: Least Squares

Date: 11/05/14 Time: 11:52

Sample (adjusted): 8 209

Included observations: 202 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(TISCOUS(-1))	-4.879690	0.421915	-11.56559	0.0000
D(TISCOUS(-1),2)	2.957655	0.380475	7.773585	0.0000
D(TISCOUS(-2),2)	2.073508	0.311781	6.650527	0.0000
D(TISCOUS(-3),2)	1.289182	0.231086	5.578805	0.0000
D(TISCOUS(-4),2)	0.631516	0.147441	4.283185	0.0000
D(TISCOUS(-5),2)	0.238384	0.069690	3.420647	0.0008
C	0.014483	0.073117	0.198078	0.8432
R-squared	0.824529	Mean dependent var		0.005656
Adjusted R-squared	0.819130	S.D. dependent var		2.443362
S.E. of regression	1.039133	Akaike info criterion		2.948690
Sum squared resid	210.5606	Schwarz criterion		3.063333
Log likelihood	-290.8177	Hannan-Quinn criter.		2.995074
F-statistic	152.7157	Durbin-Watson stat		2.053751
Prob(F-statistic)	0.000000			

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ในรูป Trend and Intercept ที่ระดับ 0

Null Hypothesis: D(TISCOUS) has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 5 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-11.53588	0.0000
Test critical values:		
1% level	-4.004132	
5% level	-3.432226	
10% level	-3.139858	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(TISCOUS,2)
 Method: Least Squares
 Date: 11/05/14 Time: 11:52
 Sample (adjusted): 8 209
 Included observations: 202 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(TISCOUS(-1))	-4.879647	0.422997	-11.53588	0.0000
D(TISCOUS(-1),2)	2.957582	0.381453	7.753463	0.0000
D(TISCOUS(-2),2)	2.073420	0.312584	6.633153	0.0000
D(TISCOUS(-3),2)	1.289124	0.231681	5.564229	0.0000
D(TISCOUS(-4),2)	0.631482	0.147820	4.271959	0.0000
D(TISCOUS(-5),2)	0.238368	0.069869	3.411640	0.0008
C	0.022367	0.153746	0.145482	0.8845
@TREND("1")	-7.33E-05	0.001257	-0.058340	0.9535
R-squared	0.824532	Mean dependent var		0.005656
Adjusted R-squared	0.818201	S.D. dependent var		2.443362
S.E. of regression	1.041799	Akaike info criterion		2.958573
Sum squared resid	210.5569	Schwarz criterion		3.089594
Log likelihood	-290.8159	Hannan-Quinn criter.		3.011584
F-statistic	130.2307	Durbin-Watson stat		2.053725
Prob(F-statistic)	0.000000			

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ในรูปแบบ None ที่ระดับ 0

Null Hypothesis: D(TISCOUS) has a unit root

Exogenous: None

Lag Length: 5 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-11.59259	0.0000
Test critical values:		
1% level	-2.576460	
5% level	-1.942407	
10% level	-1.615654	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(TISCOUS,2)

Method: Least Squares

Date: 11/05/14 Time: 11:53

Sample (adjusted): 8 209

Included observations: 202 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(TISCOUS(-1))	-4.878805	0.420856	-11.59259	0.0000
D(TISCOUS(-1),2)	2.956869	0.379521	7.791060	0.0000
D(TISCOUS(-2),2)	2.072897	0.311001	6.665251	0.0000
D(TISCOUS(-3),2)	1.288778	0.230510	5.590993	0.0000
D(TISCOUS(-4),2)	0.631290	0.147075	4.292311	0.0000
D(TISCOUS(-5),2)	0.238302	0.069518	3.427938	0.0007
R-squared	0.824494	Mean dependent var		0.005656
Adjusted R-squared	0.820016	S.D. dependent var		2.443362
S.E. of regression	1.036583	Akaike info criterion		2.938990
Sum squared resid	210.6029	Schwarz criterion		3.037255
Log likelihood	-290.8380	Hannan-Quinn criter.		2.978748
Durbin-Watson stat	2.053517			

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5) การทดสอบความนิ่งของผลตอบแทนของกองทุน ABAG

ในรูป Intercept ที่ระดับ 0

Null Hypothesis: D(ABAG) has a unit root

Exogenous: Constant

Lag Length: 8 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.847431	0.0000
Test critical values:		
1% level	-3.463235	
5% level	-2.875898	
10% level	-2.574501	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(ABAG,2)

Method: Least Squares

Date: 11/05/14 Time: 11:54

Sample (adjusted): 11 209

Included observations: 199 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ABAG(-1))	-8.251873	0.837972	-9.847431	0.0000
D(ABAG(-1),2)	6.143028	0.796653	7.711045	0.0000
D(ABAG(-2),2)	5.101753	0.721590	7.070153	0.0000
D(ABAG(-3),2)	3.990627	0.627079	6.363839	0.0000
D(ABAG(-4),2)	2.846045	0.512460	5.553691	0.0000
D(ABAG(-5),2)	1.886877	0.387751	4.866215	0.0000
D(ABAG(-6),2)	1.176224	0.269640	4.362207	0.0000
D(ABAG(-7),2)	0.554866	0.164994	3.362956	0.0009
D(ABAG(-8),2)	0.168489	0.071910	2.343046	0.0202
C	-0.002865	0.087532	-0.032725	0.9739

R-squared	0.868954	Mean dependent var	-0.002117
Adjusted R-squared	0.862713	S.D. dependent var	3.332356
S.E. of regression	1.234712	Akaike info criterion	3.308498
Sum squared resid	288.1332	Schwarz criterion	3.473990
Log likelihood	-319.1955	Hannan-Quinn criter.	3.375477
F-statistic	139.2485	Durbin-Watson stat	2.035499
Prob(F-statistic)	0.000000		

โมเดล Trend and Intercept ที่ระดับ 0

Null Hypothesis: D(ABAG) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 8 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.830265	0.0000
Test critical values:		
1% level	-4.004836	
5% level	-3.432566	
10% level	-3.140059	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(ABAG,2)

Method: Least Squares

Date: 11/05/14 Time: 11:55

Sample (adjusted): 11 209

Included observations: 199 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ABAG(-1))	-8.259719	0.840234	-9.830265	0.0000
D(ABAG(-1),2)	6.150466	0.798801	7.699617	0.0000
D(ABAG(-2),2)	5.108438	0.723532	7.060416	0.0000
D(ABAG(-3),2)	3.996259	0.628753	6.355852	0.0000
D(ABAG(-4),2)	2.850432	0.513813	5.547611	0.0000
D(ABAG(-5),2)	1.890005	0.388761	4.861617	0.0000
D(ABAG(-6),2)	1.178261	0.270333	4.358551	0.0000
D(ABAG(-7),2)	0.555993	0.165411	3.361287	0.0009
D(ABAG(-8),2)	0.168878	0.072087	2.342692	0.0202
C	-0.060628	0.188232	-0.322093	0.7477
@TREND("1")	0.000530	0.001528	0.346858	0.7291
R-squared	0.869037	Mean dependent var		-0.002117
Adjusted R-squared	0.862071	S.D. dependent var		3.332356
S.E. of regression	1.237596	Akaike info criterion		3.317908
Sum squared resid	287.9489	Schwarz criterion		3.499950
Log likelihood	-319.1319	Hannan-Quinn criter.		3.391585
F-statistic	124.7524	Durbin-Watson stat		2.036064
Prob(F-statistic)	0.000000			

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ในรูปแบบ None ที่ระดับ 0

Null Hypothesis: D(ABAG) has a unit root

Exogenous: None

Lag Length: 8 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.873370	0.0000
Test critical values:		
1% level	-2.576634	
5% level	-1.942431	
10% level	-1.615638	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(ABAG,2)

Method: Least Squares

Date: 11/05/14 Time: 11:55

Sample (adjusted): 11 209

Included observations: 199 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ABAG(-1))	-8.251758	0.835759	-9.873370	0.0000
D(ABAG(-1),2)	6.142913	0.794549	7.731326	0.0000
D(ABAG(-2),2)	5.101637	0.719682	7.088736	0.0000
D(ABAG(-3),2)	3.990508	0.625417	6.380551	0.0000
D(ABAG(-4),2)	2.845934	0.511100	5.568253	0.0000
D(ABAG(-5),2)	1.886789	0.386720	4.878948	0.0000
D(ABAG(-6),2)	1.176169	0.268925	4.373600	0.0000
D(ABAG(-7),2)	0.554838	0.164557	3.371705	0.0009
D(ABAG(-8),2)	0.168479	0.071720	2.349102	0.0198
R-squared	0.868953	Mean dependent var		-0.002117
Adjusted R-squared	0.863435	S.D. dependent var		3.332356
S.E. of regression	1.231462	Akaike info criterion		3.298453
Sum squared resid	288.1348	Schwarz criterion		3.447396
Log likelihood	-319.1961	Hannan-Quinn criter.		3.358734
Durbin-Watson stat	2.035487			

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6) การทดสอบความนิ่งของผลตอบแทนของกองทุน GW

ในรูป Intercept ที่ระดับ 0

Null Hypothesis: D(GW) has a unit root

Exogenous: Constant

Lag Length: 8 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-10.19463	0.0000
Test critical values:		
1% level	-3.463235	
5% level	-2.875898	
10% level	-2.574501	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(GW,2)

Method: Least Squares

Date: 11/05/14 Time: 11:55

Sample (adjusted): 11 209

Included observations: 199 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GW(-1))	-12.93430	1.268737	-10.19463	0.0000
D(GW(-1),2)	10.30259	1.225581	8.406287	0.0000
D(GW(-2),2)	8.345709	1.125128	7.417566	0.0000
D(GW(-3),2)	6.316051	0.972082	6.497445	0.0000
D(GW(-4),2)	4.413624	0.781529	5.647423	0.0000
D(GW(-5),2)	2.784692	0.574076	4.850738	0.0000
D(GW(-6),2)	1.520026	0.372473	4.080901	0.0001
D(GW(-7),2)	0.655999	0.198769	3.300308	0.0012
D(GW(-8),2)	0.176272	0.071609	2.461599	0.0147
C	-0.030759	1.384519	-0.022217	0.9823

R-squared	0.928515	Mean dependent var	0.006370
Adjusted R-squared	0.925111	S.D. dependent var	71.36960
S.E. of regression	19.53090	Akaike info criterion	8.830817
Sum squared resid	72095.16	Schwarz criterion	8.996310
Log likelihood	-868.6663	Hannan-Quinn criter.	8.897796
F-statistic	272.7683	Durbin-Watson stat	2.057076
Prob(F-statistic)	0.000000		

ในรูป Trend and Intercept ที่ระดับ 0

Null Hypothesis: D(GW) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 8 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-10.16760	0.0000
Test critical values:		
1% level	-4.004836	
5% level	-3.432566	
10% level	-3.140059	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(GW,2)

Method: Least Squares

Date: 11/05/14 Time: 11:56

Sample (adjusted): 11 209

Included observations: 199 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GW(-1))	-12.93426	1.272106	-10.16760	0.0000
D(GW(-1),2)	10.30255	1.228835	8.383992	0.0000
D(GW(-2),2)	8.345669	1.128116	7.397885	0.0000
D(GW(-3),2)	6.316014	0.974664	6.480195	0.0000
D(GW(-4),2)	4.413590	0.783605	5.632420	0.0000
D(GW(-5),2)	2.784665	0.575601	4.837840	0.0000
D(GW(-6),2)	1.520007	0.373463	4.070040	0.0001
D(GW(-7),2)	0.655989	0.199297	3.291513	0.0012
D(GW(-8),2)	0.176269	0.071799	2.455034	0.0150
C	-0.094033	2.977425	-0.031582	0.9748
@TREND("1")	0.000580	0.024165	0.024022	0.9809
R-squared	0.928515	Mean dependent var		0.006370
Adjusted R-squared	0.924713	S.D. dependent var		71.36960
S.E. of regression	19.58274	Akaike info criterion		8.840864
Sum squared resid	72094.94	Schwarz criterion		9.022906
Log likelihood	-868.6660	Hannan-Quinn criter.		8.914541
F-statistic	244.1934	Durbin-Watson stat		2.057079
Prob(F-statistic)	0.000000			

ในรูปแบบ None ที่ระดับ 0

Null Hypothesis: D(GW) has a unit root

Exogenous: None

Lag Length: 8 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-10.22154	0.0000
Test critical values:		
1% level	-2.576634	
5% level	-1.942431	
10% level	-1.615638	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(GW,2)

Method: Least Squares

Date: 11/05/14 Time: 11:56

Sample (adjusted): 11 209

Included observations: 199 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GW(-1))	-12.93419	1.265386	-10.22154	0.0000
D(GW(-1),2)	10.30248	1.222344	8.428463	0.0000
D(GW(-2),2)	8.345610	1.122156	7.437123	0.0000
D(GW(-3),2)	6.315966	0.969515	6.514565	0.0000
D(GW(-4),2)	4.413556	0.779464	5.662292	0.0000
D(GW(-5),2)	2.784643	0.572560	4.863497	0.0000
D(GW(-6),2)	1.519996	0.371490	4.091624	0.0001
D(GW(-7),2)	0.655985	0.198245	3.308969	0.0011
D(GW(-8),2)	0.176268	0.071420	2.468052	0.0145
R-squared	0.928515	Mean dependent var		0.006370
Adjusted R-squared	0.925505	S.D. dependent var		71.36960
S.E. of regression	19.47946	Akaike info criterion		8.820769
Sum squared resid	72095.35	Schwarz criterion		8.969713
Log likelihood	-868.6665	Hannan-Quinn criter.		8.881051
Durbin-Watson stat	2.057075			

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7) การทดสอบความนิ่งของผลตอบแทนของกองทุน T-GlobalValue

ในรูป Intercept ที่ระดับ 0

Null Hypothesis: D(TGLOBALVALUE) has a unit root
 Exogenous: Constant
 Lag Length: 8 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.938404	0.0000
Test critical values:		
1% level	-3.463235	
5% level	-2.875898	
10% level	-2.574501	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(TGLOBALVALUE,2)
 Method: Least Squares
 Date: 11/05/14 Time: 11:56
 Sample (adjusted): 11 209
 Included observations: 199 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(TGLOBALVALUE(-1))	-10.22465	1.028802	-9.938404	0.0000
D(TGLOBALVALUE(-1),2)	7.843126	0.987577	7.941789	0.0000
D(TGLOBALVALUE(-2),2)	6.336531	0.901435	7.029385	0.0000
D(TGLOBALVALUE(-3),2)	4.855996	0.778353	6.238812	0.0000
D(TGLOBALVALUE(-4),2)	3.468684	0.631881	5.489458	0.0000
D(TGLOBALVALUE(-5),2)	2.260061	0.474323	4.764810	0.0000
D(TGLOBALVALUE(-6),2)	1.272445	0.319558	3.981886	0.0001
D(TGLOBALVALUE(-7),2)	0.585088	0.180234	3.246274	0.0014
D(TGLOBALVALUE(-8),2)	0.170582	0.070870	2.406978	0.0170
C	-0.019120	0.122961	-0.155498	0.8766
R-squared	0.901490	Mean dependent var		-0.003425
Adjusted R-squared	0.896799	S.D. dependent var		5.399201
S.E. of regression	1.734491	Akaike info criterion		3.988250
Sum squared resid	568.5990	Schwarz criterion		4.153743
Log likelihood	-386.8309	Hannan-Quinn criter.		4.055229
F-statistic	192.1755	Durbin-Watson stat		2.054079
Prob(F-statistic)	0.000000			

ในรูป Trend and Intercept ที่ระดับ 0

Null Hypothesis: D(TGLOBALVALUE) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 8 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.929880	0.0000
Test critical values:		
1% level	-4.004836	
5% level	-3.432566	
10% level	-3.140059	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(TGLOBALVALUE,2)

Method: Least Squares

Date: 11/05/14 Time: 11:57

Sample (adjusted): 11 209

Included observations: 199 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(TGLOBALVALUE(-1))	-10.23991	1.031222	-9.929880	0.0000
D(TGLOBALVALUE(-1),2)	7.857507	0.989885	7.937797	0.0000
D(TGLOBALVALUE(-2),2)	6.349276	0.903521	7.027257	0.0000
D(TGLOBALVALUE(-3),2)	4.866663	0.780137	6.238216	0.0000
D(TGLOBALVALUE(-4),2)	3.476922	0.633308	5.490093	0.0000
D(TGLOBALVALUE(-5),2)	2.265719	0.475370	4.766217	0.0000
D(TGLOBALVALUE(-6),2)	1.275642	0.320239	3.983410	0.0001
D(TGLOBALVALUE(-7),2)	0.586385	0.180601	3.246851	0.0014
D(TGLOBALVALUE(-8),2)	0.170883	0.071010	2.406466	0.0171
C	-0.140183	0.264364	-0.530267	0.5966
@TREND("1")	0.001111	0.002146	0.517581	0.6054
R-squared	0.901630	Mean dependent var		-0.003425
Adjusted R-squared	0.896397	S.D. dependent var		5.399201
S.E. of regression	1.737861	Akaike info criterion		3.996877
Sum squared resid	567.7899	Schwarz criterion		4.178918
Log likelihood	-386.6892	Hannan-Quinn criter.		4.070554
F-statistic	172.3148	Durbin-Watson stat		2.055338
Prob(F-statistic)	0.000000			

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ในรูปแบบ None ที่ระดับ 0

Null Hypothesis: D(TGLOBALVALUE) has a unit root

Exogenous: None

Lag Length: 8 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.963424	0.0000
Test critical values:		
1% level	-2.576634	
5% level	-1.942431	
10% level	-1.615638	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(TGLOBALVALUE,2)

Method: Least Squares

Date: 11/05/14 Time: 11:57

Sample (adjusted): 11 209

Included observations: 199 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(TGLOBALVALUE(-1))	-10.22393	1.026147	-9.963424	0.0000
D(TGLOBALVALUE(-1),2)	7.842476	0.985029	7.961673	0.0000
D(TGLOBALVALUE(-2),2)	6.336013	0.899111	7.046978	0.0000
D(TGLOBALVALUE(-3),2)	4.855624	0.776348	6.254444	0.0000
D(TGLOBALVALUE(-4),2)	3.468471	0.630255	5.503285	0.0000
D(TGLOBALVALUE(-5),2)	2.259986	0.473104	4.776937	0.0000
D(TGLOBALVALUE(-6),2)	1.272468	0.318737	3.992222	0.0001
D(TGLOBALVALUE(-7),2)	0.585139	0.179770	3.254930	0.0013
D(TGLOBALVALUE(-8),2)	0.170616	0.070687	2.413672	0.0167
R-squared	0.901477	Mean dependent var		-0.003425
Adjusted R-squared	0.897329	S.D. dependent var		5.399201
S.E. of regression	1.730032	Akaike info criterion		3.978328
Sum squared resid	568.6717	Schwarz criterion		4.127271
Log likelihood	-386.8436	Hannan-Quinn criter.		4.038609
Durbin-Watson stat	2.053965			

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8) การทดสอบความนิ่งของผลตอบแทนของกองทุน SCBPGF

ในรูป Intercept ที่ระดับ 0

Null Hypothesis: D(ASPSP500) has a unit root
 Exogenous: Constant
 Lag Length: 14 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.471576	0.0000
Test critical values:		
1% level	-3.464280	
5% level	-2.876356	
10% level	-2.574746	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(ASPSP500,2)
 Method: Least Squares
 Date: 11/05/14 Time: 11:58
 Sample (adjusted): 17 209
 Included observations: 193 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ASPSP500(-1))	-31.35061	3.309968	-9.471576	0.0000
D(ASPSP500(-1),2)	28.58183	3.266700	8.749451	0.0000
D(ASPSP500(-2),2)	26.26379	3.159819	8.311803	0.0000
D(ASPSP500(-3),2)	23.60545	2.989396	7.896396	0.0000
D(ASPSP500(-4),2)	20.80641	2.774431	7.499345	0.0000
D(ASPSP500(-5),2)	17.96298	2.518239	7.133149	0.0000
D(ASPSP500(-6),2)	15.15705	2.228224	6.802304	0.0000
D(ASPSP500(-7),2)	12.45527	1.914523	6.505678	0.0000
D(ASPSP500(-8),2)	9.908664	1.588929	6.236064	0.0000
D(ASPSP500(-9),2)	7.553284	1.264057	5.975430	0.0000
D(ASPSP500(-10),2)	5.410227	0.952660	5.679076	0.0000
D(ASPSP500(-11),2)	3.484488	0.666922	5.224733	0.0000
D(ASPSP500(-12),2)	1.765563	0.417689	4.226983	0.0000
D(ASPSP500(-13),2)	0.715698	0.214201	3.341243	0.0010
D(ASPSP500(-14),2)	0.181302	0.073919	2.452703	0.0151
C	-0.062822	7.756442	-0.008099	0.9935
R-squared	0.952670	Mean dependent var		-0.000611
Adjusted R-squared	0.948659	S.D. dependent var		475.5618
S.E. of regression	107.7559	Akaike info criterion		12.27688
Sum squared resid	2055205.	Schwarz criterion		12.54736
Log likelihood	-1168.719	Hannan-Quinn criter.		12.38641
F-statistic	237.5114	Durbin-Watson stat		2.055990
Prob(F-statistic)	0.000000			

ในรูป Trend and Intercept ที่ระดับ 0

Null Hypothesis: D(ASPSP500) has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 14 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.444779	0.0000
Test critical values:		
1% level	-4.006311	
5% level	-3.433278	
10% level	-3.140478	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(ASPSP500,2)
 Method: Least Squares
 Date: 11/05/14 Time: 11:58
 Sample (adjusted): 17 209
 Included observations: 193 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ASPSP500(-1))	-31.35061	3.319359	-9.444779	0.0000
D(ASPSP500(-1),2)	28.58183	3.275969	8.724697	0.0000
D(ASPSP500(-2),2)	26.26379	3.168784	8.288287	0.0000
D(ASPSP500(-3),2)	23.60545	2.997877	7.874055	0.0000
D(ASPSP500(-4),2)	20.80641	2.782303	7.478127	0.0000
D(ASPSP500(-5),2)	17.96298	2.525384	7.112967	0.0000
D(ASPSP500(-6),2)	15.15705	2.234546	6.783058	0.0000
D(ASPSP500(-7),2)	12.45527	1.919956	6.487271	0.0000
D(ASPSP500(-8),2)	9.908664	1.593437	6.218420	0.0000
D(ASPSP500(-9),2)	7.553284	1.267643	5.958524	0.0000
D(ASPSP500(-10),2)	5.410227	0.955363	5.663009	0.0000
D(ASPSP500(-11),2)	3.484488	0.668814	5.209952	0.0000
D(ASPSP500(-12),2)	1.765562	0.418874	4.215024	0.0000
D(ASPSP500(-13),2)	0.715698	0.214809	3.331790	0.0011
D(ASPSP500(-14),2)	0.181302	0.074129	2.445765	0.0154
C	-0.063320	17.46470	-0.003626	0.9971
@TREND("1")	4.45E-06	0.139615	3.19E-05	1.0000
R-squared	0.952670	Mean dependent var		-0.000611
Adjusted R-squared	0.948367	S.D. dependent var		475.5618
S.E. of regression	108.0616	Akaike info criterion		12.28724
Sum squared resid	2055205.	Schwarz criterion		12.57463
Log likelihood	-1168.719	Hannan-Quinn criter.		12.40362
F-statistic	221.4089	Durbin-Watson stat		2.055990
Prob(F-statistic)	0.000000			

ในรูปแบบ None ที่ระดับ 0

Null Hypothesis: D(ASPSP500) has a unit root

Exogenous: None

Lag Length: 14 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.498289	0.0000
Test critical values:		
1% level	-2.576999	
5% level	-1.942482	
10% level	-1.615606	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(ASPSP500,2)

Method: Least Squares

Date: 11/05/14 Time: 11:58

Sample (adjusted): 17 209

Included observations: 193 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ASPSP500(-1))	-31.35058	3.300656	-9.498289	0.0000
D(ASPSP500(-1),2)	28.58180	3.257510	8.774126	0.0000
D(ASPSP500(-2),2)	26.26376	3.150929	8.335244	0.0000
D(ASPSP500(-3),2)	23.60542	2.980985	7.918665	0.0000
D(ASPSP500(-4),2)	20.80639	2.766625	7.520493	0.0000
D(ASPSP500(-5),2)	17.96295	2.511155	7.153265	0.0000
D(ASPSP500(-6),2)	15.15703	2.221955	6.821486	0.0000
D(ASPSP500(-7),2)	12.45526	1.909137	6.524023	0.0000
D(ASPSP500(-8),2)	9.908651	1.584459	6.253649	0.0000
D(ASPSP500(-9),2)	7.553274	1.260501	5.992280	0.0000
D(ASPSP500(-10),2)	5.410220	0.949980	5.695090	0.0000
D(ASPSP500(-11),2)	3.484484	0.665046	5.239466	0.0000
D(ASPSP500(-12),2)	1.765560	0.416514	4.238901	0.0000
D(ASPSP500(-13),2)	0.715697	0.213599	3.350663	0.0010
D(ASPSP500(-14),2)	0.181302	0.073711	2.459617	0.0149
R-squared	0.952670	Mean dependent var		-0.000611
Adjusted R-squared	0.948947	S.D. dependent var		475.5618
S.E. of regression	107.4528	Akaike info criterion		12.26651
Sum squared resid	2055205.	Schwarz criterion		12.52009
Log likelihood	-1168.719	Hannan-Quinn criter.		12.36920
Durbin-Watson stat	2.055990			

9) การทดสอบความนิ่งของผลตอบแทนของกองทุน ASP-S&P500

ในรูป Intercept ที่ระดับ 0

Null Hypothesis: D(SCBPGF) has a unit root

Exogenous: Constant

Lag Length: 8 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.998617	0.0000
Test critical values:		
1% level	-3.463235	
5% level	-2.875898	
10% level	-2.574501	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(SCBPGF,2)

Method: Least Squares

Date: 11/05/14 Time: 11:59

Sample (adjusted): 11 209

Included observations: 199 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(SCBPGF(-1))	-12.43543	1.243715	-9.998617	0.0000
D(SCBPGF(-1),2)	9.825077	1.200895	8.181464	0.0000
D(SCBPGF(-2),2)	7.927674	1.101924	7.194390	0.0000
D(SCBPGF(-3),2)	5.985382	0.952180	6.285980	0.0000
D(SCBPGF(-4),2)	4.176491	0.766629	5.447861	0.0000
D(SCBPGF(-5),2)	2.632021	0.564936	4.658969	0.0000
D(SCBPGF(-6),2)	1.436007	0.368409	3.897861	0.0001
D(SCBPGF(-7),2)	0.619771	0.197868	3.132244	0.0020
D(SCBPGF(-8),2)	0.165367	0.071721	2.305685	0.0222
C	-0.066267	1.436558	-0.046129	0.9633
R-squared	0.927130	Mean dependent var		0.003772
Adjusted R-squared	0.923660	S.D. dependent var		73.34488
S.E. of regression	20.26493	Akaike info criterion		8.904605
Sum squared resid	77616.14	Schwarz criterion		9.070098
Log likelihood	-876.0082	Hannan-Quinn criter.		8.971585
F-statistic	267.1855	Durbin-Watson stat		2.049486
Prob(F-statistic)	0.000000			

ในรูป Trend and Intercept ที่ระดับ 0

Null Hypothesis: D(SCBPGF) has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 8 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.972130	0.0000
Test critical values:		
1% level	-4.004836	
5% level	-3.432566	
10% level	-3.140059	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(SCBPGF,2)
 Method: Least Squares
 Date: 11/05/14 Time: 11:59
 Sample (adjusted): 11 209
 Included observations: 199 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(SCBPGF(-1))	-12.43543	1.247019	-9.972130	0.0000
D(SCBPGF(-1),2)	9.825077	1.204084	8.159791	0.0000
D(SCBPGF(-2),2)	7.927674	1.104851	7.175332	0.0000
D(SCBPGF(-3),2)	5.985382	0.954709	6.269328	0.0000
D(SCBPGF(-4),2)	4.176491	0.768666	5.433430	0.0000
D(SCBPGF(-5),2)	2.632021	0.566437	4.646628	0.0000
D(SCBPGF(-6),2)	1.436007	0.369388	3.887535	0.0001
D(SCBPGF(-7),2)	0.619771	0.198393	3.123947	0.0021
D(SCBPGF(-8),2)	0.165367	0.071912	2.299577	0.0226
C	-0.067890	3.089342	-0.021976	0.9825
@TREND("1")	1.49E-05	0.025073	0.000594	0.9995
R-squared	0.927130	Mean dependent var		0.003772
Adjusted R-squared	0.923254	S.D. dependent var		73.34488
S.E. of regression	20.31876	Akaike info criterion		8.914656
Sum squared resid	77616.14	Schwarz criterion		9.096698
Log likelihood	-876.0082	Hannan-Quinn criter.		8.988333
F-statistic	239.1946	Durbin-Watson stat		2.049486
Prob(F-statistic)	0.000000			

ในรูปแบบ None ที่ระดับ 0

Null Hypothesis: D(SCBPGF) has a unit root

Exogenous: None

Lag Length: 8 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-10.02487	0.0000
Test critical values:		
1% level	-2.576634	
5% level	-1.942431	
10% level	-1.615638	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(SCBPGF,2)

Method: Least Squares

Date: 11/05/14 Time: 11:59

Sample (adjusted): 11 209

Included observations: 199 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(SCBPGF(-1))	-12.43518	1.240433	-10.02487	0.0000
D(SCBPGF(-1),2)	9.824837	1.197726	8.202910	0.0000
D(SCBPGF(-2),2)	7.927456	1.099017	7.213225	0.0000
D(SCBPGF(-3),2)	5.985197	0.949668	6.302413	0.0000
D(SCBPGF(-4),2)	4.176350	0.764608	5.462083	0.0000
D(SCBPGF(-5),2)	2.631926	0.563447	4.671115	0.0000
D(SCBPGF(-6),2)	1.435953	0.367438	3.908009	0.0001
D(SCBPGF(-7),2)	0.619746	0.197347	3.140390	0.0020
D(SCBPGF(-8),2)	0.165360	0.071533	2.311677	0.0219
R-squared	0.927129	Mean dependent var		0.003772
Adjusted R-squared	0.924061	S.D. dependent var		73.34488
S.E. of regression	20.21165	Akaike info criterion		8.894566
Sum squared resid	77617.02	Schwarz criterion		9.043510
Log likelihood	-876.0094	Hannan-Quinn criter.		8.954848
Durbin-Watson stat	2.049479			

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10) การทดสอบความนิ่งของผลตอบแทนของกองทุน KF-WATER

ในรูป Intercept ที่ระดับ 0

Null Hypothesis: D(KFWATER) has a unit root

Exogenous: Constant

Lag Length: 6 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-10.32856	0.0000
Test critical values:		
1% level	-3.462901	
5% level	-2.875752	
10% level	-2.574423	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(KFWATER,2)

Method: Least Squares

Date: 11/05/14 Time: 12:00

Sample (adjusted): 9 209

Included observations: 201 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(KFWATER(-1))	-4.577756	0.443213	-10.32856	0.0000
D(KFWATER(-1),2)	2.712490	0.407012	6.664395	0.0000
D(KFWATER(-2),2)	2.067843	0.350886	5.893200	0.0000
D(KFWATER(-3),2)	1.540215	0.283052	5.441459	0.0000
D(KFWATER(-4),2)	0.974299	0.214089	4.550916	0.0000
D(KFWATER(-5),2)	0.561217	0.140557	3.992800	0.0001
D(KFWATER(-6),2)	0.184389	0.067898	2.715679	0.0072
C	0.005984	0.084102	0.071149	0.9434

R-squared	0.832298	Mean dependent var	0.027092
Adjusted R-squared	0.826216	S.D. dependent var	2.859012
S.E. of regression	1.191849	Akaike info criterion	3.227876
Sum squared resid	274.1573	Schwarz criterion	3.359351
Log likelihood	-316.4016	Hannan-Quinn criter.	3.281077
F-statistic	136.8360	Durbin-Watson stat	2.030552
Prob(F-statistic)	0.000000		

ในรูป Trend and Intercept ที่ระดับ 0

Null Hypothesis: D(KFWATER) has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 6 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-10.29865	0.0000
Test critical values:		
1% level	-4.004365	
5% level	-3.432339	
10% level	-3.139924	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(KFWATER,2)
 Method: Least Squares
 Date: 11/05/14 Time: 12:00
 Sample (adjusted): 9 209
 Included observations: 201 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(KFWATER(-1))	-4.578052	0.444529	-10.29865	0.0000
D(KFWATER(-1),2)	2.712760	0.408218	6.645367	0.0000
D(KFWATER(-2),2)	2.068063	0.351913	5.876638	0.0000
D(KFWATER(-3),2)	1.540393	0.283880	5.426205	0.0000
D(KFWATER(-4),2)	0.974447	0.214729	4.538028	0.0000
D(KFWATER(-5),2)	0.561308	0.140972	3.981706	0.0001
D(KFWATER(-6),2)	0.184437	0.068103	2.708226	0.0074
C	0.002131	0.178269	0.011951	0.9905
@TREND("1")	3.57E-05	0.001454	0.024532	0.9805
R-squared	0.832299	Mean dependent var		0.027092
Adjusted R-squared	0.825311	S.D. dependent var		2.859012
S.E. of regression	1.194947	Akaike info criterion		3.237823
Sum squared resid	274.1565	Schwarz criterion		3.385733
Log likelihood	-316.4013	Hannan-Quinn criter.		3.297674
F-statistic	119.1116	Durbin-Watson stat		2.030510
Prob(F-statistic)	0.000000			

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ในรูปแบบ None ที่ระดับ 0

Null Hypothesis: D(KFWATER) has a unit root

Exogenous: None

Lag Length: 6 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-10.36047	0.0000
Test critical values:		
1% level	-2.576518	
5% level	-1.942415	
10% level	-1.615649	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(KFWATER,2)

Method: Least Squares

Date: 11/05/14 Time: 12:00

Sample (adjusted): 9 209

Included observations: 201 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(KFWATER(-1))	-4.578572	0.441927	-10.36047	0.0000
D(KFWATER(-1),2)	2.713240	0.405831	6.685640	0.0000
D(KFWATER(-2),2)	2.068488	0.349868	5.912188	0.0000
D(KFWATER(-3),2)	1.540745	0.282228	5.459230	0.0000
D(KFWATER(-4),2)	0.974705	0.213463	4.566151	0.0000
D(KFWATER(-5),2)	0.561488	0.140145	4.006479	0.0001
D(KFWATER(-6),2)	0.184510	0.067703	2.725292	0.0070
R-squared	0.832294	Mean dependent var		0.027092
Adjusted R-squared	0.827107	S.D. dependent var		2.859012
S.E. of regression	1.188789	Akaike info criterion		3.217952
Sum squared resid	274.1645	Schwarz criterion		3.332993
Log likelihood	-316.4042	Hannan-Quinn criter.		3.264503
Durbin-Watson stat	2.030386			

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ภาคผนวก ข

ผลการวิเคราะห์ความผันผวนของผลตอบแทนของกองทุนรวมที่ลงทุนในต่างประเทศทั้ง 10 กองทุน
โดยแบบจำลอง VARMA-GARCH

MV-GARCH, CC with VARMA Variances - Estimation by BFGS

NO CONVERGENCE IN 70 ITERATIONS

LAST CRITERION WAS 0.0000000

SUBITERATIONS LIMIT EXCEEDED.

ESTIMATION POSSIBLY HAS STALLED OR MACHINE ROUNDOFF IS MAKING
FURTHER PROGRESS DIFFICULT

TRY HIGHER SUBITERATIONS LIMIT, TIGHTER CVCRT, DIFFERENT SETTING FOR
EXACTLINE OR ALPHA ON NLPAR

RESTARTING ESTIMATION FROM LAST ESTIMATES OR DIFFERENT INITIAL GUESSES
MIGHT ALSO WORK

With Heteroscedasticity/Misspecification Adjusted Standard Errors

Usable Observations 208

Log Likelihood -5022.5700

Variable	Coeff	Std Error	T-Stat	Signif
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1. Constant	0.062412	36.949478	0.00169	0.99865228
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2. MSASIASSM{1}	0.007281	4.542163	0.00160	0.99872100
3. Constant	0.001887	0.133321	0.01416	0.98870452
4. PHATRAGHC{1}	0.000933	0.190457	0.00490	0.99609304
5. Mvg Avge{1}	-0.000117	0.258445	-4.51879e-004	0.99963945
6. Constant	-0.000439	0.011752	-0.03732	0.97023292
7. KKPROP{1}	0.000380	0.082146	0.00462	0.99631361
8. Mvg Avge{1}	0.000542	0.017338	0.03124	0.97508085
9. Constant	0.000952	0.278444	0.00342	0.99727265
10. TISCOUS{1}	0.002442	0.397639	0.00614	0.99510019
11. Mvg Avge{1}	-0.002608	0.373010	-0.00699	0.99442095
12. Constant	0.002345	1.395052	0.00168	0.99865879
13. ABAG{1}	-0.002738	1.846990	-0.00148	0.99881713
14. Mvg Avge{1}	0.000320	3.207663	9.97867e-005	0.99992038
15. Constant	0.014560	5.599362	0.00260	0.99792529
16. GW{1}	-0.009665	197.831767	-4.88552e-005	0.99996102
17. Mvg Avge{1}	-0.043268	71.350499	-6.06413e-004	0.99951615
18. Constant	0.004220	0.686013	0.00615	0.99509156
19. TGLOBALVALUE{1}	-0.003972	2.280297	-0.00174	0.99861027
20. Mvg Avge{1}	0.009235	5.353572	0.00173	0.99862357

21. Constant	0.001550	0.533501	0.00291	0.99768212
22. ASPSP500{1}	-0.000635	0.000020	-31.25631	0.00000000
23. Mvg Avge{1}	0.001741	1.560775	0.00112	0.99910989
24. Constant	0.008618	27.548233	3.12819e-004	0.99975041
25. SCBPGF{1}	-0.006764	21.818732	-3.10022e-004	0.99975264
26. Mvg Avge{1}	0.036598	30.696408	0.00119	0.99904871
27. Constant	-0.000418	0.090040	-0.00464	0.99629866
28. KFWATER{1}	-0.000785	0.046126	-0.01702	0.98642129
29. Mvg Avge{1}	0.000253	0.159037	0.00159	0.99873097
30. C(1)	0.490337	24.402970	0.02009	0.98396890
31. C(2)	0.932784	0.698720	1.33499	0.18187962
32. C(3)	0.343000	0.005449	62.94769	0.00000000
33. C(4)	0.896196	0.177417	5.05137	0.00000044
34. C(5)	1.408787	1.113432	1.26527	0.20577622
35. C(6)	481.811792	44.134389	10.91692	0.00000000
36. C(7)	3.113444	0.221443	14.05977	0.00000000
37. C(8)	20668.066115	3.842025	5379.47228	0.00000000
38. C(9)	506.228295	32.634799	15.51192	0.00000000
39. C(10)	1.310575	3.172463	0.41311	0.67952632

40. A(1,1)	0.202140	16.178860	0.01249	0.99003143
41. A(1,2)	0.010505	86.311187	1.21706e-004	0.99990289
42. A(1,3)	-0.040097	148.067406	-2.70803e-004	0.99978393
43. A(1,4)	0.003987	585.528697	6.80981e-006	0.99999457
44. A(1,5)	0.014574	133.062378	1.09528e-004	0.99991261
45. A(1,6)	-0.002303	0.303020	-0.00760	0.99393544
46. A(1,7)	-0.006499	131.739206	-4.93355e-005	0.99996064
47. A(1,8)	-0.000639	0.125924	-0.00508	0.99594815
48. A(1,9)	0.001650	4.299155	3.83902e-004	0.99969369
49. A(1,10)	0.017955	161.399108	1.11246e-004	0.99991124
50. A(2,1)	-0.006108	0.653096	-0.00935	0.99253777
51. A(2,2)	0.218911	0.414691	0.52789	0.59757620
52. A(2,3)	0.004832	0.422929	0.01142	0.99088455
53. A(2,4)	0.000318	0.721174	4.41161e-004	0.99964800
54. A(2,5)	0.001011	0.245558	0.00412	0.99671470
55. A(2,6)	-0.000770	0.075319	-0.01023	0.99183951
56. A(2,7)	-0.001464	11.325886	-1.29266e-004	0.99989686
57. A(2,8)	-0.000268	0.108426	-0.00247	0.99802885
58. A(2,9)	-0.000026	0.443449	-5.95210e-005	0.99995251

59. A(2,10)	-0.000229	0.194793	-0.00118	0.99906031
60. A(3,1)	-0.000193	0.035423	-0.00545	0.99565366
61. A(3,2)	0.000252	0.039312	0.00641	0.99488897
62. A(3,3)	0.223269	0.018113	12.32615	0.00000000
63. A(3,4)	0.000278	0.009758	0.02847	0.97729084
64. A(3,5)	0.000307	0.027336	0.01122	0.99104505
65. A(3,6)	-0.000851	0.921001	-9.24501e-004	0.99926236
66. A(3,7)	-0.000350	0.012094	-0.02897	0.97688849
67. A(3,8)	-0.000607	0.000002	-387.17950	0.00000000
68. A(3,9)	0.000022	0.046492	4.76405e-004	0.99961988
69. A(3,10)	-0.000083	0.011659	-0.00714	0.99429949
70. A(4,1)	0.010968	0.818032	0.01341	0.98930208
71. A(4,2)	-0.002724	0.435384	-0.00626	0.99500776
72. A(4,3)	-0.008840	1.815536	-0.00487	0.99611512
73. A(4,4)	0.216993	0.700843	0.30962	0.75685207
74. A(4,5)	0.000411	0.333708	0.00123	0.99901835
75. A(4,6)	0.000745	1.759544	4.23233e-004	0.99966231
76. A(4,7)	-0.000339	0.313232	-0.00108	0.99913537
77. A(4,8)	-0.000482	0.021603	-0.02229	0.98221813

78. A(4,9)	-0.000986	0.692586	-0.00142	0.99886377
79. A(4,10)	0.005060	0.718391	0.00704	0.99438042
80. A(5,1)	-0.001290	1.797425	-7.17462e-004	0.99942755
81. A(5,2)	-0.002519	1.752041	-0.00144	0.99885305
82. A(5,3)	-0.000911	0.331399	-0.00275	0.99780645
83. A(5,4)	-0.001592	0.266921	-0.00596	0.99524133
84. A(5,5)	0.223268	0.966507	0.23100	0.81731128
85. A(5,6)	-0.000066	0.931959	-7.11857e-005	0.99994320
86. A(5,7)	-0.001795	1.128488	-0.00159	0.99873088
87. A(5,8)	-0.000761	0.068622	-0.01108	0.99115647
88. A(5,9)	-0.000091	0.116309	-7.80623e-004	0.99937715
89. A(5,10)	0.008905	3.967070	0.00224	0.99820897
90. A(6,1)	-0.064895	530.104063	-1.22419e-004	0.99990232
91. A(6,2)	-0.018215	661.059136	-2.75541e-005	0.99997802
92. A(6,3)	1.139437	9990.486081	1.14052e-004	0.99990900
93. A(6,4)	-0.298478	157.513263	-0.00189	0.99848806
94. A(6,5)	0.075745	243.971589	3.10468e-004	0.99975228
95. A(6,6)	0.224277	36.418132	0.00616	0.99508636
96. A(6,7)	0.374341	34.750158	0.01077	0.99140508

97. A(6,8)	-0.000177	0.274689	-6.42613e-004	0.99948727
98. A(6,9)	-0.000583	1.100846	-5.29426e-004	0.99957758
99. A(6,10)	-0.137226	239.502301	-5.72964e-004	0.99954284
100. A(7,1)	0.003544	1.090766	0.00325	0.99740765
101. A(7,2)	-0.000567	0.014694	-0.03861	0.96920233
102. A(7,3)	-0.021126	7.897747	-0.00267	0.99786574
103. A(7,4)	-0.008508	2.167838	-0.00392	0.99686853
104. A(7,5)	-0.000526	2.968435	-1.77359e-004	0.99985849
105. A(7,6)	0.000360	11.444175	3.14345e-005	0.99997492
106. A(7,7)	0.221963	0.576445	0.38505	0.70019716
107. A(7,8)	0.000046	0.744925	6.22606e-005	0.99995032
108. A(7,9)	0.001488	10.984529	1.35494e-004	0.99989189
109. A(7,10)	0.000743	0.060005	0.01238	0.99011858
110. A(8,1)	0.000539	6.733742	7.99740e-005	0.99993619
111. A(8,2)	0.001120	0.725280	0.00154	0.99876787
112. A(8,3)	-0.002685	1.283195	-0.00209	0.99833069
113. A(8,4)	-0.001246	0.686258	-0.00182	0.99855169
114. A(8,5)	0.000715	0.198907	0.00359	0.99713253
115. A(8,6)	-0.005177	123.944209	-4.17683e-005	0.99996667

116. A(8,7)	-0.001767	1.032080	-0.00171	0.99863409
117. A(8,8)	0.223308	0.004742	47.09127	0.00000000
118. A(8,9)	-0.000292	8.539192	-3.41913e-005	0.99997272
119. A(8,10)	-0.001820	0.931675	-0.00195	0.99844114
120. A(9,1)	-0.922032	880.599890	-0.00105	0.99916457
121. A(9,2)	-0.014485	1591.981388	-9.09867e-006	0.99999274
122. A(9,3)	1.955644	1485.816805	0.00132	0.99894982
123. A(9,4)	-0.399177	1879.380799	-2.12398e-004	0.99983053
124. A(9,5)	-0.545772	567.089313	-9.62409e-004	0.99923211
125. A(9,6)	0.005399	4.633781	0.00117	0.99907041
126. A(9,7)	0.222612	592.479513	3.75730e-004	0.99970021
127. A(9,8)	-0.000940	1.362084	-6.90359e-004	0.99944917
128. A(9,9)	0.221545	5.417529	0.04089	0.96738034
129. A(9,10)	0.186523	1600.398127	1.16548e-004	0.99990701
130. A(10,1)	-0.003961	8.060425	-4.91443e-004	0.99960789
131. A(10,2)	0.000142	0.710634	1.99743e-004	0.99984063
132. A(10,3)	-0.009196	0.379093	-0.02426	0.98064730
133. A(10,4)	0.004701	3.294080	0.00143	0.99886122
134. A(10,5)	-0.000073	0.795859	-9.18301e-005	0.99992673

135. A(10,6)	-0.000885	0.014611	-0.06054	0.95172823
136. A(10,7)	-0.002337	0.910245	-0.00257	0.99795171
137. A(10,8)	-0.000056	0.000015	-3.61705	0.00029799
138. A(10,9)	-0.004874	0.000081	-59.91062	0.00000000
139. A(10,10)	0.220943	8.424752	0.02623	0.97907753
140. B(1,1)	0.814862	4.313796	0.18890	0.85017371
141. B(1,2)	-7.349075	14882.263175	-4.93814e-004	0.99960599
142. B(1,3)	4.573045	269.386857	0.01698	0.98645596
143. B(1,4)	-3.865314	5747.299120	-6.72544e-004	0.99946339
144. B(1,5)	4.157699	6.463538	0.64325	0.52005907
145. B(1,6)	0.151582	6.722671	0.02255	0.98201091
146. B(1,7)	2.895421	124.400078	0.02328	0.98143086
147. B(1,8)	0.016866	4.702457	0.00359	0.99713827
148. B(1,9)	0.088664	0.277328	0.31971	0.74918883
149. B(1,10)	-2.951914	5397.979765	-5.46855e-004	0.99956367
150. B(2,1)	-0.792682	5261.130974	-1.50668e-004	0.99987978
151. B(2,2)	-0.024968	0.495477	-0.05039	0.95981063
152. B(2,3)	0.512753	135.513184	0.00378	0.99698098
153. B(2,4)	-0.173584	184.560010	-9.40527e-004	0.99924957

154. B(2,5)	0.184498	650.501529	2.83625e-004	0.99977370
155. B(2,6)	-0.012694	7.768923	-0.00163	0.99869632
156. B(2,7)	-0.302191	201.832600	-0.00150	0.99880538
157. B(2,8)	-0.000895	3.849045	-2.32521e-004	0.99981448
158. B(2,9)	0.008307	2.691153	0.00309	0.99753699
159. B(2,10)	0.075122	29.995727	0.00250	0.99800177
160. B(3,1)	0.000094	17.164637	5.49878e-006	0.99999561
161. B(3,2)	0.013753	16.838376	8.16736e-004	0.99934834
162. B(3,3)	-0.073277	0.015069	-4.86272	0.00000116
163. B(3,4)	-0.001971	1.558655	-0.00126	0.99899089
164. B(3,5)	0.011595	14.985232	7.73740e-004	0.99938265
165. B(3,6)	-0.000479	0.088235	-0.00543	0.99567091
166. B(3,7)	-0.003562	2.772854	-0.00128	0.99897500
167. B(3,8)	-0.000402	0.011136	-0.03613	0.97118196
168. B(3,9)	0.000286	0.672477	4.25672e-004	0.99966036
169. B(3,10)	-0.005860	6.471176	-9.05486e-004	0.99927753
170. B(4,1)	-0.116938	264.091306	-4.42796e-004	0.99964670
171. B(4,2)	-0.146903	57.331879	-0.00256	0.99795556
172. B(4,3)	-0.406399	67.430134	-0.00603	0.99519121

173. B(4,4)	-0.087668	0.085203	-1.02893	0.30351196
174. B(4,5)	-0.295254	105.596266	-0.00280	0.99776906
175. B(4,6)	0.030766	17.184523	0.00179	0.99857151
176. B(4,7)	-0.044057	3.427671	-0.01285	0.98974472
177. B(4,8)	-0.001974	2.075874	-9.50828e-004	0.99924135
178. B(4,9)	-0.027791	66.791702	-4.16083e-004	0.99966801
179. B(4,10)	0.275928	71.686786	0.00385	0.99692889
180. B(5,1)	6.139343	3197.624478	0.00192	0.99846809
181. B(5,2)	0.802563	1080.862015	7.42521e-004	0.99940755
182. B(5,3)	0.281174	263.310466	0.00107	0.99914799
183. B(5,4)	-0.706759	813.194033	-8.69115e-004	0.99930655
184. B(5,5)	-0.049809	0.494656	-0.10069	0.91979265
185. B(5,6)	0.007701	4.328132	0.00178	0.99858036
186. B(5,7)	-0.471055	362.030806	-0.00130	0.99896184
187. B(5,8)	0.007353	5.751146	0.00128	0.99897990
188. B(5,9)	0.035516	48.287246	7.35509e-004	0.99941315
189. B(5,10)	-0.011456	19.036985	-6.01790e-004	0.99951984
190. B(6,1)	8.581412	47993.486670	1.78804e-004	0.99985734
191. B(6,2)	-3.504444	10355.784592	-3.38405e-004	0.99972999

192. B(6,3)	-7.519180	9791.602004	-7.67921e-004	0.99938729
193. B(6,4)	4.782090	39404.164679	1.21360e-004	0.99990317
194. B(6,5)	0.064241	1620.377413	3.96459e-005	0.99996837
195. B(6,6)	-0.042679	1.063613	-0.04013	0.96799262
196. B(6,7)	0.142373	5498.294988	2.58940e-005	0.99997934
197. B(6,8)	0.007851	5.390137	0.00146	0.99883781
198. B(6,9)	0.055548	5.021757	0.01106	0.99117438
199. B(6,10)	-6.284883	3079.378810	-0.00204	0.99837155
200. B(7,1)	5.523175	9120.426012	6.05583e-004	0.99951681
201. B(7,2)	0.006262	384.590714	1.62826e-005	0.99998701
202. B(7,3)	0.360825	835.981683	4.31619e-004	0.99965562
203. B(7,4)	0.068059	152.471265	4.46371e-004	0.99964385
204. B(7,5)	-0.886551	182.767850	-0.00485	0.99612972
205. B(7,6)	0.048641	70.837053	6.86661e-004	0.99945212
206. B(7,7)	-0.066734	0.626820	-0.10646	0.91521443
207. B(7,8)	0.024739	16.289984	0.00152	0.99878830
208. B(7,9)	-0.044312	167.118243	-2.65156e-004	0.99978844
209. B(7,10)	-0.247177	4268.406660	-5.79086e-005	0.99995380
210. B(8,1)	0.292667	108.867501	0.00269	0.99785506

211. B(8,2)	-0.119081	354.601464	-3.35818e-004	0.99973206
212. B(8,3)	4.993713	15164.345652	3.29306e-004	0.99973725
213. B(8,4)	0.010755	129.532528	8.30308e-005	0.99993375
214. B(8,5)	0.274319	260.497259	0.00105	0.99915978
215. B(8,6)	0.003206	22.187525	1.44484e-004	0.99988472
216. B(8,7)	0.165484	742.341338	2.22921e-004	0.99982213
217. B(8,8)	-0.070286	0.000005	-15127.03275	0.00000000
218. B(8,9)	-0.000511	10.865876	-4.69928e-005	0.99996251
219. B(8,10)	-0.065693	697.495442	-9.41837e-005	0.99992485
220. B(9,1)	5.411630	64164.621884	8.43398e-005	0.99993271
221. B(9,2)	-0.203547	2370.414044	-8.58700e-005	0.99993149
222. B(9,3)	6.504565	23615.789059	2.75433e-004	0.99978024
223. B(9,4)	-13.563318	17240.758416	-7.86701e-004	0.99937230
224. B(9,5)	6.749384	11707.190236	5.76516e-004	0.99954001
225. B(9,6)	0.088555	111.969556	7.90885e-004	0.99936897
226. B(9,7)	10.413987	29032.197598	3.58705e-004	0.99971380
227. B(9,8)	-0.007865	9.605328	-8.18775e-004	0.99934671
228. B(9,9)	-0.041942	1.077331	-0.03893	0.96894499
229. B(9,10)	-1.895640	3377.237608	-5.61299e-004	0.99955215

230. B(10,1)	-0.073000	447.467535	-1.63140e-004	0.99986983
231. B(10,2)	0.423201	173.261862	0.00244	0.99805113
232. B(10,3)	-0.218907	220.838347	-9.91253e-004	0.99920910
233. B(10,4)	0.719212	3293.172364	2.18395e-004	0.99982575
234. B(10,5)	0.072863	395.382515	1.84284e-004	0.99985296
235. B(10,6)	-0.058684	61.727231	-9.50703e-004	0.99924145
236. B(10,7)	-0.194550	2196.957423	-8.85545e-005	0.99992934
237. B(10,8)	-0.001069	3.543399	-3.01551e-004	0.99975940
238. B(10,9)	-0.017460	53.952796	-3.23611e-004	0.99974180
239. B(10,10)	-0.054324	0.917582	-0.05920	0.95278985
240. R(2,1)	0.010393	7.226469	0.00144	0.99885254
241. R(3,1)	-0.007117	18.118334	-3.92790e-004	0.99968660
242. R(3,2)	-0.000514	0.380995	-0.00135	0.99892293
243. R(4,1)	0.011677	0.916751	0.01274	0.98983694
244. R(4,2)	-0.001160	0.361965	-0.00321	0.99744218
245. R(4,3)	0.003475	0.193236	0.01798	0.98565274
246. R(5,1)	-0.045098	40.740700	-0.00111	0.99911679
247. R(5,2)	-0.001528	4.505137	-3.39117e-004	0.99972942
248. R(5,3)	-0.000609	0.385565	-0.00158	0.99873972

249. R(5,4)	0.004116	3.412929	0.00121	0.99903786
250. R(6,1)	-0.013515	3.397844	-0.00398	0.99682638
251. R(6,2)	0.004107	1.832182	0.00224	0.99821128
252. R(6,3)	0.004218	1.463503	0.00288	0.99770045
253. R(6,4)	-0.003640	8.272462	-4.40008e-004	0.99964892
254. R(6,5)	-0.000377	0.612815	-6.15955e-004	0.99950854
255. R(7,1)	-0.034677	106.862522	-3.24504e-004	0.99974108
256. R(7,2)	0.002344	0.960555	0.00244	0.99805271
257. R(7,3)	0.005239	0.532884	0.00983	0.99215634
258. R(7,4)	0.002812	0.018618	0.15101	0.87996426
259. R(7,5)	-0.000698	1.183465	-5.89554e-004	0.99952960
260. R(7,6)	-0.012026	54.509056	-2.20621e-004	0.99982397
261. R(8,1)	-0.009517	61.146001	-1.55645e-004	0.99987581
262. R(8,2)	-0.001123	0.802940	-0.00140	0.99888389
263. R(8,3)	-0.001115	0.053179	-0.02097	0.98326930
264. R(8,4)	0.003100	4.595153	6.74702e-004	0.99946167
265. R(8,5)	-0.003401	19.098400	-1.78102e-004	0.99985790
266. R(8,6)	0.001095	0.479568	0.00228	0.99817795
267. R(8,7)	0.001672	58.661741	2.85086e-005	0.99997725

268. R(9,1)	-0.021770	7.755128	-0.00281	0.99776020
269. R(9,2)	0.000228	0.672931	3.38079e-004	0.99973025
270. R(9,3)	-0.004051	1.496826	-0.00271	0.99784085
271. R(9,4)	0.008160	9.368434	8.70983e-004	0.99930506
272. R(9,5)	-0.002698	14.877171	-1.81359e-004	0.99985530
273. R(9,6)	0.000717	0.235486	0.00305	0.99757016
274. R(9,7)	-0.025455	39.674842	-6.41590e-004	0.99948809
275. R(9,8)	0.001772	0.048238	0.03674	0.97069199
276. R(10,1)	0.018534	8.879570	0.00209	0.99833463
277. R(10,2)	0.000611	1.379794	4.42652e-004	0.99964682
278. R(10,3)	0.007162	0.069548	0.10298	0.91798217
279. R(10,4)	0.001448	2.639086	5.48553e-004	0.99956232
280. R(10,5)	-0.000131	0.358272	-3.65405e-004	0.99970845
281. R(10,6)	-0.000927	6.547687	-1.41610e-004	0.99988701
282. R(10,7)	0.001084	1.724625	6.28448e-004	0.99949857
283. R(10,8)	0.003231	2.646013	0.00122	0.99902561
284. R(10,9)	0.003476	2.490138	0.00140	0.99888633

ลิขสิทธิ์ของวิทยุคลังข้อมูลใหม่
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ภาคผนวก ค

ผลการวิเคราะห์ความผันผวนของผลตอบแทนของกองทุนรวมที่ลงทุนในต่างประเทศทั้ง 10 กองทุน
โดยแบบจำลอง VARMA-AGARCH

MV-GARCH, CC with VARMA Variances - Estimation by BFGS

NO CONVERGENCE IN 81 ITERATIONS

LAST CRITERION WAS 0.0000000

SUBITERATIONS LIMIT EXCEEDED.

ESTIMATION POSSIBLY HAS STALLED OR MACHINE ROUNDOFF IS MAKING
FURTHER PROGRESS DIFFICULT

TRY HIGHER SUBITERATIONS LIMIT, TIGHTER CVCRIT, DIFFERENT SETTING FOR
EXACTLINE OR ALPHA ON NLPAR

RESTARTING ESTIMATION FROM LAST ESTIMATES OR DIFFERENT INITIAL GUESSES
MIGHT ALSO WORK

With Heteroscedasticity/Misspecification Adjusted Standard Errors

Usable Observations 208

Log Likelihood -4959.9634

Variable	Coeff	Std Error	T-Stat	Signif
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1. Constant	0.049558	4.223156	0.01173	0.99063713
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2. MSASIASSM{1}	0.046736	9.478829	0.00493	0.99606596
3. Constant	0.023954	5.960690	0.00402	0.99679354
4. PHATRAGHC{1}	0.001431	15.724336	9.10348e-005	0.99992736
5. Mvg Avge{1}	-0.012180	5.352223	-0.00228	0.99818423
6. Constant	-0.000020	0.043946	-4.59464e-004	0.99963340
7. KKPROP{1}	0.002497	0.112838	0.02213	0.98234367
8. Mvg Avge{1}	0.001006	0.059364	0.01695	0.98647518
9. Constant	0.047449	13.476342	0.00352	0.99719073
10. TISCOUS{1}	-0.007311	5.572784	-0.00131	0.99895324
11. Mvg Avge{1}	-0.032340	20.175255	-0.00160	0.99872104
12. Constant	0.072074	126.585093	5.69371e-004	0.99954571
13. ABAG{1}	-0.019442	6.797163	-0.00286	0.99771786
14. Mvg Avge{1}	-0.051341	11.700680	-0.00439	0.99649902
15. Constant	0.056405	42.476854	0.00133	0.99894050
16. GW{1}	-0.006362	0.682181	-0.00933	0.99255945
17. Mvg Avge{1}	-0.056024	57.101904	-9.81120e-004	0.99921718
18. Constant	0.003961	0.276542	0.01432	0.98857132
19. TGLOBALVALUE{1}	-0.002779	0.452728	-0.00614	0.99510172
20. Mvg Avge{1}	0.008092	0.569730	0.01420	0.98866737

21. Constant	0.003137	0.032321	0.09706	0.92267951
22. ASPSP500{1}	-0.000287	0.000000	-2487.05574	0.00000000
23. Mvg Avge{1}	0.005678	0.081946	0.06929	0.94476042
24. Constant	0.012022	2.884016	0.00417	0.99667391
25. SCBPGF{1}	-0.005664	0.661483	-0.00856	0.99316755
26. Mvg Avge{1}	0.029758	2.255063	0.01320	0.98947125
27. Constant	-0.000402	0.126344	-0.00319	0.99745856
28. KFWATER{1}	-0.000770	0.169175	-0.00455	0.99636712
29. Mvg Avge{1}	-0.001589	0.142900	-0.01112	0.99113048
30. C(1)	0.493613	0.187321	2.63512	0.00841065
31. C(2)	0.917314	0.166786	5.49995	0.00000004
32. C(3)	0.000648	0.001985	0.32642	0.74410478
33. C(4)	0.882539	0.440333	2.00425	0.04504305
34. C(5)	1.392966	3.690850	0.37741	0.70586854
35. C(6)	483.487176	23.069175	20.95815	0.00000000
36. C(7)	3.119884	0.070722	44.11466	0.00000000
37. C(8)	20794.802297	0.037031	561547.99968	0.00000000
38. C(9)	509.607540	9.044486	56.34456	0.00000000
39. C(10)	1.309981	0.164097	7.98297	0.00000000

40. A(1,1)	0.204908	0.588761	0.34803	0.72781533
41. A(1,2)	0.027975	7.877689	0.00355	0.99716661
42. A(1,3)	-0.032393	8.252669	-0.00393	0.99686819
43. A(1,4)	0.013380	16.450803	8.13353e-004	0.99935104
44. A(1,5)	-0.003068	6.504775	-4.71671e-004	0.99962366
45. A(1,6)	-0.001566	0.525652	-0.00298	0.99762247
46. A(1,7)	0.016650	24.962375	6.67002e-004	0.99946781
47. A(1,8)	-0.000402	0.117359	-0.00343	0.99726393
48. A(1,9)	0.004121	2.262299	0.00182	0.99854660
49. A(1,10)	0.013675	3.700741	0.00370	0.99705167
50. A(2,1)	-0.058031	10.242181	-0.00567	0.99547928
51. A(2,2)	0.196318	1.414619	0.13878	0.88962562
52. A(2,3)	0.070285	12.655484	0.00555	0.99556877
53. A(2,4)	-0.026704	16.579881	-0.00161	0.99871490
54. A(2,5)	-0.014618	6.377438	-0.00229	0.99817108
55. A(2,6)	-0.001968	0.091045	-0.02162	0.98275247
56. A(2,7)	0.001284	9.071656	1.41527e-004	0.99988708
57. A(2,8)	-0.000516	0.095051	-0.00543	0.99567010
58. A(2,9)	-0.001492	0.393892	-0.00379	0.99697845

59. A(2,10)	0.008441	6.728852	0.00125	0.99899905
60. A(3,1)	-0.000220	0.053393	-0.00411	0.99671886
61. A(3,2)	-0.000314	0.041903	-0.00748	0.99402830
62. A(3,3)	0.222448	0.011129	19.98850	0.00000000
63. A(3,4)	-0.000613	0.042960	-0.01427	0.98861349
64. A(3,5)	0.000270	0.039551	0.00684	0.99454603
65. A(3,6)	-0.000438	0.003545	-0.12349	0.90171768
66. A(3,7)	-0.000190	0.017064	-0.01113	0.99111893
67. A(3,8)	-0.000078	0.000212	-0.36796	0.71290430
68. A(3,9)	0.000398	0.019088	0.02085	0.98336661
69. A(3,10)	-0.000775	0.031222	-0.02481	0.98020298
70. A(4,1)	0.186688	28.429531	0.00657	0.99476058
71. A(4,2)	-0.107572	85.630389	-0.00126	0.99899767
72. A(4,3)	-0.013700	49.627951	-2.76053e-004	0.99977974
73. A(4,4)	0.198049	9.369394	0.02114	0.98313569
74. A(4,5)	0.003579	33.958298	1.05401e-004	0.99991590
75. A(4,6)	-0.002123	2.925826	-7.25513e-004	0.99942112
76. A(4,7)	-0.004506	0.214253	-0.02103	0.98322037
77. A(4,8)	0.000053	0.094001	5.60467e-004	0.99955281

78. A(4,9)	-0.001932	0.923564	-0.00209	0.99833112
79. A(4,10)	-0.074112	15.987103	-0.00464	0.99630121
80. A(5,1)	-0.193434	30.012146	-0.00645	0.99485752
81. A(5,2)	0.003294	8.032337	4.10148e-004	0.99967275
82. A(5,3)	-0.200118	18.571645	-0.01078	0.99140259
83. A(5,4)	-0.017261	16.440946	-0.00105	0.99916230
84. A(5,5)	0.209866	2.728845	0.07691	0.93869791
85. A(5,6)	0.000943	0.523048	0.00180	0.99856101
86. A(5,7)	0.021771	5.525796	0.00394	0.99685641
87. A(5,8)	-0.001847	0.292254	-0.00632	0.99495659
88. A(5,9)	0.007291	1.257345	0.00580	0.99537323
89. A(5,10)	0.025196	18.391169	0.00137	0.99890690
90. A(6,1)	0.381119	68.924423	0.00553	0.99558811
91. A(6,2)	0.105121	20.160137	0.00521	0.99583962
92. A(6,3)	-1.059421	630.036918	-0.00168	0.99865834
93. A(6,4)	-0.761812	179.715374	-0.00424	0.99661778
94. A(6,5)	0.244963	34.245358	0.00715	0.99429265
95. A(6,6)	0.220924	0.714151	0.30935	0.75705397
96. A(6,7)	0.708787	384.825862	0.00184	0.99853043

97. A(6,8)	-0.000182	0.032203	-0.00565	0.99549161
98. A(6,9)	-0.000938	0.128670	-0.00729	0.99418594
99. A(6,10)	-0.271887	21.393172	-0.01271	0.98985990
100. A(7,1)	0.003229	0.174062	0.01855	0.98519747
101. A(7,2)	-0.000541	0.019122	-0.02827	0.97744977
102. A(7,3)	-0.020291	1.259525	-0.01611	0.98714661
103. A(7,4)	-0.008526	0.776541	-0.01098	0.99124023
104. A(7,5)	0.000228	0.507155	4.49767e-004	0.99964114
105. A(7,6)	-0.003988	0.725911	-0.00549	0.99561655
106. A(7,7)	0.222026	0.252879	0.87799	0.37994653
107. A(7,8)	0.000339	0.022698	0.01492	0.98809337
108. A(7,9)	0.003389	0.409966	0.00827	0.99340360
109. A(7,10)	0.001071	0.087190	0.01228	0.99020306
110. A(8,1)	0.012943	0.253111	0.05113	0.95921890
111. A(8,2)	0.016727	0.364907	0.04584	0.96343827
112. A(8,3)	-0.008291	0.147771	-0.05610	0.95525888
113. A(8,4)	-0.004241	0.073195	-0.05794	0.95379313
114. A(8,5)	0.013527	0.313243	0.04319	0.96555401
115. A(8,6)	-0.012451	3.964016	-0.00314	0.99749380

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116. A(8,7)	-0.005108	0.088838	-0.05750	0.95414450
117. A(8,8)	0.193033	0.124890	1.54562	0.12219627
118. A(8,9)	0.001281	0.470616	0.00272	0.99782895
119. A(8,10)	-0.006448	0.127599	-0.05053	0.95969620
120. A(9,1)	-0.750285	86.581275	-0.00867	0.99308588
121. A(9,2)	0.111730	101.518670	0.00110	0.99912186
122. A(9,3)	1.413399	176.221463	0.00802	0.99360057
123. A(9,4)	-0.750174	132.307650	-0.00567	0.99547608
124. A(9,5)	-0.409243	48.787629	-0.00839	0.99330722
125. A(9,6)	0.003742	0.475470	0.00787	0.99372007
126. A(9,7)	0.382465	64.564114	0.00592	0.99527352
127. A(9,8)	-0.000871	0.081902	-0.01063	0.99151948
128. A(9,9)	0.221536	0.327481	0.67648	0.49873345
129. A(9,10)	0.202961	66.460577	0.00305	0.99756338
130. A(10,1)	-0.005014	0.323152	-0.01552	0.98762085
131. A(10,2)	-0.001303	0.471635	-0.00276	0.99779535
132. A(10,3)	-0.011665	0.403727	-0.02889	0.97694949
133. A(10,4)	0.005615	0.373274	0.01504	0.98799746
134. A(10,5)	-0.001579	0.302027	-0.00523	0.99582802

135. A(10,6)	-0.000392	0.012231	-0.03204	0.97443735
136. A(10,7)	-0.001543	0.634064	-0.00243	0.99805802
137. A(10,8)	-0.000130	0.002197	-0.05922	0.95277556
138. A(10,9)	-0.000363	0.012971	-0.02796	0.97769533
139. A(10,10)	0.209499	0.173585	1.20689	0.22747335
140. B(1,1)	0.849852	0.024913	34.11257	0.00000000
141. B(1,2)	-11.726628	1036.757948	-0.01131	0.99097543
142. B(1,3)	3.237855	745.926348	0.00434	0.99653662
143. B(1,4)	-3.634268	451.366257	-0.00805	0.99357574
144. B(1,5)	-12.176399	1686.261457	-0.00722	0.99423857
145. B(1,6)	0.039543	64.914293	6.09155e-004	0.99951396
146. B(1,7)	1.044783	734.414706	0.00142	0.99886492
147. B(1,8)	-0.084204	5.809904	-0.01449	0.98843646
148. B(1,9)	-0.053327	128.622015	-4.14603e-004	0.99966919
149. B(1,10)	-4.373103	289.738761	-0.01509	0.98795778
150. B(2,1)	-33.890295	2714.508566	-0.01248	0.99003877
151. B(2,2)	0.849469	0.016765	50.66954	0.00000000
152. B(2,3)	-7.291068	3383.500515	-0.00215	0.99828065
153. B(2,4)	-2.205317	1063.438016	-0.00207	0.99834538

154. B(2,5)	8.061916	1602.747054	0.00503	0.99598661
155. B(2,6)	-0.088245	9.194295	-0.00960	0.99234220
156. B(2,7)	-1.606026	108.879332	-0.01475	0.98823122
157. B(2,8)	0.020244	7.579695	0.00267	0.99786903
158. B(2,9)	-0.031903	25.648139	-0.00124	0.99900754
159. B(2,10)	-0.616333	286.007558	-0.00215	0.99828060
160. B(3,1)	-0.479713	45.496904	-0.01054	0.99158737
161. B(3,2)	0.016869	16.903424	9.97946e-004	0.99920375
162. B(3,3)	0.851895	0.005109	166.74955	0.00000000
163. B(3,4)	-0.046011	7.317228	-0.00629	0.99498285
164. B(3,5)	0.054679	7.305272	0.00748	0.99402798
165. B(3,6)	-0.006423	0.327404	-0.01962	0.98434916
166. B(3,7)	-0.041740	2.192177	-0.01904	0.98480888
167. B(3,8)	-0.013716	36.430906	-3.76501e-004	0.99969960
168. B(3,9)	0.020767	16.149606	0.00129	0.99897397
169. B(3,10)	-0.041173	2.240915	-0.01837	0.98534115
170. B(4,1)	-5.496683	1381.381473	-0.00398	0.99682513
171. B(4,2)	-9.678291	1712.872640	-0.00565	0.99549172
172. B(4,3)	-3.334251	320.050437	-0.01042	0.99168787

173. B(4,4)	0.849492	0.037218	22.82488	0.00000000
174. B(4,5)	-4.011376	588.454126	-0.00682	0.99456102
175. B(4,6)	0.137706	123.922608	0.00111	0.99911337
176. B(4,7)	-0.171933	11.069000	-0.01553	0.98760706
177. B(4,8)	-0.017331	13.834431	-0.00125	0.99900047
178. B(4,9)	-0.220099	18.704594	-0.01177	0.99061142
179. B(4,10)	-1.557210	3800.980865	-4.09686e-004	0.99967312
180. B(5,1)	-32.717952	11689.046325	-0.00280	0.99776670
181. B(5,2)	15.493207	6969.065591	0.00222	0.99822619
182. B(5,3)	-1.196819	1714.855253	-6.97913e-004	0.99944315
183. B(5,4)	-6.856497	1739.862998	-0.00394	0.99685568
184. B(5,5)	0.850137	0.030622	27.76222	0.00000000
185. B(5,6)	0.034199	418.584107	8.17021e-005	0.99993481
186. B(5,7)	-3.010059	5097.949841	-5.90445e-004	0.99952889
187. B(5,8)	-0.997561	56.777386	-0.01757	0.98598213
188. B(5,9)	-0.124327	1016.872016	-1.22264e-004	0.99990245
189. B(5,10)	1.804670	7896.732986	2.28534e-004	0.99981766
190. B(6,1)	58.464216	93108.173487	6.27917e-004	0.99949899
191. B(6,2)	-4.949497	3353.118986	-0.00148	0.99882225

192. B(6,3)	-5.730604	3482.882731	-0.00165	0.99868719
193. B(6,4)	418.020365	6141.423950	0.06807	0.94573333
194. B(6,5)	1.245837	1842.027391	6.76340e-004	0.99946036
195. B(6,6)	0.057986	0.023143	2.50557	0.01222543
196. B(6,7)	22.755332	3253.549088	0.00699	0.99441964
197. B(6,8)	0.011911	1.707810	0.00697	0.99443536
198. B(6,9)	0.059679	7.124527	0.00838	0.99331656
199. B(6,10)	-21.100233	20644.649397	-0.00102	0.99918451
200. B(7,1)	7.729668	2261.565098	0.00342	0.99727296
201. B(7,2)	1.179666	275.834265	0.00428	0.99658768
202. B(7,3)	0.064339	73.185572	8.79116e-004	0.99929857
203. B(7,4)	-0.019551	14.453595	-0.00135	0.99892073
204. B(7,5)	-5.736136	847.936420	-0.00676	0.99460250
205. B(7,6)	1.516908	157.211742	0.00965	0.99230147
206. B(7,7)	-0.066640	0.114369	-0.58267	0.56011250
207. B(7,8)	-0.018580	146.481413	-1.26844e-004	0.99989879
208. B(7,9)	-0.065337	47.451394	-0.00138	0.99890137
209. B(7,10)	-0.291596	1100.187052	-2.65043e-004	0.99978853
210. B(8,1)	1.237987	5294.267031	2.33835e-004	0.99981343

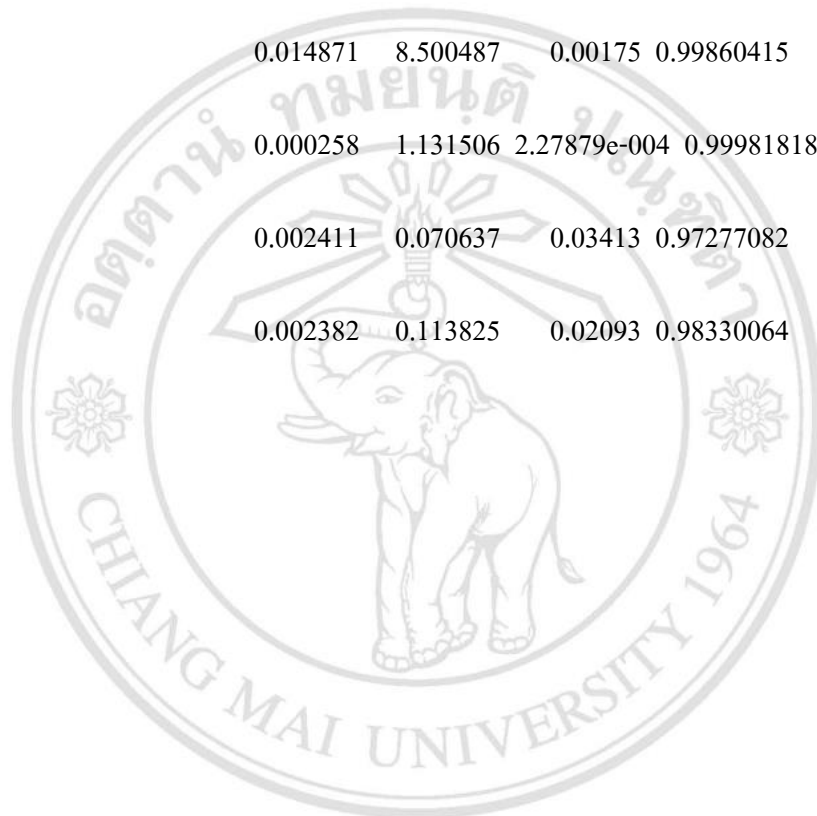
211. B(8,2)	3.944792	60.199196	0.06553	0.94775283
212. B(8,3)	136.685956	22338.425935	0.00612	0.99511788
213. B(8,4)	1.540945	114.048674	0.01351	0.98921988
214. B(8,5)	9.877882	3197.601105	0.00309	0.99753522
215. B(8,6)	0.038054	0.606145	0.06278	0.94994151
216. B(8,7)	-26.006341	11638.180509	-0.00223	0.99821707
217. B(8,8)	-0.070349	0.000000	-159026.32599	0.00000000
218. B(8,9)	0.028237	0.815242	0.03464	0.97236991
219. B(8,10)	1.192447	43.322960	0.02752	0.97804133
220. B(9,1)	46.813214	33330.692935	0.00140	0.99887937
221. B(9,2)	-1.416464	1971.107276	-7.18613e-004	0.99942663
222. B(9,3)	-114.787494	41654.144134	-0.00276	0.99780125
223. B(9,4)	-20.363828	4157.079174	-0.00490	0.99609151
224. B(9,5)	217.653184	36936.413921	0.00589	0.99529838
225. B(9,6)	0.083714	1.493436	0.05605	0.95529848
226. B(9,7)	34.891979	16481.675988	0.00212	0.99831087
227. B(9,8)	-0.011665	0.869326	-0.01342	0.98929430
228. B(9,9)	-0.041760	0.047671	-0.87602	0.38101805
229. B(9,10)	-4.431811	811.372436	-0.00546	0.99564188

230. B(10,1)	-2.209916	214.322499	-0.01031	0.99177302
231. B(10,2)	0.705252	94.414999	0.00747	0.99404010
232. B(10,3)	-0.318500	24.757269	-0.01286	0.98973556
233. B(10,4)	1.060786	513.131743	0.00207	0.99835055
234. B(10,5)	0.891187	119.235989	0.00747	0.99403655
235. B(10,6)	-0.075926	8.517469	-0.00891	0.99288763
236. B(10,7)	1.273678	111.020268	0.01147	0.99084649
237. B(10,8)	-0.003049	0.280677	-0.01086	0.99133305
238. B(10,9)	-0.040235	3.414897	-0.01178	0.99059948
239. B(10,10)	0.030679	0.091031	0.33702	0.73610189
240. D(1)	-0.011047	1.653604	-0.00668	0.99466970
241. D(2)	-0.026444	3.094178	-0.00855	0.99318103
242. D(3)	0.000105	0.026893	0.00391	0.99688087
243. D(4)	-0.019468	8.282172	-0.00235	0.99812450
244. D(5)	-0.005753	4.145909	-0.00139	0.99889276
245. D(6)	-0.019690	2.764574	-0.00712	0.99431736
246. D(7)	-0.004322	0.604413	-0.00715	0.99429509
247. D(8)	-0.029896	0.149193	-0.20038	0.84118009
248. D(9)	-0.002071	0.424839	-0.00488	0.99611017

249. D(10)	-0.010024	0.235822	-0.04251	0.96609419
250. R(2,1)	0.028230	4.460293	0.00633	0.99495008
251. R(3,1)	0.003849	2.430390	0.00158	0.99873627
252. R(3,2)	-0.017281	4.311810	-0.00401	0.99680223
253. R(4,1)	-0.010900	5.297536	-0.00206	0.99835827
254. R(4,2)	0.050929	6.047029	0.00842	0.99328020
255. R(4,3)	0.011535	1.964379	0.00587	0.99531469
256. R(5,1)	0.007778	3.147894	0.00247	0.99802865
257. R(5,2)	-0.015305	16.350981	-9.36042e-004	0.99925315
258. R(5,3)	-0.007756	1.299439	-0.00597	0.99523778
259. R(5,4)	0.069864	3.713093	0.01882	0.98498818
260. R(6,1)	-0.010789	9.102084	-0.00119	0.99905426
261. R(6,2)	0.034254	2.987254	0.01147	0.99085102
262. R(6,3)	0.003317	0.298914	0.01110	0.99114506
263. R(6,4)	-0.027211	0.411855	-0.06607	0.94732326
264. R(6,5)	-0.008240	1.046317	-0.00788	0.99371622
265. R(7,1)	-0.017284	7.683484	-0.00225	0.99820516
266. R(7,2)	0.004981	3.132181	0.00159	0.99873107
267. R(7,3)	0.003459	0.178363	0.01940	0.98452554

268. R(7,4)	0.002741	0.203594	0.01346	0.98925799
269. R(7,5)	0.013817	8.065938	0.00171	0.99863318
270. R(7,6)	-0.016293	1.416221	-0.01150	0.99082111
271. R(8,1)	0.021854	4.232421	0.00516	0.99588009
272. R(8,2)	-0.010715	3.377226	-0.00317	0.99746865
273. R(8,3)	-0.006450	4.964616	-0.00130	0.99896345
274. R(8,4)	-0.014245	17.890785	-7.96219e-004	0.99936471
275. R(8,5)	0.003703	0.217320	0.01704	0.98640452
276. R(8,6)	-0.000033	0.052821	-6.25444e-004	0.99950097
277. R(8,7)	0.000022	0.057828	3.89043e-004	0.99968959
278. R(9,1)	0.003869	0.913285	0.00424	0.99661956
279. R(9,2)	-0.008710	1.427702	-0.00610	0.99513257
280. R(9,3)	-0.042838	12.779248	-0.00335	0.99732540
281. R(9,4)	0.035187	9.694233	0.00363	0.99710391
282. R(9,5)	-0.020596	12.247186	-0.00168	0.99865821
283. R(9,6)	0.000226	0.080966	0.00279	0.99777371
284. R(9,7)	-0.032665	5.748725	-0.00568	0.99546636
285. R(9,8)	0.001191	0.017290	0.06889	0.94507347
286. R(10,1)	0.006741	4.239365	0.00159	0.99873130

287. R(10,2)	-0.002904	1.207278	-0.00241	0.99808106
288. R(10,3)	0.005914	0.073114	0.08089	0.93552666
289. R(10,4)	0.005074	6.012545	8.43857e-004	0.99932670
290. R(10,5)	-0.018660	2.294232	-0.00813	0.99351059
291. R(10,6)	0.014871	8.500487	0.00175	0.99860415
292. R(10,7)	0.000258	1.131506	2.27879e-004	0.99981818
293. R(10,8)	0.002411	0.070637	0.03413	0.97277082
294. R(10,9)	0.002382	0.113825	0.02093	0.98330064



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ภาคผนวก ง

ผลการวิเคราะห์ความผันผวนของผลตอบแทนของกองทุนรวมที่ลงทุนในต่างประเทศทั้ง 10 กองทุน
โดยแบบจำลอง CCC

MV-GARCH, CC - Estimation by BFGS

NO CONVERGENCE IN 87 ITERATIONS

LAST CRITERION WAS 0.0000000

SUBITERATIONS LIMIT EXCEEDED.

ESTIMATION POSSIBLY HAS STALLED OR MACHINE ROUNDOFF IS MAKING
FURTHER PROGRESS DIFFICULT

TRY HIGHER SUBITERATIONS LIMIT, TIGHTER CVCRIT, DIFFERENT SETTING FOR
EXACTLINE OR ALPHA ON NLPAR

RESTARTING ESTIMATION FROM LAST ESTIMATES OR DIFFERENT INITIAL GUESSES
MIGHT ALSO WORK

With Heteroscedasticity/Misspecification Adjusted Standard Errors

Usable Observations 208

Log Likelihood -4856.2194

Variable	Coeff	Std Error	T-Stat	Signif
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1. Constant	0.102149	0.000247	414.05647	0.0000000
2. MSASIASSM{1}	0.184534	0.001257	146.79312	0.0000000

3. Constant	0.031410	0.075982	0.41339	0.67932087
4. PHATRAGHC{1}	-0.054659	0.070628	-0.77390	0.43899104
5. Mvg Avge{1}	0.000381	0.092890	0.00410	0.99672543
6. Constant	-0.018817	0.046575	-0.40400	0.68620947
7. KKPROP{1}	-0.054363	0.076784	-0.70800	0.47894440
8. Mvg Avge{1}	0.012069	0.060758	0.19864	0.84254416
9. Constant	0.003945	0.072512	0.05441	0.95661037
10. TISCOUS{1}	0.035912	0.047764	0.75185	0.45213845
11. Mvg Avge{1}	-0.108123	0.098830	-1.09403	0.27394270
12. Constant	0.134945	0.183003	0.73739	0.46088498
13. ABAG{1}	-0.181384	0.075474	-2.40328	0.01624888
14. Mvg Avge{1}	0.079860	0.175489	0.45507	0.64905875
15. Constant	1.096607	1.081022	1.01442	0.31038356
16. GW{1}	-0.278542	0.164691	-1.69130	0.09077906
17. Mvg Avge{1}	-1.552427	4.588196	-0.33835	0.73509773
18. Constant	-0.050869	0.047301	-1.07545	0.28217422
19. TGLOBALVALUE{1}	0.041755	0.033272	1.25496	0.20949279
20. Mvg Avge{1}	0.201411	0.177209	1.13657	0.25571684
21. Constant	-0.045432	0.017198	-2.64161	0.00825135

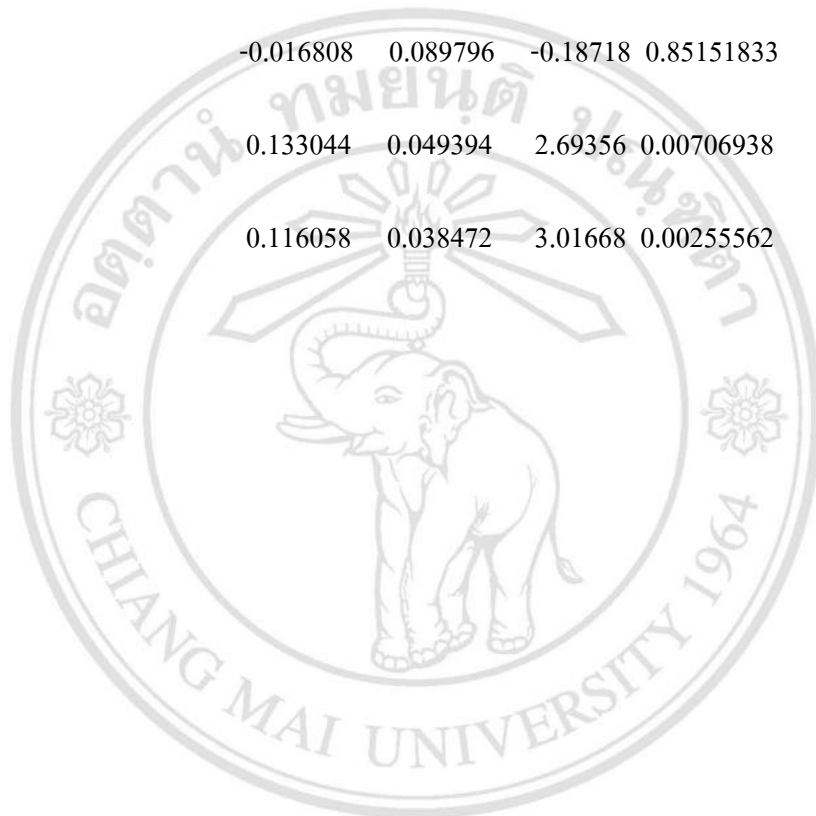
22. ASPSP500{1}	-0.002955	0.000010	-291.06825	0.00000000
23. Mvg Avge{1}	0.051113	0.017406	2.93656	0.00331871
24. Constant	0.312163	1.009721	0.30916	0.75720154
25. SCBPGF{1}	-0.301310	0.031063	-9.70010	0.00000000
26. Mvg Avge{1}	-0.769350	3.785416	-0.20324	0.83894702
27. Constant	-0.101813	0.005518	-18.45221	0.00000000
28. KFWATER{1}	-0.043998	0.000034	-1285.74460	0.00000000
29. Mvg Avge{1}	-0.125913	0.000611	-206.11844	0.00000000
30. C(1)	0.155228	0.015885	9.77226	0.00000000
31. C(2)	0.975573	0.060426	16.14484	0.00000000
32. C(3)	0.108431	0.014856	7.29867	0.00000000
33. C(4)	0.562004	0.125137	4.49112	0.00000709
34. C(5)	0.466798	0.053744	8.68558	0.00000000
35. C(6)	259.396329	85.119838	3.04743	0.00230811
36. C(7)	3.621080	0.133002	27.22585	0.00000000
37. C(8)	19865.148662	1.475716	13461.36344	0.00000000
38. C(9)	325.580029	6.626452	49.13338	0.00000000
39. C(10)	0.365096	0.001063	343.41295	0.00000000
40. A(1)	0.175654	0.048018	3.65809	0.00025410

41. A(2)	-0.024522	0.004578	-5.35690	0.00000008
42. A(3)	0.083528	0.040708	2.05187	0.04018249
43. A(4)	0.114573	0.017856	6.41652	0.00000000
44. A(5)	0.498110	0.133723	3.72493	0.00019537
45. A(6)	0.085948	0.014983	5.73621	0.00000001
46. A(7)	0.166638	0.019418	8.58180	0.00000000
47. A(8)	0.048038	0.000003	15399.88742	0.00000000
48. A(9)	0.238870	0.056113	4.25696	0.00002072
49. A(10)	-0.138390	0.000363	-381.50786	0.00000000
50. B(1)	0.522652	0.026957	19.38809	0.00000000
51. B(2)	-0.002116	0.063999	-0.03307	0.97362126
52. B(3)	0.603639	0.034998	17.24793	0.00000000
53. B(4)	0.211281	0.187023	1.12971	0.25859934
54. B(5)	0.157222	0.042398	3.70821	0.00020873
55. B(6)	-0.098657	0.060432	-1.63253	0.10256887
56. B(7)	-0.864772	0.069895	-12.37247	0.00000000
57. B(8)	-0.362326	0.000017	-21569.48688	0.00000000
58. B(9)	-0.265530	0.029787	-8.91433	0.00000000
59. B(10)	0.852328	0.000946	901.02551	0.00000000

60. R(2,1)	-0.013014	0.067466	-0.19289	0.84704292
61. R(3,1)	0.044845	0.064841	0.69161	0.48917975
62. R(3,2)	-0.055541	0.078910	-0.70385	0.48152625
63. R(4,1)	-0.026542	0.077141	-0.34407	0.73079107
64. R(4,2)	0.050105	0.094781	0.52863	0.59705967
65. R(4,3)	0.088285	0.072513	1.21750	0.22341413
66. R(5,1)	0.010574	0.116269	0.09095	0.92753454
67. R(5,2)	0.033090	0.074623	0.44343	0.65745468
68. R(5,3)	-0.084372	0.063065	-1.33786	0.18094143
69. R(5,4)	0.015153	0.073979	0.20483	0.83770333
70. R(6,1)	-0.068203	0.024836	-2.74614	0.00603009
71. R(6,2)	0.045585	0.053927	0.84531	0.39793889
72. R(6,3)	0.073912	0.036816	2.00761	0.04468475
73. R(6,4)	-0.033878	0.084709	-0.39993	0.68920872
74. R(6,5)	-0.100329	0.041570	-2.41348	0.01580080
75. R(7,1)	-0.037394	0.100406	-0.37243	0.70957268
76. R(7,2)	0.107573	0.092710	1.16032	0.24591703
77. R(7,3)	0.156938	0.100342	1.56403	0.11781155
78. R(7,4)	0.337197	0.105497	3.19626	0.00139220

79. R(7,5)	0.003775	0.059221	0.06375	0.94917008
80. R(7,6)	0.016215	0.074031	0.21903	0.82662935
81. R(8,1)	0.044949	0.034551	1.30095	0.19327651
82. R(8,2)	-0.039250	0.069788	-0.56242	0.57383006
83. R(8,3)	-0.004115	0.035717	-0.11520	0.90828599
84. R(8,4)	0.051604	0.095849	0.53839	0.59030683
85. R(8,5)	-0.034113	0.080050	-0.42615	0.66999761
86. R(8,6)	-0.294022	0.045188	-6.50665	0.00000000
87. R(8,7)	-0.003845	0.045618	-0.08428	0.93283625
88. R(9,1)	-0.049848	0.058657	-0.84983	0.39542113
89. R(9,2)	-0.073730	0.055125	-1.33751	0.18105739
90. R(9,3)	0.002433	0.056885	0.04278	0.96587811
91. R(9,4)	0.060664	0.057673	1.05186	0.29286437
92. R(9,5)	-0.084245	0.026539	-3.17441	0.00150141
93. R(9,6)	-0.110355	0.029828	-3.69976	0.00021580
94. R(9,7)	-0.007247	0.041541	-0.17444	0.86151584
95. R(9,8)	0.624912	0.190369	3.28264	0.00102841
96. R(10,1)	0.048758	0.087915	0.55460	0.57916492
97. R(10,2)	-0.061755	0.080357	-0.76852	0.44218007

98. R(10,3)	0.375357	0.069668	5.38780	0.00000007
99. R(10,4)	-0.006223	0.065197	-0.09545	0.92395885
100. R(10,5)	-0.152441	0.060757	-2.50902	0.01210676
101. R(10,6)	0.013451	0.051441	0.26149	0.79371575
102. R(10,7)	-0.016808	0.089796	-0.18718	0.85151833
103. R(10,8)	0.133044	0.049394	2.69356	0.00706938
104. R(10,9)	0.116058	0.038472	3.01668	0.00255562



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ภาคผนวก จ

ผลการวิเคราะห์ความผันผวนของผลตอบแทนของกองทุนรวมที่ลงทุนในต่างประเทศทั้ง 10 กองทุน
โดยแบบจำลอง DCC

MV-GARCH, DCC - Estimation by BFGS

NO CONVERGENCE IN 4 ITERATIONS

LAST CRITERION WAS 0.0000000

SUBITERATIONS LIMIT EXCEEDED.

ESTIMATION POSSIBLY HAS STALLED OR MACHINE ROUNDOFF IS MAKING
FURTHER PROGRESS DIFFICULT

TRY HIGHER SUBITERATIONS LIMIT, TIGHTER CVCRIT, DIFFERENT SETTING FOR
EXACTLINE OR ALPHA ON NLPAR

RESTARTING ESTIMATION FROM LAST ESTIMATES OR DIFFERENT INITIAL GUESSES
MIGHT ALSO WORK

With Heteroscedasticity/Misspecification Adjusted Standard Errors

Usable Observations 208

Log Likelihood -4885.6953

Variable	Coeff	Std Error	T-Stat	Signif
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1. Constant	0.038716	0.049214	0.78669	0.43146604
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2. MSASIASSM{1}	0.050569	0.067888	0.74489	0.45633848
3. Constant	-0.010999	0.065800	-0.16716	0.86724751
4. PHATRAGHC{1}	-0.010644	0.076067	-0.13993	0.88871823
5. Mvg Avge{1}	-0.000861	0.089539	-0.00961	0.99232904
6. Constant	0.003622	0.036647	0.09883	0.92127374
7. KKPROP{1}	-0.049017	0.071708	-0.68356	0.49425284
8. Mvg Avge{1}	0.042386	0.056238	0.75367	0.45104458
9. Constant	-0.018295	0.053896	-0.33946	0.73426411
10. TISCOUS{1}	0.035707	0.078681	0.45381	0.64996230
11. Mvg Avge{1}	-0.023122	0.075885	-0.30470	0.76059732
12. Constant	-0.036433	0.085486	-0.42619	0.66996767
13. ABAG{1}	0.014703	0.061030	0.24091	0.80962360
14. Mvg Avge{1}	-0.004611	0.119062	-0.03873	0.96910497
15. Constant	0.012051	0.512529	0.02351	0.98124187
16. GW{1}	-0.050462	0.009770	-5.16506	0.00000024
17. Mvg Avge{1}	0.054399	1.477780	0.03681	0.97063574
18. Constant	-0.003437	0.089136	-0.03856	0.96924471
19. TGLOBALVALUE{1}	0.055259	0.059242	0.93276	0.35094454
20. Mvg Avge{1}	0.091114	0.133725	0.68135	0.49564879

21. Constant	0.109440	0.007017	15.59589	0.00000000
22. ASPSP500{1}	-0.033489	0.000000	-8580930.42931	0.00000000
23. Mvg Avge{1}	0.022004	0.009177	2.39765	0.01650064
24. Constant	-0.001247	0.885943	-0.00141	0.99887730
25. SCBPGF{1}	0.133185	0.236244	0.56376	0.57291813
26. Mvg Avge{1}	0.401507	2.235625	0.17959	0.85747055
27. Constant	-0.037297	0.069132	-0.53951	0.58953475
28. KFWATER{1}	-0.000866	0.076359	-0.01133	0.99095647
29. Mvg Avge{1}	-0.057919	0.104589	-0.55378	0.57973180
30. C(1)	0.275494	0.023825	11.56337	0.00000000
31. C(2)	0.620539	0.035756	17.35458	0.00000000
32. C(3)	0.170331	0.014662	11.61697	0.00000000
33. C(4)	0.485093	0.040283	12.04207	0.00000000
34. C(5)	0.392687	0.010719	36.63635	0.00000000
35. C(6)	269.431560	2.657357	101.39079	0.00000000
36. C(7)	1.914774	0.037163	51.52344	0.00000000
37. C(8)	12834.466074	1.048075	12245.75070	0.00000000
38. C(9)	338.911457	3.372634	100.48865	0.00000000
39. C(10)	1.631074	0.144456	11.29118	0.00000000

40. A(1)	0.045173	0.031646	1.42744	0.15345187
41. A(2)	0.040031	0.052031	0.76936	0.44168001
42. A(3)	0.067243	0.040312	1.66807	0.09530240
43. A(4)	0.144742	0.056292	2.57124	0.01013341
44. A(5)	0.071557	0.009028	7.92655	0.00000000
45. A(6)	0.207821	0.015250	13.62741	0.00000000
46. A(7)	0.200325	0.021836	9.17389	0.00000000
47. A(8)	0.080523	0.003631	22.17909	0.00000000
48. A(9)	0.061312	0.039114	1.56755	0.11698689
49. A(10)	-0.000112	0.071144	-0.00157	0.99874621
50. B(1)	0.421203	0.045293	9.29952	0.00000000
51. B(2)	0.344345	0.035619	9.66749	0.00000000
52. B(3)	0.456387	0.040696	11.21443	0.00000000
53. B(4)	0.327996	0.043666	7.51155	0.00000000
54. B(5)	0.563692	0.010800	52.19488	0.00000000
55. B(6)	-0.032467	0.002612	-12.43206	0.00000000
56. B(7)	-0.043961	0.008458	-5.19776	0.00000020
57. B(8)	-0.133918	0.000003	-48336.51423	0.00000000
58. B(9)	-0.008249	0.010018	-0.82341	0.41027752

59. B(10)	-0.302870	0.115376	-2.62508	0.00866281
60. DCC(1)	0.014515	0.008367	1.73483	0.08277088
61. DCC(2)	0.389419	0.749229	0.51976	0.60323149



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ประวัติผู้เขียน

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