CHAPTER V

DISCUSSION AND CONCLUSION

A. Summary

1. At level, after testing with Dickey-Fuller test, Augmented Dickety-Fuller, and Phillips-Perron test, all variables are not stationary. Nevertheless, series are integrated at first difference noted as I(1) therefore stationary.

2. For bivariate model, result from Granger causality test explains the short-run causal relationship between the variables. Only a single pairwise series represents a bidirectional causality that is between ISEQ and RTSI. In other words, ISEQ has impacts upon RTSI and reversely; the actual value of the former is resulted from the previous change upon the latter and vice versa. In a unidirectional short run causal relationship, IBOVESPA Granger causes RTSI, CNXNIFTY and JKSE. RTSI has impact on JKSE; SSE over ISEQ. PSIG influences JKSE, SSE and ATHEX. FTSEMIB Granger causes JKSE and ATHEX. ISEQ has influence over JKSE, PSIG and ATHEX; IBEX35 over JKSE, ISEQ and ATHEX.

3. In multivariate perspective, by the means of Johansen co-integration test, either with default lag length 4 or with the optimum lag 1, the presence of co-integrating equation always verified; five for the former and one for the latter. Effectively, the first hypothesis H_1 is supported that means series are

co-integrated. Since, the series derived from BRIIC and PIIGS are co-integrated, that implies shift persists during eleven years and co-movement could be drawn as conclusion.

4. In short term, using ECT, there is some disturbance within the series nevertheless; this latter is corrected between one to four months alongside eleven years. That is a trace of disequilibrium within the series. That trace tends to be more significant for Brazil in light of Russia, India and Spain for less than two months. Similarly to Russia that tends to decline with Brazil, Indonesia and Greece. Indian needs four months to sort out the disequilibrium with Brazil, Indonesia and Portugal; about three months for Indonesia in light of Russia and India. For China within about two months, that imbalance collapses in tie with Brazil, Portugal, Ireland (for a negative impact) and Greece. Considering the PIIGS countries, Portugal needs also about four months to correct the imbalance with both Ireland and Spain; whereas a couple of months for Italy in light with Portugal, Ireland, Greece and Spain. Only less than a month, this trace persists as well as for both Ireland with Brazil, Portugal, Italy and Spain as Greece with Russia, Italy and Spain. Thus, Spain requires three months to connect with Brazil, Portugal, Italy and Greece.

VECM enhances these results for the short run disequilibrium between Russia and Ireland, China and Greece, Italy with Ireland and Spain, Ireland

and Portugal; Italy and Greece. Since the approach is different and the lag length used is optimu (lag=1), results may not accurately the same. For instance, Brazil, India, Indonesia, and Portugal represent no trace of disequilibrium in short term, and Italy apart from Ireland has also Spain.

5. In the long term, in light of the VECM, for Brazil, only Italy and Ireland have no impact over the long-run equilibrium relationship between both groups. Besides, only Brazil, Italy and Ireland do not have influence over the long-run relationship for no significant value towards Russia, India, Indonesia, China, Portugal, Italy, Ireland, Greece and Spain. Brazil is mostly6 influenced positively by Indonesia and Greece; negatively by India, Portugal and Spain similar to the case of Russia. For India, only Portugal has the most positive impact and Indonesia the negative. Both Indonesia and China over influenced positively and negatively by Greece and Portugal respectively. PIIGS countries on the other side, negatively also positively influenced by Greece, Spain, Portugal, India and Indonesia.

6. Almost all variables, that is to say RTSI, CNXNIFTY, JKSE, SSE, PSIG, ATHEX and IBEX35 have impact on the others as well as positively as negatively. Only IBOVESPA, FTSEMIB and ISEQ have not. The disequilibrium takes place only for a very short period of time (less than four months during eleven years). Hence, the second hypothesis (H_2) of strong co-movement is supported.

7. Briefly, at the first period, the variable itself because of shock responds that shock greatly, while considering IRF. This fact changes more and more pursuing the following countries. Before and after the crisis, the variables tend to look for the average value of response, which has a trace of decrease at the heart of the crisis.

8. FEVD highlights the importance of every variable because of shock, not far from IRF, at the first period then almost every variable has great impact on itself though more and more increases, starting from 100% to 17.5% on average.

B. Discussion and conclusion

Co-movement verifies the theory of one price that is to say in light of the globalization era, prices fluctuate nevertheless come to seek its equilibrium. From co-integration test, series are in overall co-integrated therefore arbitrage is not applicable, more precisely; it is difficult to handle the alternatives for portfolio international diversification. This study provides information concerning relationship between the newly emerging economies that suffer from the crisis for a while but are blooming for a long time that is BRIIC group. On the contrary, the PIIGS group suffers from the global economic recession and still in difficulties over the period.

C. Limitation and suggestion

This study is far from being perfect, aiming only to determine either there is co-movement within the limited groups, in overall apart from the financial crisis, this

research does not depict or analyze the detailed causes that affect the co-movement nor the contagion from 2002 to 2012. For further research, it is better if the causes are analyzed to explain the international portfolio diversification; its advantages and also its drawbacks, since investors need complete information. Besides, times could be added as long as possible like daily price by matching every markets fluctuation as regards to the others. Even the groups could be improved in term of international trends. If data are available, limitation as such composite or index adjusted price is better. For some methods, order of variables may change the result, for instance while analyzing the response and variance decomposition. In order to avoid that matter, determination of a dependent variable is important, it may be possible if only one or some variables are limited towards other independent variables but not all variables are permuted. If other more accurate methods or processes are available, that findings or discovery is more appreciated and expected.

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APPENDIX

Appendix 1: Stationarity test and order of integration

1- DICKEY FULLER TEST (DF TEST)

1.1 DF AT LEVEL: DEGREE (0)

BRIIC COUNTRIES

BRAZIL: IBOVESPA

Null Hypothesis: IBOVESPA has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=12)

		t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic		0.294684
Test critical values:	1% level	-2.582872
	5% level	-1.943304
	10% level	-1.615087

*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals
Dependent Variable: D(GLSRESID)
Method: Least Squares
Date: 05/22/13 Time: 16:11
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	0.002006	0.006808	0.294684	0.7687
D(GLSRESID(-1))	0.158281	0.087325	1.812539	0.0722

R-squared	0.002566	Mean dependent var	0.011297
Adjusted R-squared	-0.005226	S.D. dependent var	0.071797
S.E. of regression	0.071985	Akaike info criterion	-2.409465
Sum squared resid	0.663267	Schwarz criterion	-2.365349
Log likelihood	158.6152	Hannan-Quinn criter.	-2.391540
Durbin-Watson stat	1.997783		

RUSSIA: RTSI

Null Hypothesis: RTSI has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=12)

		t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic		-0.326355
Test critical values:	1% level	-2.582872
	5% level	-1.943304
	10% level	-1.615087

*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals
Dependent Variable: D(GLSRESID)
Method: Least Squares
Date: 05/22/13 Time: 16:11
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.002792	0.008555	-0.326355	0.7447
D(GLSRESID(-1))	0.285298	0.085239	3.347037	0.0011

R-squared	0.067003	Mean dependent var	0.012758
Adjusted R-squared	0.059714	S.D. dependent var	0.105799
S.E. of regression	0.102592	Akaike info criterion	-1.700853
Sum squared resid	1.347209	Schwarz criterion	-1.656737
Log likelihood	112.5554	Hannan-Quinn criter.	-1.682927
Durbin-Watson stat	2.003922		

INDIA: CNXNIFTY

Null Hypothesis: CNXNIFTY has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=12)

		t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic		0.585579
Test critical values:	1% level	-2.582734
	5% level	-1.943285
	10% level	-1.615099

*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals
Dependent Variable: D(GLSRESID)
Method: Least Squares
Date: 05/22/13 Time: 16:12
Sample (adjusted): 2002M02 2012M12
Included observations: 131 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	0.004333	0.007400	0.585579	0.5592

R-squared	-0.026539	Mean dependent var	0.013001
Adjusted R-squared	-0.026539	S.D. dependent var	0.076313
S.E. of regression	0.077319	Akaike info criterion	-2.274148
Sum squared resid	0.777171	Schwarz criterion	-2.252200
Log likelihood	149.9567	Hannan-Quinn criter.	-2.265229
Durbin-Watson stat	1.838927		

INDONESIA: JKSE

Null Hypothesis: JKSE has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=12)

		t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic		0.872730
Test critical values:	1% level	-2.582872
	5% level	-1.943304
	10% level	-1.615087

*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals
Dependent Variable: D(GLSRESID)
Method: Least Squares
Date: 05/22/13 Time: 16:12
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	0.004957	0.005680	0.872730	0.3844
D(GLSRESID(-1))	0.260026	0.086297	3.013154	0.0031

R-squared	0.024106	Mean dependent var	0.017337
Adjusted R-squared	0.016482	S.D. dependent var	0.070178
S.E. of regression	0.069597	Akaike info criterion	-2.476929
Sum squared resid	0.619997	Schwarz criterion	-2.432813
Log likelihood	163.0004	Hannan-Quinn criter.	-2.459003
Durbin-Watson stat	1.984920		

CHINA: SSE

Null Hypothesis: SSE has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=12)

		t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic		-0.948487
Test critical values:	1% level	-2.582734
	5% level	-1.943285
	10% level	-1.615099

*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals
Dependent Variable: D(GLSRESID)
Method: Least Squares
Date: 05/22/13 Time: 16:13
Sample (adjusted): 2002M02 2012M12
Included observations: 131 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.015138	0.015960	-0.948487	0.3446

R-squared	0.005461	Mean dependent var	0.003202
Adjusted R-squared	0.005461	S.D. dependent var	0.085269
S.E. of regression	0.085036	Akaike info criterion	-2.083884
Sum squared resid	0.940041	Schwarz criterion	-2.061936
Log likelihood	137.4944	Hannan-Quinn criter.	-2.074966
Durbin-Watson stat	1.846140		

PIIGS COUNTRIES

PSIG

Null Hypothesis: PSIG has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=12)

		t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic		-1.215064
Test critical values:	1% level	-2.582872
	5% level	-1.943304
	10% level	-1.615087

*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals
Dependent Variable: D(GLSRESID)
Method: Least Squares
Date: 05/22/13 Time: 16:13
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.018747	0.015429	-1.215064	0.2266
D(GLSRESID(-1))	0.195952	0.087185	2.247549	0.0263

R-squared	0.044767	Mean dependent var	0.001424
Adjusted R-squared	0.037304	S.D. dependent var	0.053264
S.E. of regression	0.052261	Akaike info criterion	-3.049853
Sum squared resid	0.349600	Schwarz criterion	-3.005737
Log likelihood	200.2404	Hannan-Quinn criter.	-3.031927
Durbin-Watson stat	1.966741		

FTSEMIB

Null Hypothesis: FTSEMIB has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=12)

		t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic		-0.331211
Test critical values:	1% level	-2.582734
	5% level	-1.943285
	10% level	-1.615099

*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals
Dependent Variable: D(GLSRESID)
Method: Least Squares
Date: 05/22/13 Time: 16:13
Sample (adjusted): 2002M02 2012M12
Included observations: 131 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.005295	0.015987	-0.331211	0.7410

R-squared	-0.006182	Mean dependent var	-0.005203
Adjusted R-squared	-0.006182	S.D. dependent var	0.062284
S.E. of regression	0.062476	Akaike info criterion	-2.700462
Sum squared resid	0.507424	Schwarz criterion	-2.678513
Log likelihood	177.8802	Hannan-Quinn criter.	-2.691543
Durbin-Watson stat	1.761373		

ISEQ

Null Hypothesis: ISEQ has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=12)

		t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic		-0.893359
Test critical values:	1% level	-2.582872
	5% level	-1.943304
	10% level	-1.615087

*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals
Dependent Variable: D(GLSRESID)
Method: Least Squares
Date: 05/22/13 Time: 16:14
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.011280	0.012627	-0.893359	0.3733
D(GLSRESID(-1))	0.245392	0.085714	2.862921	0.0049

R-squared	0.060839	Mean dependent var	-0.002912
Adjusted R-squared	0.053502	S.D. dependent var	0.063764
S.E. of regression	0.062035	Akaike info criterion	-2.706972
Sum squared resid	0.492587	Schwarz criterion	-2.662856
Log likelihood	177.9532	Hannan-Quinn criter.	-2.689046
Durbin-Watson stat	2.029566		

ATHEX

Null Hypothesis: ATHEX has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=12)

		t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic		-0.078712
Test critical values:	1% level	-2.582734
	5% level	-1.943285
	10% level	-1.615099

*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals
Dependent Variable: D(GLSRESID)
Method: Least Squares
Date: 05/22/13 Time: 16:14
Sample (adjusted): 2002M02 2012M12
Included observations: 131 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.001077	0.013688	-0.078712	0.9374

R-squared	-0.008339	Mean dependent var	-0.008022
Adjusted R-squared	-0.008339	S.D. dependent var	0.087931
S.E. of regression	0.088297	Akaike info criterion	-2.008612
Sum squared resid	1.013532	Schwarz criterion	-1.986664
Log likelihood	132.5641	Hannan-Quinn criter.	-1.999693
Durbin-Watson stat	1.606332		

IBEX35

Null Hypothesis: IBEX35 has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=12)

		t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic		-1.239858
Test critical values:	1% level	-2.582734
	5% level	-1.943285
	10% level	-1.615099

*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals
Dependent Variable: D(GLSRESID)
Method: Least Squares
Date: 05/22/13 Time: 16:15
Sample (adjusted): 2002M02 2012M12
Included observations: 131 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.023320	0.018809	-1.239858	0.2173

R-squared	0.011684	Mean dependent var	0.000110
Adjusted R-squared	0.011684	S.D. dependent var	0.061803
S.E. of regression	0.061441	Akaike info criterion	-2.733869
Sum squared resid	0.490752	Schwarz criterion	-2.711921
Log likelihood	180.0684	Hannan-Quinn criter.	-2.724951
Durbin-Watson stat	1.818738		

1.2 DF AT FIRST DIFFERENCE: DEGREE (1)

BRIIC COUNTRIES

BRAZIL: IBOVESPA

Null Hypothesis: D(IBOVESPA) has a unit root
Exogenous: Constant
Lag Length: 2 (Automatic - based on SIC, maxlag=12)

		t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic		-3.098352
Test critical values:	1% level	-2.583153
	5% level	-1.943344
	10% level	-1.615062

*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals
Dependent Variable: D(GLSRESID)
Method: Least Squares
Date: 05/30/13 Time: 14:08
Sample (adjusted): 2002M05 2012M12
Included observations: 128 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.270116	0.087181	-3.098352	0.0024
D(GLSRESID(-1))	-0.445171	0.100211	-4.442322	0.0000
D(GLSRESID(-2))	-0.218998	0.086606	-2.528657	0.0127

R-squared	0.350423	Mean dependent var	0.000560
Adjusted R-squared	0.340030	S.D. dependent var	0.093978
S.E. of regression	0.076347	Akaike info criterion	-2.283907
Sum squared resid	0.728601	Schwarz criterion	-2.217063
Log likelihood	149.1700	Hannan-Quinn criter.	-2.256748
Durbin-Watson stat	2.049556		

RUSSIA: RTSI

Null Hypothesis: D(RTSI) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=12)

		t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic		-8.581608
Test critical values:	1% level	-2.582872
	5% level	-1.943304
	10% level	-1.615087

*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals
Dependent Variable: D(GLSRESID)
Method: Least Squares
Date: 05/30/13 Time: 14:09
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.727615	0.084788	-8.581608	0.0000

R-squared	0.363410	Mean dependent var	0.000384
Adjusted R-squared	0.363410	S.D. dependent var	0.127599
S.E. of regression	0.101807	Akaike info criterion	-1.723810
Sum squared resid	1.337047	Schwarz criterion	-1.701752
Log likelihood	113.0476	Hannan-Quinn criter.	-1.714847
Durbin-Watson stat	1.997664		

INDIA: CNXNIFTY

Null Hypothesis: D(CNXNIFTY) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=12)

		t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic		-9.240599
Test critical values:	1% level	-2.582872
	5% level	-1.943304
	10% level	-1.615087

*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals
Dependent Variable: D(GLSRESID)
Method: Least Squares
Date: 05/30/13 Time: 14:09
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.797392	0.086292	-9.240599	0.0000

R-squared	0.398279	Mean dependent var	-0.000430
Adjusted R-squared	0.398279	S.D. dependent var	0.105026
S.E. of regression	0.081470	Akaike info criterion	-2.169509
Sum squared resid	0.856213	Schwarz criterion	-2.147451
Log likelihood	142.0181	Hannan-Quinn criter.	-2.160546
Durbin-Watson stat	2.044976		

INDONESIA: JKSE

Null Hypothesis: D(JKSE) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=12)

		t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic		-8.849134
Test critical values:	1% level	-2.582872
	5% level	-1.943304
	10% level	-1.615087

*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals
Dependent Variable: D(GLSRESID)
Method: Least Squares
Date: 05/30/13 Time: 14:10
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.755461	0.085371	-8.849134	0.0000

R-squared	0.377735	Mean dependent var	4.52E-05
Adjusted R-squared	0.377735	S.D. dependent var	0.087111
S.E. of regression	0.068717	Akaike info criterion	-2.509989
Sum squared resid	0.609135	Schwarz criterion	-2.487931
Log likelihood	164.1493	Hannan-Quinn criter.	-2.501026
Durbin-Watson stat	1.979830		

CHINA: SSE

Null Hypothesis: D(SSE) has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=12)

		t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic		-5.752644
Test critical values:	1% level	-2.583011
	5% level	-1.943324
	10% level	-1.615075

*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals
Dependent Variable: D(GLSRESID)
Method: Least Squares
Date: 05/30/13 Time: 14:10
Sample (adjusted): 2002M04 2012M12
Included observations: 129 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.662833	0.115222	-5.752644	0.0000
D(GLSRESID(-1))	-0.264140	0.086454	-3.055271	0.0027

R-squared	0.483762	Mean dependent var	0.000664
Adjusted R-squared	0.479697	S.D. dependent var	0.117285
S.E. of regression	0.084600	Akaike info criterion	-2.086377
Sum squared resid	0.908965	Schwarz criterion	-2.042039
Log likelihood	136.5713	Hannan-Quinn criter.	-2.068361
Durbin-Watson stat	2.024498		

PIIGS COUNTRIES

PSIG

Null Hypothesis: D(PSIG) has a unit root
Exogenous: Constant
Lag Length: 3 (Automatic - based on SIC, maxlag=12)

		t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic		-3.507976
Test critical values:	1% level	-2.583298
	5% level	-1.943364
	10% level	-1.615050

*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals
Dependent Variable: D(GLSRESID)
Method: Least Squares
Date: 05/30/13 Time: 14:11
Sample (adjusted): 2002M06 2012M12
Included observations: 127 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.493783	0.140760	-3.507976	0.0006
D(GLSRESID(-1))	-0.294542	0.130227	-2.261756	0.0255
D(GLSRESID(-2))	-0.311687	0.110332	-2.824982	0.0055
D(GLSRESID(-3))	-0.256189	0.087998	-2.911316	0.0043

R-squared	0.424407	Mean dependent var	0.000730
Adjusted R-squared	0.410368	S.D. dependent var	0.068268
S.E. of regression	0.052421	Akaike info criterion	-3.028017
Sum squared resid	0.338003	Schwarz criterion	-2.938436
Log likelihood	196.2791	Hannan-Quinn criter.	-2.991621
Durbin-Watson stat	2.034507		

FTSEMIB

Null Hypothesis: D(FTSEMIB) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=12)

		t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic		-10.15825
Test critical values:	1% level	-2.582872
	5% level	-1.943304
	10% level	-1.615087

*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals
Dependent Variable: D(GLSRESID)
Method: Least Squares
Date: 05/30/13 Time: 14:11
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.890183	0.087632	-10.15825	0.0000

R-squared	0.444413	Mean dependent var	0.000307
Adjusted R-squared	0.444413	S.D. dependent var	0.083457
S.E. of regression	0.062207	Akaike info criterion	-2.709043
Sum squared resid	0.499189	Schwarz criterion	-2.686985
Log likelihood	177.0878	Hannan-Quinn criter.	-2.700080
Durbin-Watson stat	1.964248		

ISEQ

Null Hypothesis: D(ISEQ) has a unit root
Exogenous: Constant
Lag Length: 2 (Automatic - based on SIC, maxlag=12)

		t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic		-3.097001
Test critical values:	1% level	-2.583153
	5% level	-1.943344
	10% level	-1.615062

*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals
Dependent Variable: D(GLSRESID)
Method: Least Squares
Date: 05/30/13 Time: 14:12
Sample (adjusted): 2002M05 2012M12
Included observations: 128 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.288755	0.093237	-3.097001	0.0024
D(GLSRESID(-1))	-0.418857	0.100009	-4.188206	0.0001
D(GLSRESID(-2))	-0.285992	0.085299	-3.352826	0.0011

R-squared	0.361848	Mean dependent var	0.000309
Adjusted R-squared	0.351637	S.D. dependent var	0.078768
S.E. of regression	0.063424	Akaike info criterion	-2.654776
Sum squared resid	0.502833	Schwarz criterion	-2.587932
Log likelihood	172.9057	Hannan-Quinn criter.	-2.627617
Durbin-Watson stat	2.065874		

ATHEX

Null Hypothesis: D(ATHEX) has a unit root
Exogenous: Constant
Lag Length: 2 (Automatic - based on SIC, maxlag=12)

		t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic		-2.867905
Test critical values:	1% level	-2.583153
	5% level	-1.943344
	10% level	-1.615062

*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals
Dependent Variable: D(GLSRESID)
Method: Least Squares
Date: 05/30/13 Time: 14:13
Sample (adjusted): 2002M05 2012M12
Included observations: 128 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.270778	0.094417	-2.867905	0.0049
D(GLSRESID(-1))	-0.428215	0.100271	-4.270581	0.0000
D(GLSRESID(-2))	-0.317530	0.085944	-3.694599	0.0003

R-squared	0.365041	Mean dependent var	0.001116
Adjusted R-squared	0.354882	S.D. dependent var	0.113029
S.E. of regression	0.090784	Akaike info criterion	-1.937511
Sum squared resid	1.030215	Schwarz criterion	-1.870666
Log likelihood	127.0007	Hannan-Quinn criter.	-1.910352
Durbin-Watson stat	2.025050		

IBEX35

Null Hypothesis: D(IBEX35) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=12)

		t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic		-10.31121
Test critical values:	1% level	-2.582872
	5% level	-1.943304
	10% level	-1.615087

*MacKinnon (1996)

DF-GLS Test Equation on GLS Detrended Residuals
Dependent Variable: D(GLSRESID)
Method: Least Squares
Date: 05/30/13 Time: 14:12
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.904040	0.087675	-10.31121	0.0000

R-squared	0.451811	Mean dependent var	0.000142
Adjusted R-squared	0.451811	S.D. dependent var	0.084154
S.E. of regression	0.062307	Akaike info criterion	-2.705809
Sum squared resid	0.500806	Schwarz criterion	-2.683751
Log likelihood	176.8776	Hannan-Quinn criter.	-2.696846
Durbin-Watson stat	1.992687		

2-AUGMENTED DICKEY FULLER TEST (ADF TEST)

2.1 ADF AT LEVEL: DEGREE (0)

BRIIC COUNTRIES

BRAZIL: IBOVESPA

Null Hypothesis: IBOVESPA has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.510891	0.5251
Test critical values:	1% level	-3.480818	
	5% level	-2.883579	
	10% level	-2.578601	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(IBOVESPA)
Method: Least Squares
Date: 05/22/13 Time: 15:51
Sample (adjusted): 2002M02 2012M12
Included observations: 131 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
IBOVESPA(-1)	-0.015504	0.010261	-1.510891	0.1333
C	0.174678	0.107878	1.619223	0.1078

R-squared	0.017388	Mean dependent var	0.011961
Adjusted R-squared	0.009771	S.D. dependent var	0.071922
S.E. of regression	0.071570	Akaike info criterion	-2.421139
Sum squared resid	0.660768	Schwarz criterion	-2.377243
Log likelihood	160.5846	Hannan-Quinn criter.	-2.403302
F-statistic	2.282793	Durbin-Watson stat	1.710136
Prob(F-statistic)	0.133262		

RUSSIA: RTSI

Null Hypothesis: RTSI has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.142480	0.2286
Test critical values:	1% level	-3.481217	
	5% level	-2.883753	
	10% level	-2.578694	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(RTSI)
Method: Least Squares
Date: 05/22/13 Time: 15:52
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RTSI(-1)	-0.032035	0.014952	-2.142480	0.0341
D(RTSI(-1))	0.271478	0.083954	3.233664	0.0016
C	0.231860	0.104219	2.224732	0.0279

R-squared	0.106353	Mean dependent var	0.012758
Adjusted R-squared	0.092280	S.D. dependent var	0.105799
S.E. of regression	0.100800	Akaike info criterion	-1.728560
Sum squared resid	1.290389	Schwarz criterion	-1.662386
Log likelihood	115.3564	Hannan-Quinn criter.	-1.701671
F-statistic	7.557148	Durbin-Watson stat	2.002823
Prob(F-statistic)	0.000793		

INDIA: CNXNIFTY

Null Hypothesis: CNXNIFTY has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.357196	0.6013
Test critical values:	1% level	-3.480818	
	5% level	-2.883579	
	10% level	-2.578601	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(CNXNIFTY)
Method: Least Squares
Date: 05/22/13 Time: 15:57
Sample (adjusted): 2002M02 2012M12
Included observations: 131 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CNXNIFTY(-1)	-0.015130	0.011148	-1.357196	0.1771
C	0.134296	0.089619	1.498528	0.1364

R-squared	0.014078	Mean dependent var	0.013001
Adjusted R-squared	0.006435	S.D. dependent var	0.076313
S.E. of regression	0.076067	Akaike info criterion	-2.299252
Sum squared resid	0.746421	Schwarz criterion	-2.255356
Log likelihood	152.6010	Hannan-Quinn criter.	-2.281415
F-statistic	1.841981	Durbin-Watson stat	1.877706
Prob(F-statistic)	0.177089		

INDONESIA: JKSE

Null Hypothesis: JKSE has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.020613	0.7447
Test critical values:	1% level	-3.481217	
	5% level	-2.883753	
	10% level	-2.578694	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(JKSE)
Method: Least Squares
Date: 05/22/13 Time: 15:58
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
JKSE(-1)	-0.008389	0.008219	-1.020613	0.3094
D(JKSE(-1))	0.230961	0.086013	2.685197	0.0082
C	0.074938	0.060646	1.235669	0.2189

R-squared	0.060454	Mean dependent var	0.017337
Adjusted R-squared	0.045658	S.D. dependent var	0.070178
S.E. of regression	0.068557	Akaike info criterion	-2.499501
Sum squared resid	0.596905	Schwarz criterion	-2.433327
Log likelihood	165.4676	Hannan-Quinn criter.	-2.472612
F-statistic	4.085841	Durbin-Watson stat	1.976965
Prob(F-statistic)	0.019067		

CHINA: SSE

Null Hypothesis: SSE has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.328062	0.6152
Test critical values:	1% level	-3.480818	
	5% level	-2.883579	
	10% level	-2.578601	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(SSE)
Method: Least Squares
Date: 05/22/13 Time: 16:01
Sample (adjusted): 2002M02 2012M12
Included observations: 131 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SSE(-1)	-0.024281	0.018283	-1.328062	0.1865
C	0.188731	0.139896	1.349079	0.1797

R-squared	0.013488	Mean dependent var	0.003202
Adjusted R-squared	0.005841	S.D. dependent var	0.085269
S.E. of regression	0.085020	Akaike info criterion	-2.076721
Sum squared resid	0.932454	Schwarz criterion	-2.032825
Log likelihood	138.0252	Hannan-Quinn criter.	-2.058884
F-statistic	1.763748	Durbin-Watson stat	1.844423
Prob(F-statistic)	0.186503		

PIIGS COUNTRIES

PSIG

Null Hypothesis: PSIG has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.557903	0.5012
Test critical values:	1% level	-3.481217	
	5% level	-2.883753	
	10% level	-2.578694	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(PSIG)
Method: Least Squares
Date: 05/22/13 Time: 16:01
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PSIG(-1)	-0.027651	0.017749	-1.557903	0.1217
D(PSIG(-1))	0.198960	0.087225	2.280993	0.0242
C	0.217002	0.138541	1.566343	0.1198

R-squared	0.052446	Mean dependent var	0.001424
Adjusted R-squared	0.037524	S.D. dependent var	0.053264
S.E. of regression	0.052255	Akaike info criterion	-3.042540
Sum squared resid	0.346790	Schwarz criterion	-2.976366
Log likelihood	200.7651	Hannan-Quinn criter.	-3.015651
F-statistic	3.514679	Durbin-Watson stat	1.970866

FTSEMIB

Null Hypothesis: FTSEMIB has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-0.782890	0.8203
Test critical values:	1% level	-3.480818	
	5% level	-2.883579	
	10% level	-2.578601	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(FTSEMIB)
Method: Least Squares
Date: 05/22/13 Time: 16:02
Sample (adjusted): 2002M02 2012M12
Included observations: 131 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FTSEMIB(-1)	-0.013654	0.017441	-0.782890	0.4351
C	0.133449	0.177186	0.753158	0.4527

R-squared	0.004729	Mean dependent var	-0.005203
Adjusted R-squared	-0.002986	S.D. dependent var	0.062284
S.E. of regression	0.062377	Akaike info criterion	-2.696097
Sum squared resid	0.501922	Schwarz criterion	-2.652201
Log likelihood	178.5944	Hannan-Quinn criter.	-2.678260
F-statistic	0.612917	Durbin-Watson stat	1.765890
Prob(F-statistic)	0.435126		

ISEQ

Null Hypothesis: ISEQ has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.002318	0.7512
Test critical values:	1% level	-3.481217	
	5% level	-2.883753	
	10% level	-2.578694	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(ISEQ)
Method: Least Squares
Date: 05/22/13 Time: 16:04
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ISEQ(-1)	-0.013028	0.012998	-1.002318	0.3181
D(ISEQ(-1))	0.243557	0.085988	2.832464	0.0054
C	0.107599	0.109531	0.982367	0.3278

R-squared	0.063429	Mean dependent var	-0.002912
Adjusted R-squared	0.048680	S.D. dependent var	0.063764
S.E. of regression	0.062193	Akaike info criterion	-2.694349
Sum squared resid	0.491229	Schwarz criterion	-2.628175
Log likelihood	178.1327	Hannan-Quinn criter.	-2.667460
F-statistic	4.300509	Durbin-Watson stat	2.027668
Prob(F-statistic)	0.015590		

ATHEX

Null Hypothesis: ATHEX has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-0.232140	0.9302
Test critical values:	1% level	-3.480818	
	5% level	-2.883579	
	10% level	-2.578601	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(ATHEX)
Method: Least Squares
Date: 05/22/13 Time: 16:06
Sample (adjusted): 2002M02 2012M12
Included observations: 131 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ATHEX(-1)	-0.003210	0.013827	-0.232140	0.8168
C	0.016676	0.106671	0.156330	0.8760

R-squared	0.000418	Mean dependent var	-0.008022
Adjusted R-squared	-0.007331	S.D. dependent var	0.087931
S.E. of regression	0.088253	Akaike info criterion	-2.002067
Sum squared resid	1.004730	Schwarz criterion	-1.958170
Log likelihood	133.1354	Hannan-Quinn criter.	-1.984230
F-statistic	0.053889	Durbin-Watson stat	1.616958
Prob(F-statistic)	0.816797		

IBEX35

Null Hypothesis: IBEX35 has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.384319	0.5882
Test critical values:	1% level	-3.480818	
	5% level	-2.883579	
	10% level	-2.578601	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(IBEX35)
Method: Least Squares
Date: 05/22/13 Time: 16:07
Sample (adjusted): 2002M02 2012M12
Included observations: 131 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
IBEX35(-1)	-0.028999	0.020949	-1.384319	0.1687
C	0.265875	0.192058	1.384350	0.1686

R-squared	0.014638	Mean dependent var	0.000110
Adjusted R-squared	0.006999	S.D. dependent var	0.061803
S.E. of regression	0.061587	Akaike info criterion	-2.721596
Sum squared resid	0.489285	Schwarz criterion	-2.677700
Log likelihood	180.2645	Hannan-Quinn criter.	-2.703759
F-statistic	1.916340	Durbin-Watson stat	1.813896
Prob(F-statistic)	0.168651		

2.2 ADF FIRST DIFFERENCE: DEGREE (1)

BRIIC COUNTRIES

BRAZIL: IBOVESPA

Null Hypothesis: D(IBOVESPA) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-9.867482	0.0000
Test critical values:	1% level	-3.481217	
	5% level	-2.883753	
	10% level	-2.578694	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(IBOVESPA,2)
Method: Least Squares
Date: 05/22/13 Time: 15:51
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(IBOVESPA(-1))	-0.860117	0.087167	-9.867482	0.0000
C	0.009675	0.006340	1.525966	0.1295

R-squared	0.432038	Mean dependent var	-0.000303
Adjusted R-squared	0.427601	S.D. dependent var	0.094324
S.E. of regression	0.071363	Akaike info criterion	-2.426816
Sum squared resid	0.651859	Schwarz criterion	-2.382700
Log likelihood	159.7430	Hannan-Quinn criter.	-2.408890
F-statistic	97.36720	Durbin-Watson stat	1.988761
Prob(F-statistic)	0.000000		

RUSSIA: RTSI

Null Hypothesis: D(RTSI) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-8.548334	0.0000
Test critical values:	1% level	-3.481217	
	5% level	-2.883753	
	10% level	-2.578694	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(RTSI,2)
Method: Least Squares
Date: 05/22/13 Time: 15:55
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(RTSI(-1))	-0.727651	0.085122	-8.548334	0.0000
C	0.009388	0.009026	1.040182	0.3002

R-squared	0.363418	Mean dependent var	0.000384
Adjusted R-squared	0.358445	S.D. dependent var	0.127599
S.E. of regression	0.102203	Akaike info criterion	-1.708439
Sum squared resid	1.337028	Schwarz criterion	-1.664323
Log likelihood	113.0485	Hannan-Quinn criter.	-1.690513
F-statistic	73.07401	Durbin-Watson stat	1.997618
Prob(F-statistic)	0.000000		

INDIA: CNXNIFTY

Null Hypothesis: D(CNXNIFTY) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-10.68309	0.0000
Test critical values:	1% level	-3.481217	
	5% level	-2.883753	
	10% level	-2.578694	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(CNXNIFTY,2)
Method: Least Squares
Date: 05/22/13 Time: 15:57
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CNXNIFTY(-1))	-0.941280	0.088109	-10.68309	0.0000
C	0.011871	0.006821	1.740258	0.0842

R-squared	0.471355	Mean dependent var	-0.000430
Adjusted R-squared	0.467225	S.D. dependent var	0.105026
S.E. of regression	0.076660	Akaike info criterion	-2.283601
Sum squared resid	0.752230	Schwarz criterion	-2.239485
Log likelihood	150.4341	Hannan-Quinn criter.	-2.265675
F-statistic	114.1285	Durbin-Watson stat	1.997281
Prob(F-statistic)	0.000000		

INDONESIA: JKSE

Null Hypothesis: D(JKSE) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-8.955831	0.0000
Test critical values:	1% level	-3.481217	
	5% level	-2.883753	
	10% level	-2.578694	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(JKSE,2)
Method: Least Squares
Date: 05/22/13 Time: 15:59
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(JKSE(-1))	-0.770354	0.086017	-8.955831	0.0000
C	0.013366	0.006195	2.157534	0.0328

R-squared	0.385227	Mean dependent var	4.52E-05
Adjusted R-squared	0.380424	S.D. dependent var	0.087111
S.E. of regression	0.068568	Akaike info criterion	-2.506717
Sum squared resid	0.601801	Schwarz criterion	-2.462601
Log likelihood	164.9366	Hannan-Quinn criter.	-2.488791
F-statistic	80.20690	Durbin-Watson stat	1.975084

CHINA: SSE

Null Hypothesis: D(SSE) has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-6.040823	0.0000
Test critical values:	1% level	-3.481623	
	5% level	-2.883930	
	10% level	-2.578788	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(SSE,2)
Method: Least Squares
Date: 05/22/13 Time: 16:00
Sample (adjusted): 2002M04 2012M12
Included observations: 129 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(SSE(-1))	-0.721861	0.119497	-6.040823	0.0000
D(SSE(-1),2)	-0.235054	0.087493	-2.686544	0.0082
C	0.002006	0.007398	0.271166	0.7867

R-squared	0.495394	Mean dependent var	0.000664
Adjusted R-squared	0.487385	S.D. dependent var	0.117285
S.E. of regression	0.083973	Akaike info criterion	-2.093664
Sum squared resid	0.888482	Schwarz criterion	-2.027157
Log likelihood	138.0413	Hannan-Quinn criter.	-2.066641
F-statistic	61.84996	Durbin-Watson stat	2.007808
Prob(F-statistic)	0.000000		

PIIGS COUNTRIES

PSIG

Null Hypothesis: D(PSIG) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-9.317490	0.0000
Test critical values:	1% level	-3.481217	
	5% level	-2.883753	
	10% level	-2.578694	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(PSIG,2)
Method: Least Squares
Date: 05/22/13 Time: 16:01
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PSIG(-1))	-0.813689	0.087329	-9.317490	0.0000
C	0.001287	0.004609	0.279318	0.7805

R-squared	0.404140	Mean dependent var	0.000690
Adjusted R-squared	0.399485	S.D. dependent var	0.067807
S.E. of regression	0.052546	Akaike info criterion	-3.038994
Sum squared resid	0.353417	Schwarz criterion	-2.994878
Log likelihood	199.5346	Hannan-Quinn criter.	-3.021068
F-statistic	86.81562	Durbin-Watson stat	1.963977
Prob(F-statistic)	0.000000		

FTSEMIB

Null Hypothesis: D(FTSEMIB) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-10.13714	0.0000
Test critical values:	1% level	-3.481217	
	5% level	-2.883753	
	10% level	-2.578694	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(FTSEMIB,2)
Method: Least Squares
Date: 05/22/13 Time: 16:02
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(FTSEMIB(-1))	-0.891767	0.087970	-10.13714	0.0000
C	-0.004567	0.005494	-0.831230	0.4074

R-squared	0.445315	Mean dependent var	0.000307
Adjusted R-squared	0.440981	S.D. dependent var	0.083457
S.E. of regression	0.062399	Akaike info criterion	-2.695283
Sum squared resid	0.498379	Schwarz criterion	-2.651167
Log likelihood	177.1934	Hannan-Quinn criter.	-2.677357
F-statistic	102.7616	Durbin-Watson stat	1.964626
Prob(F-statistic)	0.000000		

ISEQ

Null Hypothesis: D(ISEQ) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-8.916950	0.0000
Test critical values:	1% level	-3.481217	
	5% level	-2.883753	
	10% level	-2.578694	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(ISEQ,2)
Method: Least Squares
Date: 05/22/13 Time: 16:05
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ISEQ(-1))	-0.763892	0.085667	-8.916950	0.0000
C	-0.002049	0.005464	-0.374933	0.7083

R-squared	0.383168	Mean dependent var	0.000744
Adjusted R-squared	0.378349	S.D. dependent var	0.078881
S.E. of regression	0.062194	Akaike info criterion	-2.701854
Sum squared resid	0.495115	Schwarz criterion	-2.657738
Log likelihood	177.6205	Hannan-Quinn criter.	-2.683928
F-statistic	79.51200	Durbin-Watson stat	2.021202
Prob(F-statistic)	0.000000		

ATHEX

Null Hypothesis: D(ATHEX) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-9.408231	0.0000
Test critical values:	1% level	-3.481217	
	5% level	-2.883753	
	10% level	-2.578694	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(ATHEX,2)
Method: Least Squares
Date: 05/22/13 Time: 16:06
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ATHEX(-1))	-0.820346	0.087194	-9.408231	0.0000
C	-0.005648	0.007649	-0.738433	0.4616

R-squared	0.408816	Mean dependent var	0.001710
Adjusted R-squared	0.404198	S.D. dependent var	0.112389
S.E. of regression	0.086751	Akaike info criterion	-2.036279
Sum squared resid	0.963299	Schwarz criterion	-1.992163
Log likelihood	134.3582	Hannan-Quinn criter.	-2.018353
F-statistic	88.51481	Durbin-Watson stat	1.996829
Prob(F-statistic)	0.000000		

IBEX35

Null Hypothesis: D(IBEX35) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=12)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-10.44198	0.0000
Test critical values:	1% level	-3.481217	
	5% level	-2.883753	
	10% level	-2.578694	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(IBEX35,2)
Method: Least Squares
Date: 05/22/13 Time: 16:08
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(IBEX35(-1))	-0.920724	0.088175	-10.44198	0.0000
C	3.90E-05	0.005445	0.007169	0.9943

R-squared	0.459995	Mean dependent var	0.000142
Adjusted R-squared	0.455777	S.D. dependent var	0.084154
S.E. of regression	0.062082	Akaike info criterion	-2.705467
Sum squared resid	0.493329	Schwarz criterion	-2.661351
Log likelihood	177.8553	Hannan-Quinn criter.	-2.687541
F-statistic	109.0350	Durbin-Watson stat	1.990695
Prob(F-statistic)	0.000000		

3- PHILLIPS PERON TEST

3.1 PP AT LEVEL: DEGREE (0)

BRIIC COUNTRIES

BRAZIL: IBOVESPA

Null Hypothesis: IBOVESPA has a unit root
Exogenous: Constant
Bandwidth: 4 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-1.502851	0.5292
Test critical values:	1% level	-3.480818	
	5% level	-2.883579	
	10% level	-2.578601	

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

Residual variance (no correction)	0.005044
HAC corrected variance (Bartlett kernel)	0.007139

Phillips-Perron Test Equation
Dependent Variable: D(IBOVESPA)
Method: Least Squares
Date: 05/24/13 Time: 02:24
Sample (adjusted): 2002M02 2012M12
Included observations: 131 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
IBOVESPA(-1)	-0.015504	0.010261	-1.510891	0.1333
C	0.174678	0.107878	1.619223	0.1078

R-squared	0.017388	Mean dependent var	0.011961
Adjusted R-squared	0.009771	S.D. dependent var	0.071922
S.E. of regression	0.071570	Akaike info criterion	-2.421139
Sum squared resid	0.660768	Schwarz criterion	-2.377243
Log likelihood	160.5846	Hannan-Quinn criter.	-2.403302
F-statistic	2.282793	Durbin-Watson stat	1.710136
Prob(F-statistic)	0.133262		

RUSSIA: RTSI

Null Hypothesis: RTSI has a unit root
Exogenous: Constant
Bandwidth: 5 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-2.101021	0.2447
Test critical values:	1% level	-3.480818	
	5% level	-2.883579	
	10% level	-2.578601	

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

Residual variance (no correction)	0.010675
HAC corrected variance (Bartlett kernel)	0.018091

Phillips-Perron Test Equation
Dependent Variable: D(RTSI)
Method: Least Squares
Date: 05/24/13 Time: 02:24
Sample (adjusted): 2002M02 2012M12
Included observations: 131 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RTSI(-1)	-0.031106	0.015174	-2.049950	0.0424
C	0.228450	0.105616	2.163014	0.0324

R-squared	0.031548	Mean dependent var	0.012746
Adjusted R-squared	0.024041	S.D. dependent var	0.105392
S.E. of regression	0.104117	Akaike info criterion	-1.671452
Sum squared resid	1.398407	Schwarz criterion	-1.627556
Log likelihood	111.4801	Hannan-Quinn criter.	-1.653615
F-statistic	4.202296	Durbin-Watson stat	1.456327
Prob(F-statistic)	0.042395		

INDIA: CNXNIFTY

Null Hypothesis: CNXNIFTY has a unit root
Exogenous: Constant
Bandwidth: 5 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-1.373982	0.5932
Test critical values:	1% level	-3.480818	
	5% level	-2.883579	
	10% level	-2.578601	

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

Residual variance (no correction)	0.005698
HAC corrected variance (Bartlett kernel)	0.007007

Phillips-Perron Test Equation
Dependent Variable: D(CNXNIFTY)
Method: Least Squares
Date: 05/24/13 Time: 02:25
Sample (adjusted): 2002M02 2012M12
Included observations: 131 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CNXNIFTY(-1)	-0.015130	0.011148	-1.357196	0.1771
C	0.134296	0.089619	1.498528	0.1364

R-squared	0.014078	Mean dependent var	0.013001
Adjusted R-squared	0.006435	S.D. dependent var	0.076313
S.E. of regression	0.076067	Akaike info criterion	-2.299252
Sum squared resid	0.746421	Schwarz criterion	-2.255356
Log likelihood	152.6010	Hannan-Quinn criter.	-2.281415
F-statistic	1.841981	Durbin-Watson stat	1.877706
Prob(F-statistic)	0.177089		

INDONESIA: JKSE

Null Hypothesis: JKSE has a unit root
Exogenous: Constant
Bandwidth: 6 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-0.984206	0.7577
Test critical values:	1% level	-3.480818	
	5% level	-2.883579	
	10% level	-2.578601	

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

Residual variance (no correction)	0.004819
HAC corrected variance (Bartlett kernel)	0.007684

Phillips-Perron Test Equation
Dependent Variable: D(JKSE)
Method: Least Squares
Date: 05/24/13 Time: 02:25
Sample (adjusted): 2002M02 2012M12
Included observations: 131 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
JKSE(-1)	-0.007652	0.008297	-0.922174	0.3582
C	0.073343	0.061153	1.199338	0.2326

R-squared	0.006549	Mean dependent var	0.017232
Adjusted R-squared	-0.001152	S.D. dependent var	0.069918
S.E. of regression	0.069958	Akaike info criterion	-2.466699
Sum squared resid	0.631338	Schwarz criterion	-2.422803
Log likelihood	163.5688	Hannan-Quinn criter.	-2.448862
F-statistic	0.850404	Durbin-Watson stat	1.538713
Prob(F-statistic)	0.358160		

CHINA: SSE

Null Hypothesis: SSE has a unit root
Exogenous: Constant
Bandwidth: 8 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-1.777182	0.3904
Test critical values:	1% level	-3.480818	
	5% level	-2.883579	
	10% level	-2.578601	

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

Residual variance (no correction)	0.007118
HAC corrected variance (Bartlett kernel)	0.014196

Phillips-Perron Test Equation
Dependent Variable: D(SSE)
Method: Least Squares
Date: 05/24/13 Time: 02:26
Sample (adjusted): 2002M02 2012M12
Included observations: 131 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SSE(-1)	-0.024281	0.018283	-1.328062	0.1865
C	0.188731	0.139896	1.349079	0.1797

R-squared	0.013488	Mean dependent var	0.003202
Adjusted R-squared	0.005841	S.D. dependent var	0.085269
S.E. of regression	0.085020	Akaike info criterion	-2.076721
Sum squared resid	0.932454	Schwarz criterion	-2.032825
Log likelihood	138.0252	Hannan-Quinn criter.	-2.058884
F-statistic	1.763748	Durbin-Watson stat	1.844423
Prob(F-statistic)	0.186503		

PIIGS COUNTRIES

PSIG

Null Hypothesis: PSIG has a unit root
Exogenous: Constant
Bandwidth: 7 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-1.657886	0.4502
Test critical values:	1% level	-3.480818	
	5% level	-2.883579	
	10% level	-2.578601	

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

Residual variance (no correction)	0.002762
HAC corrected variance (Bartlett kernel)	0.004950

Phillips-Perron Test Equation
Dependent Variable: D(PSIG)
Method: Least Squares
Date: 05/24/13 Time: 02:26
Sample (adjusted): 2002M02 2012M12
Included observations: 131 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PSIG(-1)	-0.023214	0.017865	-1.299436	0.1961
C	0.182320	0.139424	1.307662	0.1933

R-squared	0.012920	Mean dependent var	0.001247
Adjusted R-squared	0.005269	S.D. dependent var	0.053098
S.E. of regression	0.052958	Akaike info criterion	-3.023492
Sum squared resid	0.361785	Schwarz criterion	-2.979596
Log likelihood	200.0387	Hannan-Quinn criter.	-3.005655
F-statistic	1.688533	Durbin-Watson stat	1.602346
Prob(F-statistic)	0.196112		

FTSEMIB

Null Hypothesis: FTSEMIB has a unit root
Exogenous: Constant
Bandwidth: 6 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-1.027712	0.7421
Test critical values:	1% level	-3.480818	
	5% level	-2.883579	
	10% level	-2.578601	

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

Residual variance (no correction)	0.003831
HAC corrected variance (Bartlett kernel)	0.005252

Phillips-Perron Test Equation
Dependent Variable: D(FTSEMIB)
Method: Least Squares
Date: 05/24/13 Time: 02:26
Sample (adjusted): 2002M02 2012M12
Included observations: 131 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FTSEMIB(-1)	-0.013654	0.017441	-0.782890	0.4351
C	0.133449	0.177186	0.753158	0.4527

R-squared	0.004729	Mean dependent var	-0.005203
Adjusted R-squared	-0.002986	S.D. dependent var	0.062284
S.E. of regression	0.062377	Akaike info criterion	-2.696097
Sum squared resid	0.501922	Schwarz criterion	-2.652201
Log likelihood	178.5944	Hannan-Quinn criter.	-2.678260
F-statistic	0.612917	Durbin-Watson stat	1.765890
Prob(F-statistic)	0.435126		

ISEQ

Null Hypothesis: ISEQ has a unit root
Exogenous: Constant
Bandwidth: 7 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-1.208546	0.6696
Test critical values:	1% level	-3.480818	
	5% level	-2.883579	
	10% level	-2.578601	

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

Residual variance (no correction)	0.004014
HAC corrected variance (Bartlett kernel)	0.008689

Phillips-Perron Test Equation
Dependent Variable: D(ISEQ)
Method: Least Squares
Date: 05/24/13 Time: 02:27
Sample (adjusted): 2002M02 2012M12
Included observations: 131 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ISEQ(-1)	-0.010262	0.013287	-0.772338	0.4413
C	0.082972	0.111952	0.741140	0.4600

R-squared	0.004603	Mean dependent var	-0.003385
Adjusted R-squared	-0.003113	S.D. dependent var	0.063749
S.E. of regression	0.063848	Akaike info criterion	-2.649462
Sum squared resid	0.525883	Schwarz criterion	-2.605566
Log likelihood	175.5398	Hannan-Quinn criter.	-2.631625
F-statistic	0.596506	Durbin-Watson stat	1.510850

ATHEX

Null Hypothesis: ATHEX has a unit root
Exogenous: Constant
Bandwidth: 5 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-0.614443	0.8624
Test critical values:	1% level	-3.480818	
	5% level	-2.883579	
	10% level	-2.578601	

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

Residual variance (no correction)	0.007670
HAC corrected variance (Bartlett kernel)	0.012340

Phillips-Perron Test Equation
Dependent Variable: D(ATHEX)
Method: Least Squares
Date: 05/24/13 Time: 02:27
Sample (adjusted): 2002M02 2012M12
Included observations: 131 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ATHEX(-1)	-0.003210	0.013827	-0.232140	0.8168
C	0.016676	0.106671	0.156330	0.8760

R-squared	0.000418	Mean dependent var	-0.008022
Adjusted R-squared	-0.007331	S.D. dependent var	0.087931
S.E. of regression	0.088253	Akaike info criterion	-2.002067
Sum squared resid	1.004730	Schwarz criterion	-1.958170
Log likelihood	133.1354	Hannan-Quinn criter.	-1.984230
F-statistic	0.053889	Durbin-Watson stat	1.616958
Prob(F-statistic)	0.816797		

IBEX35

Null Hypothesis: IBEX35 has a unit root
Exogenous: Constant
Bandwidth: 5 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-1.553963	0.5032
Test critical values:	1% level	-3.480818	
	5% level	-2.883579	
	10% level	-2.578601	

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

Residual variance (no correction)	0.003735
HAC corrected variance (Bartlett kernel)	0.004739

Phillips-Perron Test Equation
Dependent Variable: D(IBEX35)
Method: Least Squares
Date: 05/24/13 Time: 02:27
Sample (adjusted): 2002M02 2012M12
Included observations: 131 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
IBEX35(-1)	-0.028999	0.020949	-1.384319	0.1687
C	0.265875	0.192058	1.384350	0.1686

R-squared	0.014638	Mean dependent var	0.000110
Adjusted R-squared	0.006999	S.D. dependent var	0.061803
S.E. of regression	0.061587	Akaike info criterion	-2.721596
Sum squared resid	0.489285	Schwarz criterion	-2.677700
Log likelihood	180.2645	Hannan-Quinn criter.	-2.703759
F-statistic	1.916340	Durbin-Watson stat	1.813896
Prob(F-statistic)	0.168651		

3.2 PP AT FIRST DIFFERENCE: DEGREE (1)

BRIIC COUNTRIES

BRAZIL: IBOVESPA

Null Hypothesis: D(IBOVESPA) has a unit root
Exogenous: Constant
Bandwidth: 4 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-10.00176	0.0000
Test critical values:	1% level	-3.481217	
	5% level	-2.883753	
	10% level	-2.578694	

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

Residual variance (no correction)	0.005014
HAC corrected variance (Bartlett kernel)	0.005843

Phillips-Perron Test Equation
Dependent Variable: D(IBOVESPA,2)
Method: Least Squares
Date: 05/22/13 Time: 15:51
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(IBOVESPA(-1))	-0.860117	0.087167	-9.867482	0.0000
C	0.009675	0.006340	1.525966	0.1295

R-squared	0.432038	Mean dependent var	-0.000303
Adjusted R-squared	0.427601	S.D. dependent var	0.094324
S.E. of regression	0.071363	Akaike info criterion	-2.426816
Sum squared resid	0.651859	Schwarz criterion	-2.382700
Log likelihood	159.7430	Hannan-Quinn criter.	-2.408890
F-statistic	97.36720	Durbin-Watson stat	1.988761
Prob(F-statistic)	0.000000		

RUSSIA: RTSI

Null Hypothesis: D(RTSI) has a unit root
Exogenous: Constant
Bandwidth: 3 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-8.617529	0.0000
Test critical values:	1% level	-3.481217	
	5% level	-2.883753	
	10% level	-2.578694	

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

Residual variance (no correction)	0.010285
HAC corrected variance (Bartlett kernel)	0.010859

Phillips-Perron Test Equation
Dependent Variable: D(RTSI,2)
Method: Least Squares
Date: 05/22/13 Time: 15:56
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(RTSI(-1))	-0.727651	0.085122	-8.548334	0.0000
C	0.009388	0.009026	1.040182	0.3002

R-squared	0.363418	Mean dependent var	0.000384
Adjusted R-squared	0.358445	S.D. dependent var	0.127599
S.E. of regression	0.102203	Akaike info criterion	-1.708439
Sum squared resid	1.337028	Schwarz criterion	-1.664323
Log likelihood	113.0485	Hannan-Quinn criter.	-1.690513
F-statistic	73.07401	Durbin-Watson stat	1.997618

INDIA: CNXNIFTY

Null Hypothesis: D(CNXNIFTY) has a unit root
Exogenous: Constant
Bandwidth: 5 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-10.74370	0.0000
Test critical values:	1% level	-3.481217	
	5% level	-2.883753	
	10% level	-2.578694	

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

Residual variance (no correction)	0.005786
HAC corrected variance (Bartlett kernel)	0.006528

Phillips-Perron Test Equation
Dependent Variable: D(CNXNIFTY,2)
Method: Least Squares
Date: 05/22/13 Time: 15:58
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CNXNIFTY(-1))	-0.941280	0.088109	-10.68309	0.0000
C	0.011871	0.006821	1.740258	0.0842

R-squared	0.471355	Mean dependent var	-0.000430
Adjusted R-squared	0.467225	S.D. dependent var	0.105026
S.E. of regression	0.076660	Akaike info criterion	-2.283601
Sum squared resid	0.752230	Schwarz criterion	-2.239485
Log likelihood	150.4341	Hannan-Quinn criter.	-2.265675
F-statistic	114.1285	Durbin-Watson stat	1.997281

INDONESIA: JKSE

Null Hypothesis: D(JKSE) has a unit root
Exogenous: Constant
Bandwidth: 5 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-9.046244	0.0000
Test critical values:	1% level	-3.481217	
	5% level	-2.883753	
	10% level	-2.578694	

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

Residual variance (no correction)	0.004629
HAC corrected variance (Bartlett kernel)	0.005005

Phillips-Perron Test Equation
Dependent Variable: D(JKSE,2)
Method: Least Squares
Date: 05/22/13 Time: 15:59
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(JKSE(-1))	-0.770354	0.086017	-8.955831	0.0000
C	0.013366	0.006195	2.157534	0.0328

R-squared	0.385227	Mean dependent var	4.52E-05
Adjusted R-squared	0.380424	S.D. dependent var	0.087111
S.E. of regression	0.068568	Akaike info criterion	-2.506717
Sum squared resid	0.601801	Schwarz criterion	-2.462601
Log likelihood	164.9366	Hannan-Quinn criter.	-2.488791
F-statistic	80.20690	Durbin-Watson stat	1.975084
Prob(F-statistic)	0.000000		

CHINA: SSE

Null Hypothesis: D(SSE) has a unit root
Exogenous: Constant
Bandwidth: 7 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-11.13893	0.0000
Test critical values:	1% level	-3.481217	
	5% level	-2.883753	
	10% level	-2.578694	

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

Residual variance (no correction)	0.007243
HAC corrected variance (Bartlett kernel)	0.012034

Phillips-Perron Test Equation
Dependent Variable: D(SSE,2)
Method: Least Squares
Date: 05/22/13 Time: 16:00
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(SSE(-1))	-0.940320	0.089062	-10.55809	0.0000
C	0.002928	0.007525	0.389174	0.6978

R-squared	0.465494	Mean dependent var	0.000880
Adjusted R-squared	0.461318	S.D. dependent var	0.116856
S.E. of regression	0.085766	Akaike info criterion	-2.059118
Sum squared resid	0.941548	Schwarz criterion	-2.015002
Log likelihood	135.8427	Hannan-Quinn criter.	-2.041192
F-statistic	111.4733	Durbin-Watson stat	2.007385
Prob(F-statistic)	0.000000		

PIIGS COUNTRIES

PSIG

Null Hypothesis: D(PSIG) has a unit root
Exogenous: Constant
Bandwidth: 6 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-9.540173	0.0000
Test critical values:	1% level	-3.481217	
	5% level	-2.883753	
	10% level	-2.578694	

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

Residual variance (no correction)	0.002719
HAC corrected variance (Bartlett kernel)	0.003277

Phillips-Perron Test Equation
Dependent Variable: D(PSIG,2)
Method: Least Squares
Date: 05/22/13 Time: 16:02
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PSIG(-1))	-0.813689	0.087329	-9.317490	0.0000
C	0.001287	0.004609	0.279318	0.7805

R-squared	0.404140	Mean dependent var	0.000690
Adjusted R-squared	0.399485	S.D. dependent var	0.067807
S.E. of regression	0.052546	Akaike info criterion	-3.038994
Sum squared resid	0.353417	Schwarz criterion	-2.994878
Log likelihood	199.5346	Hannan-Quinn criter.	-3.021068
F-statistic	86.81562	Durbin-Watson stat	1.963977
Prob(F-statistic)	0.000000		

FTSEMIB

Null Hypothesis: D(FTSEMIB) has a unit root
Exogenous: Constant
Bandwidth: 6 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-10.20036	0.0000
Test critical values:	1% level	-3.481217	
	5% level	-2.883753	
	10% level	-2.578694	

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

Residual variance (no correction)	0.003834
HAC corrected variance (Bartlett kernel)	0.004187

Phillips-Perron Test Equation
Dependent Variable: D(FTSEMIB,2)
Method: Least Squares
Date: 05/22/13 Time: 16:03
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(FTSEMIB(-1))	-0.891767	0.087970	-10.13714	0.0000
C	-0.004567	0.005494	-0.831230	0.4074

R-squared	0.445315	Mean dependent var	0.000307
Adjusted R-squared	0.440981	S.D. dependent var	0.083457
S.E. of regression	0.062399	Akaike info criterion	-2.695283
Sum squared resid	0.498379	Schwarz criterion	-2.651167
Log likelihood	177.1934	Hannan-Quinn criter.	-2.677357
F-statistic	102.7616	Durbin-Watson stat	1.964626
Prob(F-statistic)	0.000000		

ISEQ

Null Hypothesis: D(ISEQ) has a unit root
Exogenous: Constant
Bandwidth: 6 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-9.327442	0.0000
Test critical values:	1% level	-3.481217	
	5% level	-2.883753	
	10% level	-2.578694	

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

Residual variance (no correction)	0.003809
HAC corrected variance (Bartlett kernel)	0.005108

Phillips-Perron Test Equation
Dependent Variable: D(ISEQ,2)
Method: Least Squares
Date: 05/22/13 Time: 16:05
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ISEQ(-1))	-0.763892	0.085667	-8.916950	0.0000
C	-0.002049	0.005464	-0.374933	0.7083

R-squared	0.383168	Mean dependent var	0.000744
Adjusted R-squared	0.378349	S.D. dependent var	0.078881
S.E. of regression	0.062194	Akaike info criterion	-2.701854
Sum squared resid	0.495115	Schwarz criterion	-2.657738
Log likelihood	177.6205	Hannan-Quinn criter.	-2.683928
F-statistic	79.51200	Durbin-Watson stat	2.021202

ATHEX

Null Hypothesis: D(ATHEX) has a unit root
Exogenous: Constant
Bandwidth: 4 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-9.550948	0.0000
Test critical values:	1% level	-3.481217	
	5% level	-2.883753	
	10% level	-2.578694	

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

Residual variance (no correction)	0.007410
HAC corrected variance (Bartlett kernel)	0.008461

Phillips-Perron Test Equation
Dependent Variable: D(ATHEX,2)
Method: Least Squares
Date: 05/22/13 Time: 16:07
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ATHEX(-1))	-0.820346	0.087194	-9.408231	0.0000
C	-0.005648	0.007649	-0.738433	0.4616

R-squared	0.408816	Mean dependent var	0.001710
Adjusted R-squared	0.404198	S.D. dependent var	0.112389
S.E. of regression	0.086751	Akaike info criterion	-2.036279
Sum squared resid	0.963299	Schwarz criterion	-1.992163
Log likelihood	134.3582	Hannan-Quinn criter.	-2.018353
F-statistic	88.51481	Durbin-Watson stat	1.996829
Prob(F-statistic)	0.000000		

IBEX35

Null Hypothesis: D(IBEX35) has a unit root
Exogenous: Constant
Bandwidth: 4 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-10.46336	0.0000
Test critical values:	1% level	-3.481217	
	5% level	-2.883753	
	10% level	-2.578694	

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

Residual variance (no correction)	0.003795
HAC corrected variance (Bartlett kernel)	0.003954

Phillips-Perron Test Equation
Dependent Variable: D(IBEX35,2)
Method: Least Squares
Date: 05/22/13 Time: 16:08
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(IBEX35(-1))	-0.920724	0.088175	-10.44198	0.0000
C	3.90E-05	0.005445	0.007169	0.9943

R-squared	0.459995	Mean dependent var	0.000142
Adjusted R-squared	0.455777	S.D. dependent var	0.084154
S.E. of regression	0.062082	Akaike info criterion	-2.705467
Sum squared resid	0.493329	Schwarz criterion	-2.661351
Log likelihood	177.8553	Hannan-Quinn criter.	-2.687541
F-statistic	109.0350	Durbin-Watson stat	1.990695
Prob(F-statistic)	0.000000		

Appendix 2: causality test: Engle and Granger causality

1. BRIIC BETWEEN BRIIC COUNTRIES

BRAZIL: IBOVESPA WITH RUSSIA: RTSI

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:05
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
RTSI does not Granger Cause IBOVESPA	130	0.12641	0.8814
IBOVESPA does not Granger Cause RTSI		2.92378	0.0574

BRAZIL: IBOVESPA WITH INDIA: CNXNIFTY

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:06
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
CNXNIFTY does not Granger Cause IBOVESPA	130	1.00954	0.3673
IBOVESPA does not Granger Cause CNXNIFTY		3.14356	0.0466

BRAZIL: IBOVESPA WITH INDONESIA: JKSE

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:06
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
JKSE does not Granger Cause IBOVESPA	130	0.27206	0.7623
IBOVESPA does not Granger Cause JKSE		4.05390	0.0197

BRAZIL: IBOVESPA WITH CHINA: SSE

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:07
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
SSE does not Granger Cause IBOVESPA	130	0.12179	0.8854
IBOVESPA does not Granger Cause SSE		0.47046	0.6258

RUSSIA: RTSI WITH INDIA: CNXNIFTY

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:08
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
CNXNIFTY does not Granger Cause RTSI	130	2.02354	0.1365
RTSI does not Granger Cause CNXNIFTY		0.52573	0.5924

RUSSIA: RTSI WITH INDONESIA: JKSE

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:08
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
JKSE does not Granger Cause RTSI	130	0.71423	0.4916
RTSI does not Granger Cause JKSE		2.49526	0.0866

RUSSIA: RTSI WITH CHINA: SSE

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:08
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
SSE does not Granger Cause RTSI	130	0.24078	0.7864
RTSI does not Granger Cause SSE		1.16567	0.3151

INDIA: CNXNIFTY WITH INDONESIA: JKSE

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:09
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
JKSE does not Granger Cause CNXNIFTY	130	0.30899	0.7347
CNXNIFTY does not Granger Cause JKSE		0.90695	0.4064

INDIA: CNXNIFTY WITH CHINA: SSE

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:10
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
SSE does not Granger Cause CNXNIFTY	130	0.18030	0.8352
CNXNIFTY does not Granger Cause SSE		0.67824	0.5094

INDONESIA: JKSE WITH CHINA: SSE

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:10
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
SSE does not Granger Cause JKSE	130	0.32155	0.7256
JKSE does not Granger Cause SSE		0.65968	0.5188

2. PIIGS BETWEEN PIIGS COUNTRIES

PORTUGAL: PSIG WITH ITALY: FTSEMIB

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:11
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
FTSEMIB does not Granger Cause PSIG	130	2.06146	0.1316
PSIG does not Granger Cause FTSEMIB		0.83901	0.4346

PORTUGAL: PSIG WITH IRELAND: ISEQ

Pairwise Granger Causality Tests

Date: 05/22/13 Time: 17:11
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
ISEQ does not Granger Cause PSIG	130	2.43545	0.0917
PSIG does not Granger Cause ISEQ		1.96560	0.1444

PORTUGAL: PSIG WITH GREECE: ATHEX

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:12
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
ATHEX does not Granger Cause PSIG	130	0.44679	0.6407
PSIG does not Granger Cause ATHEX		3.03686	0.0515

PORTUGAL: PSIG WITH SPAIN: IBEX35

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:12
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
IBEX35 does not Granger Cause PSIG	130	2.49039	0.0870
PSIG does not Granger Cause IBEX35		0.78577	0.4580

ITALY: FTSEMIB WITH IRELAND: ISEQ

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:13
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
ISEQ does not Granger Cause FTSEMIB	130	3.46848	0.0342
FTSEMIB does not Granger Cause ISEQ		2.22679	0.1121

ITALY: FTSEMIB WITH GREECE: ATHEX

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:13
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
ATHEX does not Granger Cause FTSEMIB	130	0.25649	0.7742
FTSEMIB does not Granger Cause ATHEX		2.35953	0.0987

ITALY: FTSEMIB WITH SPAIN IBEX35

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:13
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
IBEX35 does not Granger Cause FTSEMIB	130	1.96641	0.1443
FTSEMIB does not Granger Cause IBEX35		0.19674	0.8217

IRELAND: ISEQ WITH GREECE: ATHEX

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:14
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
ATHEX does not Granger Cause ISEQ	130	1.67353	0.1918
ISEQ does not Granger Cause ATHEX		6.33919	0.0024

IRELAND: ISEQ WITH SPAIN: IBEX35

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:14
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
IBEX35 does not Granger Cause ISEQ	130	2.61754	0.0770
ISEQ does not Granger Cause IBEX35		0.87327	0.4201

GREECE: ATHEX WITH SPAIN: IBEX35

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:14
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
IBEX35 does not Granger Cause ATHEX	130	4.66808	0.0111
ATHEX does not Granger Cause IBEX35		1.65559	0.1951

3. BRIIC BETWEEN PIIGS COUNTRIES

BRAZIL: IBOVESPA WITH PORTUGAL: PSIG

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:15
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
PSIG does not Granger Cause IBOVESPA	130	0.24063	0.7865
IBOVESPA does not Granger Cause PSIG		1.84303	0.1626

BRAZIL: IBOVESPA WITH ITALY: FTSEMIB

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:16
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
FTSEMIB does not Granger Cause IBOVESPA	130	1.24389	0.2918
IBOVESPA does not Granger Cause FTSEMIB		1.24794	0.2906

BRAZIL: IBOVESPA WITH IRELAND: ISEQ

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:16
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
ISEQ does not Granger Cause IBOVESPA	130	1.52046	0.2226
IBOVESPA does not Granger Cause ISEQ		1.88422	0.1562

BRAZIL: IBOVESPA WITH GREECE: ATHEX

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:16
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
ATHEX does not Granger Cause IBOVESPA	130	0.56329	0.5708
IBOVESPA does not Granger Cause ATHEX		1.76530	0.1754

BRAZIL: IBOVESPA WITH SPAIN: IBEX35

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:17
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
IBEX35 does not Granger Cause IBOVESPA	130	0.77649	0.4622
IBOVESPA does not Granger Cause IBEX35		0.25755	0.7734

RUSSIA: RTSI WITH PORTUGAL: PSIG

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:17
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
PSIG does not Granger Cause RTSI	130	1.79656	0.1701
RTSI does not Granger Cause PSIG		1.01896	0.3639

RUSSIA: RTSI WITH ITALY: FTSEMIB

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:17
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
FTSEMIB does not Granger Cause RTSI	130	1.90635	0.1529
RTSI does not Granger Cause FTSEMIB		0.95117	0.3891

RUSSIA: RTSI WITH IRELAND: ISEQ

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:18
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
ISEQ does not Granger Cause RTSI	130	4.66702	0.0111

RTSI does not Granger Cause ISEQ	3.12807	0.0472

RUSSIA: RTSI WITH GREECE: ATHEX

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:18
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
ATHEX does not Granger Cause RTSI	130	0.82406	0.4410
RTSI does not Granger Cause ATHEX		1.62106	0.2018

RUSSIA: RTSI WITH SPAIN: IBEX35

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:19
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
IBEX35 does not Granger Cause RTSI	130	1.73507	0.1806
RTSI does not Granger Cause IBEX35		0.28333	0.7538

INDIA: CNXNIFTY WITH PORTUGAL: PSIG

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:19
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
PSIG does not Granger Cause CNXNIFTY	130	0.81412	0.4454
CNXNIFTY does not Granger Cause PSIG		0.63309	0.5326

INDIA: CNXNIFTY WITH ITALY: FTSEMIB

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:20
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
FTSEMIB does not Granger Cause CNXNIFTY	130	1.37801	0.2559

CNXNIFTY does not Granger Cause FTSEMIB	0.65360	0.5219

INDIA: CNXNIFTY WITH IRELAND: ISEQ

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:20
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
ISEQ does not Granger Cause CNXNIFTY	130	1.90246	0.1535
CNXNIFTY does not Granger Cause ISEQ		2.20042	0.1150

INDIA: CNXNIFTY WITH GREECE: ATHEX

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:20
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
ATHEX does not Granger Cause CNXNIFTY	130	1.09910	0.3364
CNXNIFTY does not Granger Cause ATHEX		1.83930	0.1632

INDIA: CNXNIFTY WITH SPAIN: IBEX35

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:20
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
IBEX35 does not Granger Cause CNXNIFTY	130	1.21743	0.2995
CNXNIFTY does not Granger Cause IBEX35		0.09851	0.9063

INDONESIA: JKSE WITH PORTUGAL: PSIG

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:21
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
PSIG does not Granger Cause JKSE	130	2.66183	0.0738
JKSE does not Granger Cause PSIG		0.62822	0.5352

INDONESIA: JKSE WITH ITALY: FTSEMIB

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:21
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
FTSEMIB does not Granger Cause JKSE	130	3.23395	0.0427
JKSE does not Granger Cause FTSEMIB		0.85305	0.4286

INDONESIA: JKSE WITH IRELAND: ISEQ

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:22
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
ISEQ does not Granger Cause JKSE	130	5.09490	0.0075
JKSE does not Granger Cause ISEQ		2.08681	0.1284

INDONESIA: JKSE WITH GREECE: ATHEX

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:22
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
ATHEX does not Granger Cause JKSE	130	0.61997	0.5396
JKSE does not Granger Cause ATHEX		2.07120	0.1303

INDONESIA: JKSE WITH SPAIN: IBEX35

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:22
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
IBEX35 does not Granger Cause JKSE	130	2.61150	0.0774
JKSE does not Granger Cause IBEX35		0.09196	0.9122

CHINA: SSE WITH PORTUGAL: PSIG

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:23
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
PSIG does not Granger Cause SSE	130	2.60946	0.0776
SSE does not Granger Cause PSIG		0.66343	0.5169

CHINA: SSE WITH ITALY: FTSEMIB

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:23
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
FTSEMIB does not Granger Cause SSE	130	0.44924	0.6391
SSE does not Granger Cause FTSEMIB		1.68789	0.1891

CHINA: SSE WITH IRELAND: ISEQ

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:24
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
ISEQ does not Granger Cause SSE	130	0.88504	0.4153
SSE does not Granger Cause ISEQ		4.81103	0.0097

CHINA: SSE WITH GREECE: ATHEX

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:24
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
ATHEX does not Granger Cause SSE	130	0.61690	0.5413
SSE does not Granger Cause ATHEX		2.11701	0.1247

CHINA: SSE WITH SPAIN: IBEX35

Pairwise Granger Causality Tests
Date: 05/22/13 Time: 17:25
Sample: 2002M01 2012M12
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
IBEX35 does not Granger Cause SSE	130	1.96692	0.1442
SSE does not Granger Cause IBEX35		0.74400	0.4773

Appendix 3: Cointegration test

A. ECT APPROACH

APPENDIX 3.1: JOHANSEN COINTEGRATION TEST: DEFAULT LAG 1 TO 4

Date: 05/29/13 Time: 16:26
Sample (adjusted): 2002M06 2012M12
Included observations: 127 after adjustments
Trend assumption: Linear deterministic trend
Series: IBOVESPA RTSI CNXNIFTY JKSE SSE PSIG FTSEMIB ISEQ ATHEX IBEX35
Lags interval (in first differences): 1 to 4

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.559968	386.7143	239.2354	0.0000
At most 1 *	0.435484	282.4589	197.3709	0.0000
At most 2 *	0.381357	209.8420	159.5297	0.0000
At most 3 *	0.312655	148.8531	125.6154	0.0009
At most 4 *	0.234054	101.2385	95.75366	0.0199
At most 5	0.203115	67.37480	69.81889	0.0771
At most 6	0.155702	38.54004	47.85613	0.2790
At most 7	0.071804	17.04530	29.79707	0.6367
At most 8	0.036799	7.582231	15.49471	0.5111
At most 9	0.021965	2.820629	3.841466	0.0931

Trace test indicates 5 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.559968	104.2554	64.50472	0.0000
At most 1 *	0.435484	72.61693	58.43354	0.0012
At most 2 *	0.381357	60.98886	52.36261	0.0052
At most 3 *	0.312655	47.61465	46.23142	0.0353
At most 4	0.234054	33.86368	40.07757	0.2119
At most 5	0.203115	28.83475	33.87687	0.1776
At most 6	0.155702	21.49474	27.58434	0.2474
At most 7	0.071804	9.463072	21.13162	0.7934
At most 8	0.036799	4.761602	14.26460	0.7716
At most 9	0.021965	2.820629	3.841466	0.0931

Max-eigenvalue test indicates 4 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values
Unrestricted Cointegrating Coefficients (normalized by b'*S11*b=I):

IBOVESPA	RTSI	CNXNIFTY	JKSE	SSE	PSIG	FTSEMIB	ISEQ	ATHEX	IBEX35
9.131201	-3.890920	-1.462192	-14.95521	1.403720	0.090461	-2.177550	5.331815	-19.65970	41.11086
19.18338	2.026386	-21.74216	4.577469	4.947894	-8.675911	4.204497	3.848069	2.161477	-13.57973
-8.226913	7.641186	-15.75902	7.573178	-1.175500	16.94388	-25.15556	-0.869177	7.784620	5.184072
-2.550141	-0.509912	2.589903	6.199110	6.503661	-41.34234	9.204540	2.635161	3.458828	14.82247
-7.360645	5.358671	-13.23794	13.71684	-1.189963	-17.48708	-19.83830	5.180267	9.372572	14.14777
5.822843	6.004882	-11.82295	6.257980	0.886459	-22.37660	12.31833	-6.639765	3.267055	1.881443
-1.442501	-3.361666	-12.49477	18.80156	1.308532	-9.293917	15.40203	-5.941369	5.930899	-7.697724
0.396141	2.980990	1.635975	-3.195276	-2.760291	17.69010	19.20783	-8.050105	-5.217496	-18.02934
4.512861	-2.558035	-2.164300	-0.991992	-1.904117	1.811444	-5.361778	3.330841	-0.041313	6.269090
3.039898	-0.429962	-1.910278	-3.838875	-0.166650	3.113368	-2.886624	-0.331490	-0.792522	3.347824

Unrestricted Adjustment Coefficients (alpha):

D(IBOVESPA)	-0.005467	-0.013251	0.003653	-0.000393	-0.000872	-0.006424	-0.002893	-0.006928	-0.001257	0.005710
D(RTSI)	-0.016425	-0.020062	-0.014070	-0.011015	-0.013426	-0.011697	0.011916	-0.006064	0.001014	0.004951
D(CNXNIFTY)	0.002619	-0.000773	0.001537	-0.015864	0.002593	0.003931	0.004552	-0.003853	0.002561	0.007009
D(JKSE)	0.005280	0.004269	-0.004139	-0.015480	-0.010960	0.000205	-0.002836	-0.001279	-0.001439	0.004949
D(SSE)	0.013648	-0.026323	-0.002778	-0.004673	-0.002293	-0.006050	-0.006660	0.002810	0.006958	0.002896
D(PSIG)	-0.009933	-0.004956	-0.012181	-0.002256	0.002213	0.003152	-0.005377	-0.003025	0.000741	0.002904
D(FTSEMIB)	-0.014125	-0.002630	-0.008054	-0.011703	0.005253	-0.005076	-0.005003	-0.006803	0.000797	0.002086
D(ISEQ)	-0.006317	-0.010758	-0.008800	-0.014237	0.008445	-0.001336	-0.001405	-0.003211	-0.004768	0.001978
D(ATHEX)	-0.009428	0.000708	-0.021010	-0.009225	0.009009	-0.013669	-0.000400	-0.003013	0.002231	0.005115
D(IBEX35)	-0.023311	-0.001135	-0.005287	-0.009217	0.004633	-0.005578	-0.005775	-0.002441	0.000841	0.003538

1 Cointegrating Equation(s): Log likelihood 2369.041

Normalized cointegrating coefficients (standard error in parentheses)

IBOVESPA	RTSI	CNXNIFTY	JKSE	SSE	PSIG	FTSEMIB	ISEQ	ATHEX	IBEX35
1.000000	-0.426113	-0.160131	-1.637814	0.153728	0.009907	-0.238474	0.583912	-2.153025	4.502240
	(0.13406)	(0.34833)	(0.30896)	(0.08746)	(0.60022)	(0.42933)	(0.15848)	(0.23754)	(0.55311)

Adjustment coefficients (standard error in parentheses)

D(IBOVESPA)	-0.049921
	(0.05350)
D(RTSI)	-0.149982

	(0.07707)
D(CNXNIFTY)	0.023910
	(0.06006)
D(JKSE)	0.048209
	(0.05083)
D(SSE)	0.124624
	(0.06359)
D(PSIG)	-0.090700
	(0.03600)
D(FTSEMIB)	-0.128974
	(0.04480)
D(ISEQ)	-0.057682
	(0.04866)
D(ATHEX)	-0.086085
	(0.06435)
D(IBEX35)	-0.212859
	(0.04324)

2 Cointegrating Equation(s): Log likelihood 2405.350

Normalized cointegrating coefficients (standard error in parentheses)

IBOVESPA	RTSI	CNXNIFTY	JKSE	SSE	PSIG	FTSEMIB	ISEQ	ATHEX	IBEX35
1.000000	0.000000	-0.940046	-0.134141	0.237227	-0.360451	0.128261	0.276741	-0.337412	0.327114
		(0.13814)	(0.15155)	(0.04618)	(0.31694)	(0.21765)	(0.08208)	(0.10868)	(0.28802)
0.000000	1.000000	-1.830302	3.528816	0.195955	-0.869155	0.860652	-0.720868	4.260876	-9.798176
		(0.57598)	(0.63189)	(0.19253)	(1.32146)	(0.90750)	(0.34223)	(0.45316)	(1.20088)

Adjustment coefficients (standard error in parentheses)

D(IBOVESPA)	-0.304117	-0.005579
	(0.12068)	(0.02492)
D(RTSI)	-0.534834	0.023256
	(0.17326)	(0.03577)
D(CNXNIFTY)	0.009076	-0.011755
	(0.13973)	(0.02885)
D(JKSE)	0.130094	-0.011893
	(0.11787)	(0.02434)
D(SSE)	-0.380338	-0.106444
	(0.13495)	(0.02787)
D(PSIG)	-0.185774	0.028605
	(0.08298)	(0.01713)
D(FTSEMIB)	-0.179425	0.049628

	(0.10406)	(0.02149)	
D(ISEQ)	-0.264051	0.002780	
	(0.11048)	(0.02281)	
D(ATHEX)	-0.072506	0.038116	
	(0.14971)	(0.03091)	
D(IBEX35)	-0.234629	0.088402	
	(0.10058)	(0.02077)	

3 Cointegrating Equation(s): Log likelihood 2435.844

Normalized cointegrating coefficients (standard error in parentheses)

IBOVESPA	RTSI	CNXNIFTY	JKSE	SSE	PSIG	FTSEMIB	ISEQ	ATHEX	IBEX35
1.000000	0.000000	0.000000	1.892360	0.308537	-2.399324	3.161553	-0.407090	2.386647	-7.854629
			(0.37954)	(0.17993)	(1.24228)	(0.85050)	(0.32763)	(0.37676)	(1.14728)
0.000000	1.000000	0.000000	7.474482	0.334798	-4.838911	6.766575	-2.052311	9.564712	-25.72831
			(1.06014)	(0.50261)	(3.47003)	(2.37566)	(0.91517)	(1.05238)	(3.20466)
0.000000	0.000000	1.000000	2.155746	0.075858	-2.168908	3.226748	-0.727444	2.897793	-8.703554
			(0.39873)	(0.18904)	(1.30513)	(0.89352)	(0.34421)	(0.39582)	(1.20532)

Adjustment coefficients (standard error in parentheses)

D(IBOVESPA)	-0.334167	0.022331	0.238534
	(0.12909)	(0.04992)	(0.15238)
D(RTSI)	-0.419082	-0.084254	0.681930
	(0.18251)	(0.07058)	(0.21543)
D(CNXNIFTY)	-0.003572	-7.94E-06	-0.011244
	(0.14979)	(0.05793)	(0.17681)
D(JKSE)	0.164146	-0.043521	-0.035298
	(0.12598)	(0.04872)	(0.14871)
D(SSE)	-0.357482	-0.127673	0.596142
	(0.14456)	(0.05590)	(0.17063)
D(PSIG)	-0.085563	-0.064471	0.314239
	(0.08374)	(0.03238)	(0.09884)
D(FTSEMIB)	-0.113168	-0.011912	0.204752
	(0.10980)	(0.04246)	(0.12961)
D(ISEQ)	-0.191652	-0.064466	0.381818
	(0.11646)	(0.04504)	(0.13746)
D(ATHEX)	0.100345	-0.122428	0.329498
	(0.15192)	(0.05875)	(0.17932)
D(IBEX35)	-0.191133	0.048003	0.142077
	(0.10706)	(0.04140)	(0.12637)

4 Cointegrating Equation(s): Log likelihood 2459.651

Normalized cointegrating coefficients (standard error in parentheses)

IBOVESPA	RTSI	CNXNIFTY	JKSE	SSE	PSIG	FTSEMIB	ISEQ	ATHEX	IBEX35
1.000000	0.000000	0.000000	0.000000	-1.177187	6.662830	0.633715	-0.904982	0.971982	-8.716493
				(0.26958)	(1.65725)	(1.01813)	(0.50133)	(0.36762)	(1.53971)
0.000000	1.000000	0.000000	0.000000	-5.533544	30.95497	-3.217932	-4.018894	3.977037	-29.13252
				(0.99755)	(6.13250)	(3.76751)	(1.85513)	(1.36036)	(5.69756)
0.000000	0.000000	1.000000	0.000000	-1.616654	8.154552	0.347076	-1.294635	1.286229	-9.685376
				(0.30415)	(1.86976)	(1.14869)	(0.56562)	(0.41476)	(1.73715)
0.000000	0.000000	0.000000	1.000000	0.785117	-4.788812	1.335813	0.263106	0.747567	0.455444
				(0.12938)	(0.79539)	(0.48865)	(0.24061)	(0.17644)	(0.73898)

Adjustment coefficients (standard error in parentheses)

D(IBOVESPA)	-0.333165	0.022532	0.237516	0.046331
	(0.12990)	(0.05001)	(0.15308)	(0.10454)
D(RTSI)	-0.390992	-0.078638	0.653402	-0.021026
	(0.18159)	(0.06991)	(0.21401)	(0.14614)
D(CNXNIFTY)	0.036885	0.008082	-0.052331	-0.129403
	(0.14547)	(0.05600)	(0.17144)	(0.11707)
D(JKSE)	0.203621	-0.035628	-0.075388	-0.186724
	(0.12078)	(0.04650)	(0.14234)	(0.09720)
D(SSE)	-0.345564	-0.125290	0.584039	-0.374614
	(0.14499)	(0.05582)	(0.17087)	(0.11669)
D(PSIG)	-0.079811	-0.063321	0.308396	0.019631
	(0.08407)	(0.03237)	(0.09908)	(0.06766)
D(FTSEMIB)	-0.083325	-0.005945	0.174444	0.065659
	(0.10659)	(0.04103)	(0.12561)	(0.08578)
D(ISEQ)	-0.155346	-0.057206	0.344946	-0.109674
	(0.11171)	(0.04301)	(0.13165)	(0.08990)
D(ATHEX)	0.123870	-0.117724	0.305606	-0.072071
	(0.15113)	(0.05818)	(0.17811)	(0.12163)
D(IBEX35)	-0.167628	0.052703	0.118205	0.246251
	(0.10526)	(0.04052)	(0.12405)	(0.08471)

5 Cointegrating Equation(s): Log likelihood 2476.583

Normalized cointegrating coefficients (standard error in parentheses)

IBOVESPA	RTSI	CNXNIFTY	JKSE	SSE	PSIG	FTSEMIB	ISEQ	ATHEX	IBEX35
1.000000	0.000000	0.000000	0.000000	0.000000	2.922304	1.742932	-0.839111	0.782827	-6.018122

					(0.69617)	(0.61137)	(0.27179)	(0.22087)	(0.75748)
0.000000	1.000000	0.000000	0.000000	0.000000	13.37207	1.996110	-3.709258	3.087889	-16.44842
					(3.13604)	(2.75403)	(1.22431)	(0.99494)	(3.41222)
0.000000	0.000000	1.000000	0.000000	0.000000	3.017612	1.870386	-1.204173	1.026459	-5.979648
					(0.87246)	(0.76618)	(0.34061)	(0.27680)	(0.94930)
0.000000	0.000000	0.000000	1.000000	0.000000	-2.294093	0.596028	0.219174	0.873722	-1.344217
					(0.50788)	(0.44601)	(0.19828)	(0.16113)	(0.55261)
0.000000	0.000000	0.000000	0.000000	1.000000	-3.177512	0.942261	0.055956	-0.160683	2.292220
					(0.93061)	(0.81725)	(0.36331)	(0.29525)	(1.01257)

Adjustment coefficients (standard error in parentheses)

D(IBOVESPA)	-0.326745	0.017858	0.249062	0.034367	-0.079050
	(0.13641)	(0.05849)	(0.17044)	(0.13024)	(0.04792)
D(RTSI)	-0.292169	-0.150583	0.831134	-0.205187	-0.161441
	(0.18747)	(0.08039)	(0.23425)	(0.17900)	(0.06586)
D(CNXNIFTY)	0.017801	0.021975	-0.086653	-0.093839	-0.108220
	(0.15264)	(0.06545)	(0.19072)	(0.14574)	(0.05362)
D(JKSE)	0.284296	-0.094361	0.069704	-0.337066	-0.054234
	(0.12358)	(0.05300)	(0.15442)	(0.11800)	(0.04342)
D(SSE)	-0.328687	-0.137577	0.614392	-0.406066	-0.135485
	(0.15217)	(0.06525)	(0.19013)	(0.14529)	(0.05346)
D(PSIG)	-0.096101	-0.051461	0.279099	0.049988	-0.041451
	(0.08811)	(0.03778)	(0.11010)	(0.08413)	(0.03095)
D(FTSEMIB)	-0.121988	0.022202	0.104910	0.137708	-0.105733
	(0.11110)	(0.04764)	(0.13883)	(0.10608)	(0.03903)
D(ISEQ)	-0.217507	-0.011951	0.233150	0.006167	-0.154392
	(0.11523)	(0.04942)	(0.14399)	(0.11003)	(0.04048)
D(ATHEX)	0.057557	-0.069447	0.186343	0.051507	-0.055751
	(0.15698)	(0.06732)	(0.19615)	(0.14989)	(0.05515)
D(IBEX35)	-0.201727	0.077528	0.056880	0.309795	-0.097580
	(0.10989)	(0.04712)	(0.13731)	(0.10493)	(0.03861)

6 Cointegrating Equation(s): Log likelihood 2491.000

Normalized cointegrating coefficients (standard error in parentheses)

IBOVESPA	RTSI	CNXNIFTY	JKSE	SSE	PSIG	FTSEMIB	ISEQ	ATHEX	IBEX35
1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	2.080954	-0.626548	0.213445	-2.897428
						(0.38921)	(0.16370)	(0.13714)	(0.08799)
0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	3.542851	-2.736598	0.482474	-2.168546
						(1.55056)	(0.65217)	(0.54636)	(0.35055)
0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	2.219431	-0.984677	0.438507	-2.757176

						(0.47759)	(0.20088)	(0.16828)	(0.10797)
0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.330671	0.052306	1.320703	-3.794051
						(0.34806)	(0.14639)	(0.12264)	(0.07869)
0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.574719	-0.175170	0.458424	-1.101007
						(1.11855)	(0.47046)	(0.39413)	(0.25288)
0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	-0.115670	-0.072738	0.194840	-1.067888
						(0.16090)	(0.06768)	(0.05670)	(0.03638)

Adjustment coefficients (standard error in parentheses)

D(IBOVESPA)	-0.364152	-0.020718	0.325014	-0.005835	-0.084745	0.351613
	(0.13927)	(0.06715)	(0.18174)	(0.13396)	(0.04782)	(0.30162)
D(RTSI)	-0.360277	-0.220820	0.969423	-0.278385	-0.171810	0.886063
	(0.19030)	(0.09176)	(0.24833)	(0.18304)	(0.06534)	(0.41213)
D(CNXNIFTY)	0.040691	0.045581	-0.133132	-0.069238	-0.104735	0.555563
	(0.15668)	(0.07555)	(0.20446)	(0.15070)	(0.05379)	(0.33932)
D(JKSE)	0.285492	-0.093127	0.067276	-0.335780	-0.054052	0.720340
	(0.12715)	(0.06131)	(0.16592)	(0.12229)	(0.04365)	(0.27535)
D(SSE)	-0.363914	-0.173906	0.685920	-0.443926	-0.140848	0.551218
	(0.15571)	(0.07508)	(0.20318)	(0.14976)	(0.05346)	(0.33721)
D(PSIG)	-0.077749	-0.032536	0.241836	0.069711	-0.038657	-0.180257
	(0.09025)	(0.04352)	(0.11777)	(0.08681)	(0.03099)	(0.19546)
D(FTSEMIB)	-0.151547	-0.008281	0.164928	0.105940	-0.110233	0.390631
	(0.11349)	(0.05472)	(0.14810)	(0.10916)	(0.03896)	(0.24578)
D(ISEQ)	-0.225289	-0.019976	0.248950	-0.002196	-0.155576	0.414457
	(0.11850)	(0.05714)	(0.15464)	(0.11398)	(0.04068)	(0.25663)
D(ATHEX)	-0.022037	-0.151529	0.347954	-0.034036	-0.067868	0.166720
	(0.15727)	(0.07583)	(0.20523)	(0.15127)	(0.05400)	(0.34060)
D(IBEX35)	-0.234207	0.044032	0.122829	0.274888	-0.102525	0.343021
	(0.11206)	(0.05403)	(0.14623)	(0.10779)	(0.03847)	(0.24269)

7 Cointegrating Equation(s): Log likelihood 2501.748

Normalized cointegrating coefficients (standard error in parentheses)

IBOVESPA	RTSI	CNXNIFTY	JKSE	SSE	PSIG	FTSEMIB	ISEQ	ATHEX	IBEX35
1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.612775	0.641306	-3.281668
							(0.10041)	(0.08952)	(0.12532)
0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	-0.626633	1.210912	-2.822719
							(0.12614)	(0.11246)	(0.15744)
0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.337118	0.894840	-3.166985
							(0.08185)	(0.07298)	(0.10216)

0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.249239	1.388692	-3.855108
							(0.07616)	(0.06790)	(0.09506)
0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.167107	0.576590	-1.207127
							(0.18969)	(0.16912)	(0.23675)
0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	-0.141626	0.171057	-1.046530
							(0.02930)	(0.02613)	(0.03657)
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	-0.595556	-0.205608	0.184646
							(0.05897)	(0.05257)	(0.07359)

Adjustment coefficients (standard error in parentheses)

D(IBOVESPA)	-0.359979	-0.010993	0.361161	-0.060226	-0.088531	0.378499	-0.245700
	(0.13929)	(0.06965)	(0.19454)	(0.17038)	(0.04830)	(0.30563)	(0.21903)
D(RTSI)	-0.377466	-0.260879	0.820530	-0.054337	-0.156217	0.775313	0.509767
	(0.18791)	(0.09396)	(0.26244)	(0.22984)	(0.06516)	(0.41230)	(0.29547)
D(CNXNIFTY)	0.034125	0.030278	-0.190011	0.016352	-0.098778	0.513255	-0.126548
	(0.15647)	(0.07824)	(0.21853)	(0.19139)	(0.05426)	(0.34332)	(0.24604)
D(JKSE)	0.289583	-0.083594	0.102710	-0.389100	-0.057763	0.746697	0.144377
	(0.12713)	(0.06357)	(0.17756)	(0.15550)	(0.04409)	(0.27895)	(0.19991)
D(SSE)	-0.354307	-0.151517	0.769137	-0.569147	-0.149563	0.613117	-0.245139
	(0.15494)	(0.07748)	(0.21639)	(0.18951)	(0.05373)	(0.33996)	(0.24363)
D(PSIG)	-0.069992	-0.014460	0.309021	-0.031385	-0.045693	-0.130283	0.198547
	(0.08924)	(0.04463)	(0.12464)	(0.10916)	(0.03095)	(0.19581)	(0.14033)
D(FTSEMIB)	-0.144330	0.008538	0.227440	0.011874	-0.116779	0.437129	-0.129216
	(0.11288)	(0.05645)	(0.15766)	(0.13807)	(0.03915)	(0.24769)	(0.17750)
D(ISEQ)	-0.223262	-0.015252	0.266510	-0.028619	-0.157415	0.427518	-0.146785
	(0.11864)	(0.05933)	(0.16570)	(0.14512)	(0.04114)	(0.26033)	(0.18656)
D(ATHEX)	-0.021461	-0.150185	0.352950	-0.041553	-0.068391	0.170436	0.113854
	(0.15754)	(0.07878)	(0.22002)	(0.19269)	(0.05463)	(0.34566)	(0.24772)
D(IBEX35)	-0.225876	0.063447	0.194988	0.166306	-0.110082	0.396695	-0.155416
	(0.11117)	(0.05559)	(0.15527)	(0.13598)	(0.03855)	(0.24393)	(0.17481)

8 Cointegrating Equation(s): Log likelihood 2506.479

Normalized cointegrating coefficients (standard error in parentheses)

IBOVESPA	RTSI	CNXNIFTY	JKSE	SSE	PSIG	FTSEMIB	ISEQ	ATHEX	IBEX35
1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.908968	-2.997306
								(0.09919)	(0.20455)
0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.937198	-3.113512
								(0.11124)	(0.22940)
0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.042094	-3.010544
								(0.06125)	(0.12631)

0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	1.497560	-3.739447
								(0.04604)	(0.09495)
0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.649583	-1.129580
								(0.11968)	(0.24682)
0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.109195	-1.112252
								(0.02748)	(0.05667)
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	-0.465748	-0.091725
								(0.08804)	(0.18156)
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	-0.436802	-0.464056
								(0.17427)	(0.35938)

Adjustment coefficients (standard error in parentheses)

D(IBOVESPA)	-0.362724	-0.031647	0.349826	-0.038088	-0.069407	0.255937	-0.378777	0.026748	
	(0.13806)	(0.07099)	(0.19301)	(0.16978)	(0.05027)	(0.31847)	(0.24193)	(0.08288)	
D(RTSI)	-0.379868	-0.278955	0.810610	-0.034962	-0.139479	0.668043	0.393294	-0.195444	
	(0.18722)	(0.09627)	(0.26174)	(0.23024)	(0.06817)	(0.43188)	(0.32809)	(0.11239)	
D(CNXNIFTY)	0.032598	0.018793	-0.196314	0.028662	-0.088144	0.445101	-0.200550	-0.040859	
	(0.15614)	(0.08029)	(0.21829)	(0.19202)	(0.05686)	(0.36020)	(0.27363)	(0.09374)	
D(JKSE)	0.289076	-0.087405	0.100619	-0.385015	-0.054234	0.724078	0.119817	-0.023617	
	(0.12710)	(0.06536)	(0.17769)	(0.15631)	(0.04628)	(0.29320)	(0.22274)	(0.07630)	
D(SSE)	-0.353194	-0.143140	0.773734	-0.578125	-0.157319	0.662825	-0.191167	0.006819	
	(0.15477)	(0.07959)	(0.21637)	(0.19033)	(0.05636)	(0.35703)	(0.27123)	(0.09291)	
D(PSIG)	-0.071190	-0.023476	0.304073	-0.021721	-0.037345	-0.183788	0.140451	-0.020556	
	(0.08888)	(0.04570)	(0.12426)	(0.10930)	(0.03236)	(0.20503)	(0.15576)	(0.05336)	
D(FTSEMIB)	-0.147025	-0.011742	0.216310	0.033612	-0.098001	0.316781	-0.259889	0.036139	
	(0.11140)	(0.05728)	(0.15574)	(0.13700)	(0.04057)	(0.25698)	(0.19522)	(0.06688)	
D(ISEQ)	-0.224534	-0.024824	0.261257	-0.018359	-0.148552	0.370714	-0.208463	-0.018124	
	(0.11834)	(0.06085)	(0.16545)	(0.14553)	(0.04309)	(0.27299)	(0.20739)	(0.07104)	
D(ATHEX)	-0.022654	-0.159168	0.348021	-0.031925	-0.060074	0.117133	0.055977	0.110473	
	(0.15735)	(0.08091)	(0.21997)	(0.19350)	(0.05730)	(0.36297)	(0.27574)	(0.09446)	
D(IBEX35)	-0.226843	0.056169	0.190995	0.174106	-0.103344	0.353511	-0.202305	-0.033353	
	(0.11099)	(0.05707)	(0.15517)	(0.13649)	(0.04042)	(0.25604)	(0.19450)	(0.06663)	

9 Cointegrating Equation(s): Log likelihood 2508.860

Normalized cointegrating coefficients (standard error in parentheses)

IBOVESPA	RTSI	CNXNIFTY	JKSE	SSE	PSIG	FTSEMIB	ISEQ	ATHEX	IBEX35
1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	-4.149005
									(1.27662)
0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	-4.300979
									(1.24846)

0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	-4.330919
									(1.43142)
0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	-5.636916
									(2.04793)
0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	-1.952628
									(0.87389)
0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	-1.250607
									(0.14582)
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.498397
									(0.67337)
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.089390
									(0.69033)
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	1.267040
									(1.35664)
Adjustment coefficients (standard error in parentheses)									
D(IBOVESPA)	-0.368396	-0.028431	0.352546	-0.036841	-0.067013	0.253660	-0.372038	0.022561	0.095794
	(0.14028)	(0.07238)	(0.19332)	(0.16981)	(0.05136)	(0.31853)	(0.24369)	(0.08490)	(0.13899)
D(RTSI)	-0.375292	-0.281549	0.808415	-0.035968	-0.141410	0.669879	0.387857	-0.192066	0.070146
	(0.19027)	(0.09818)	(0.26222)	(0.23033)	(0.06966)	(0.43205)	(0.33054)	(0.11516)	(0.18853)
D(CNXNIFTY)	0.044156	0.012242	-0.201857	0.026122	-0.093020	0.449740	-0.214281	-0.032328	-0.011917
	(0.15855)	(0.08181)	(0.21851)	(0.19193)	(0.05805)	(0.36003)	(0.27544)	(0.09596)	(0.15710)
D(JKSE)	0.282584	-0.083725	0.103732	-0.383588	-0.051495	0.721472	0.127530	-0.028409	-0.292477
	(0.12913)	(0.06663)	(0.17795)	(0.15631)	(0.04728)	(0.29321)	(0.22432)	(0.07815)	(0.12794)
D(SSE)	-0.321793	-0.160939	0.758674	-0.585028	-0.170568	0.675429	-0.228475	0.029995	-0.458711
	(0.15615)	(0.08057)	(0.21520)	(0.18903)	(0.05717)	(0.35458)	(0.27127)	(0.09451)	(0.15472)
D(PSIG)	-0.067845	-0.025372	0.302469	-0.022456	-0.038756	-0.182446	0.136476	-0.018087	0.096839
	(0.09032)	(0.04660)	(0.12447)	(0.10933)	(0.03307)	(0.20508)	(0.15690)	(0.05466)	(0.08949)
D(FTSEMIB)	-0.143429	-0.013780	0.214586	0.032821	-0.099518	0.318225	-0.264162	0.038793	0.207262
	(0.11321)	(0.05841)	(0.15602)	(0.13704)	(0.04145)	(0.25706)	(0.19666)	(0.06852)	(0.11217)
D(ISEQ)	-0.246051	-0.012628	0.271576	-0.013629	-0.139473	0.362077	-0.182898	-0.034006	0.066590
	(0.11957)	(0.06170)	(0.16479)	(0.14475)	(0.04378)	(0.27152)	(0.20772)	(0.07237)	(0.11848)
D(ATHEX)	-0.012586	-0.164875	0.343192	-0.034138	-0.064322	0.121174	0.044015	0.117904	0.044446
	(0.15981)	(0.08246)	(0.22024)	(0.19346)	(0.05851)	(0.36289)	(0.27762)	(0.09672)	(0.15835)
D(IBEX35)	-0.223049	0.054019	0.189175	0.173272	-0.104945	0.355034	-0.206812	-0.030553	0.386445
	(0.11279)	(0.05820)	(0.15544)	(0.13654)	(0.04129)	(0.25611)	(0.19594)	(0.06826)	(0.11176)

APPENDIX 3.2: ECM: TWO STEPS ENGLE GRANGER ECT BRAZIL AND THE OTHER NINE COUNTRIES

1ST STEP: ECT1 Dependent Variable: IBOVESPA
Method: Least Squares Date: 05/30/13 Time: 11:03
Sample: 2002M01 2012M12 observations: 132

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.559234	0.775571	5.878555	0.0000
RTSI	0.086629	0.050354	1.720399	0.0879
CNXNIFTY	0.466590	0.104544	4.463078	0.0000
JKSE	0.261451	0.084281	3.102132	0.0024
SSE	-0.095070	0.034337	-2.768694	0.0065
PSIG	0.123787	0.197909	0.625471	0.5328
FTSEMIB	-0.517908	0.172058	-3.010072	0.0032
ISEQ	-0.099774	0.065235	-1.529454	0.1287
ATHEX	0.242934	0.060371	4.023993	0.0001
IBEX35	0.400150	0.188522	2.122567	0.0358

R-squared	0.984668	Mean dependent var	10.49916
Adjusted R-squared	0.983537	S.D. dependent var	0.611071
S.E. of regression	0.078405	Akaike info criterion	-2.181123
Sum squared resid	0.749977	Schwarz criterion	-1.962729
Log likelihood	153.9541	Hannan-Quinn criter.	-2.092377
F-statistic	870.5895	Durbin-Watson stat	0.556420
Prob(F-statistic)	0.000000		

2ND STEP ECT1 Dependent Variable: D(IBOVESPA)
Method: Least Squares Date: 05/30/13 Time: 11:49
Sample (adjusted): 2002M02 2012M12 obs 131 after adj

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.004582	0.004386	1.044722	0.2983
D(RTSI)	0.188214	0.054689	3.441507	0.0008
D(CNXNIFTY)	0.250868	0.079199	3.167568	0.0019
D(JKSE)	0.057798	0.088804	0.650844	0.5164
D(SSE)	0.070200	0.055910	1.255583	0.2117
D(PSIG)	0.153873	0.140967	1.091550	0.2772
D(FTSEMIB)	-0.031726	0.165089	-0.192174	0.8479
D(ISEQ)	0.086163	0.100438	0.857877	0.3927
D(ATHEX)	-0.060689	0.080421	-0.754643	0.4519
D(IBEX35)	0.263655	0.147126	1.792034	0.0756
ECT1(-1)	-0.162931	0.057702	-2.823655	0.0056

R-squared	0.624181	Mean dependent var	0.011961
Adjusted R-squared	0.592863	S.D. dependent var	0.071922
S.E. of regression	0.045891	Akaike info criterion	-3.244841
Sum squared resid	0.252723	Schwarz criterion	-3.003412
Log likelihood	223.5371	F-statistic	19.93027
Durbin-Watson stat	1.899786	Prob(F-statistic)	0.000000

RUSSIA AND THE OTHER NINE COUNTRIES

1ST STEP: ECT2 Dependent Variable: RTSI
Method: Least Squares
Date: 05/30/13 Time: 12:06
Sample: 2002M01 2012M12 observations: 132

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-8.178370	1.374036	-5.952079	0.0000
IBOVESPA	0.273416	0.158926	1.720399	0.0879
CNXNIFTY	0.606767	0.192639	3.149761	0.0021
JKSE	0.129310	0.155082	0.833812	0.4060
SSE	0.138169	0.061633	2.241798	0.0268
PSIG	-0.291002	0.351174	-0.828654	0.4089
FTSEMIB	0.564749	0.312667	1.806233	0.0733
ISEQ	0.341414	0.112843	3.025571	0.0030
ATHEX	-0.175066	0.113044	-1.548655	0.1241
IBEX35	0.041825	0.341027	0.122644	0.9026

R-squared	0.949890	Mean dependent var	6.937514
Adjusted R-squared	0.946194	S.D. dependent var	0.600491
S.E. of regression	0.139291	Akaike info criterion	-1.031765
Sum squared resid	2.367051	Schwarz criterion	-0.813371
Log likelihood	78.09649	Hannan-Quinn criter.	-0.943020
F-statistic	256.9612	Durbin-Watson stat	0.369697
Prob(F-statistic)	0.000000		

2ND STEP: ECT2 Dependent Variable: D(RTSI)
Method: Least Squares Date: 05/30/13 Time: 12:08
Sample (adjusted): 2002M02 2012M12 obs: 131 after adj

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.004610	0.006680	0.690153	0.4914
D(IBOVESPA)	0.440690	0.128182	3.437990	0.0008
D(CNXNIFTY)	0.019993	0.125807	0.158919	0.8740
D(JKSE)	0.371590	0.125672	2.956813	0.0037
D(SSE)	0.061992	0.083726	0.740421	0.4605
D(PSIG)	-0.031730	0.215124	-0.147496	0.8830
D(FTSEMIB)	0.295637	0.249685	1.184042	0.2387
D(ISEQ)	0.148940	0.151167	0.985263	0.3265
D(ATHEX)	0.219366	0.120983	1.813191	0.0723
D(IBEX35)	-0.265078	0.224885	-1.178724	0.2408
ECT2(-1)	-0.161600	0.046987	-3.439227	0.0008

R-squared	0.595942	Mean dependent var	0.012746
Adjusted R-squared	0.562270	S.D. dependent var	0.105392
S.E. of regression	0.069728	Akaike info criterion	-2.408187
Sum squared resid	0.583445	Schwarz criterion	-2.166758
Log likelihood	168.7363	F-statistic	17.69869
Durbin-Watson stat	1.771177	Prob(F-statistic)	0.000000

INDIA AND THE OTHER NINE COUNTRIES

1ST STEP: ECT3 Dependent Variable: CNXNIFTY
Method: Least Squares
Date: 05/30/13 Time: 12:08
Sample: 2002M01 2012M12 Included observations: 132

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.135641	0.697902	1.627220	0.1063
IBOVESPA	0.300811	0.067400	4.463078	0.0000
RTSI	0.123942	0.039350	3.149761	0.0021
JKSE	0.386196	0.060977	6.333465	0.0000
SSE	-0.020353	0.028364	-0.717564	0.4744
PSIG	0.158671	0.158513	1.000996	0.3188
FTSEMIB	-0.336446	0.139912	-2.404698	0.0177
ISEQ	-0.000691	0.052879	-0.013066	0.9896
ATHEX	0.122061	0.050393	2.422157	0.0169
IBEX35	0.156462	0.153488	1.019379	0.3100

R-squared	0.989712	Mean dependent var	8.021910
Adjusted R-squared	0.988954	S.D. dependent var	0.598978
S.E. of regression	0.062954	Akaike info criterion	-2.620093
Sum squared resid	0.483510	Schwarz criterion	-2.401699
Log likelihood	182.9261	Hannan-Quinn criter.	-2.531347
F-statistic	1304.110	Durbin-Watson stat	0.719699
Prob(F-statistic)	0.000000		

2ND STEP: ECT3 Dependent Variable: D(CNXNIFTY)
Method: Least Squares Date: 05/30/13 Time: 12:16
Sample (adjusted): 2002M02 2012M12 obs: 131 after adj

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.002121	0.004419	0.479917	0.6322
D(IBOVESPA)	0.271484	0.085650	3.169703	0.0019
D(RTSI)	0.019158	0.057988	0.330380	0.7417
D(JKSE)	0.402628	0.078703	5.115769	0.0000
D(SSE)	0.070753	0.055703	1.270173	0.2065
D(PSIG)	0.278176	0.141579	1.964815	0.0517
D(FTSEMIB)	0.013440	0.167160	0.080403	0.9361
D(ISEQ)	-0.074108	0.099716	-0.743191	0.4588
D(ATHEX)	0.054850	0.080667	0.679964	0.4978
D(IBEX35)	0.065332	0.150842	0.433114	0.6657
ECT3(-1)	-0.363766	0.069612	-5.225602	0.0000

R-squared	0.663510	Mean dependent var	0.013001
Adjusted R-squared	0.635470	S.D. dependent var	0.076313
S.E. of regression	0.046075	Akaike info criterion	-3.236857
Sum squared resid	0.254749	Schwarz criterion	-2.995428
Log likelihood	223.0141	F-statistic	23.66231
Durbin-Watson stat	1.822497	Prob(F-statistic)	0.000000

INDONESIA AND THE OTHER NINE COUNTRIES

1ST STEP: ECT4 Dependent Variable: JKSE
Method: Least Squares Date: 05/30/13 Time: 12:09
Sample: 2002M01 2012M12 Included observations: 132

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.526833	0.879348	-2.873531	0.0048
IBOVESPA	0.279639	0.090144	3.102132	0.0024
RTSI	0.043821	0.052554	0.833812	0.4060
CNXNIFTY	0.640704	0.101162	6.333465	0.0000
SSE	0.000857	0.036610	0.023397	0.9814
PSIG	0.490897	0.200130	2.452892	0.0156
FTSEMIB	-0.129168	0.184061	-0.701771	0.4842
ISEQ	0.152464	0.066696	2.285950	0.0240
ATHEX	-0.485237	0.049857	-9.732660	0.0000
IBEX35	0.154051	0.198046	0.777857	0.4382

R-squared	0.988883	Mean dependent var	7.341001
Adjusted R-squared	0.988063	S.D. dependent var	0.742151
S.E. of regression	0.081086	Akaike info criterion	-2.113872
Sum squared resid	0.802148	Schwarz criterion	-1.895478
Log likelihood	149.5155	Hannan-Quinn criter.	-2.025127
F-statistic	1205.768	Durbin-Watson stat	0.588875
Prob(F-statistic)	0.000000		

2ND STEP: ECT4 Dependent Variable: D(JKSE)
Method: Least Squares Date: 05/30/13 Time: 12:17
Sample (adjusted): 2002M02 2012M12
Included observations: 131 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.009354	0.004048	2.310644	0.0226
D(IBOVESPA)	0.001157	0.082771	0.013980	0.9889
D(RTSI)	0.157947	0.051779	3.050398	0.0028
D(CNXNIFTY)	0.452100	0.070997	6.367863	0.0000
D(SSE)	-0.019139	0.052637	-0.363609	0.7168
D(PSIG)	0.032318	0.132313	0.244254	0.8075
D(FTSEMIB)	-0.141154	0.153962	-0.916812	0.3611
D(ISEQ)	0.142397	0.092256	1.543498	0.1253
D(ATHEX)	0.046200	0.075062	0.615497	0.5394
D(IBEX35)	0.021372	0.139220	0.153514	0.8783
ECT4(-1)	-0.300034	0.050384	-5.954912	0.0000

R-squared	0.651455	Mean dependent var	0.017232
Adjusted R-squared	0.622410	S.D. dependent var	0.069918
S.E. of regression	0.042963	Akaike info criterion	-3.376712
Sum squared resid	0.221501	Schwarz criterion	-3.135283
Log likelihood	232.1746	F-statistic	22.42884
Durbin-Watson stat	1.811880	Prob(F-statistic)	0.000000

CHINA AND THE OTHER NINE COUNTRIES

1ST STEP: ECT5 Dependent Variable: SSE
Method: Least Squares Date: 05/30/13 Time: 12:10
Sample: 2002M01 2012M12 Included observations: 132

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.538332	2.109820	4.046948	0.0001
IBOVESPA	-0.621846	0.224599	-2.768694	0.0065
RTSI	0.286346	0.127731	2.241798	0.0268
CNXNIFTY	-0.206494	0.287771	-0.717564	0.4744
JKSE	0.005238	0.223891	0.023397	0.9814
PSIG	3.463915	0.398332	8.696050	0.0000
FTSEMIB	-1.193241	0.443113	-2.692858	0.0081
ISEQ	-0.494903	0.162363	-3.048115	0.0028
ATHEX	0.171221	0.163596	1.046609	0.2973
IBEX35	-0.741461	0.486361	-1.524506	0.1300

R-squared	0.773218	Mean dependent var	7.641488
Adjusted R-squared	0.756488	S.D. dependent var	0.406354
S.E. of regression	0.200523	Akaike info criterion	-0.303040
Sum squared resid	4.905563	Schwarz criterion	-0.084646
Log likelihood	30.00063	Hannan-Quinn criter.	-0.214295
F-statistic	46.21803	Durbin-Watson stat	0.398981
Prob(F-statistic)	0.000000		

2ND STEP: ECT5 Dependent Variable: D(SSE)
Method: Least Squares Date: 05/30/13 Time: 12:17
Sample (adjusted): 2002M02 2012M12
Included observations: 131 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.002228	0.007169	-0.310735	0.7565
D(IBOVESPA)	0.268844	0.141355	1.901907	0.0596
D(RTSI)	0.073641	0.092922	0.792503	0.4296
D(CNXNIFTY)	0.186017	0.141327	1.316218	0.1906
D(JKSE)	-0.057502	0.158144	-0.363609	0.7168
D(PSIG)	0.383510	0.226711	1.691621	0.0933
D(FTSEMIB)	-0.034774	0.267781	-0.129858	0.8969
D(ISEQ)	-0.278012	0.159483	-1.743215	0.0839
D(ATHEX)	0.223858	0.128700	1.739378	0.0845
D(IBEX35)	-0.293733	0.239844	-1.224686	0.2231
ECT5(-1)	-0.208797	0.097558	-2.140238	0.0344

R-squared	0.295936	Mean dependent var	0.003202
Adjusted R-squared	0.237265	S.D. dependent var	0.085269
S.E. of regression	0.074469	Akaike info criterion	-2.276623
Sum squared resid	0.665483	Schwarz criterion	-2.035194
Log likelihood	160.1188	F-statistic	5.043917
Durbin-Watson stat	1.937649	Prob(F-statistic)	0.000004

PORTUGAL AND THE OTHER NINE COUNTRIES

1ST STEP: ECT6 Dependent Variable: PSIG
Method: Least Squares Date: 05/30/13 Time: 12:12
Sample: 2002M01 2012M12 Included observations: 132

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.911939	0.392684	-2.322321	0.0219
IBOVESPA	0.025822	0.041284	0.625471	0.5328
RTSI	-0.019233	0.023210	-0.828654	0.4089
CNXNIFTY	0.051340	0.051289	1.000996	0.3188
JKSE	0.095741	0.039032	2.452892	0.0156
SSE	0.110470	0.012703	8.696050	0.0000
FTSEMIB	0.184206	0.079724	2.310540	0.0225
ISEQ	0.071703	0.029370	2.441346	0.0161
ATHEX	0.041014	0.029110	1.408924	0.1614
IBEX35	0.417616	0.079108	5.279083	0.0000

R-squared	0.982201	Mean dependent var	7.799731
Adjusted R-squared	0.980887	S.D. dependent var	0.259026
S.E. of regression	0.035810	Akaike info criterion	-3.748453
Sum squared resid	0.156446	Schwarz criterion	-3.530059
Log likelihood	257.3979	Hannan-Quinn criter.	-3.659708
F-statistic	748.0163	Durbin-Watson stat	0.763201
Prob(F-statistic)	0.000000		

2ND STEP: ECT6 Dependent Variable: D(PSIG)
Method: Least Squares Date: 05/30/13 Time: 12:18
Sample (adjusted): 2002M02 2012M12
Included observations: 131 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.33E-05	0.002583	0.009031	0.9928
D(IBOVESPA)	0.011513	0.052178	0.220651	0.8257
D(RTSI)	0.005869	0.033593	0.174695	0.8616
D(CNXNIFTY)	0.053782	0.047847	1.124040	0.2632
D(JKSE)	0.070476	0.050545	1.394316	0.1658
D(SSE)	0.117464	0.033442	3.512467	0.0006
D(FTSEMIB)	0.113818	0.096225	1.182828	0.2392
D(ISEQ)	0.144374	0.057274	2.520766	0.0130
D(ATHEX)	0.033419	0.047006	0.710951	0.4785
D(IBEX35)	0.310974	0.085945	3.618284	0.0004
ECT6(-1)	-0.374070	0.072965	-5.126715	0.0000

R-squared	0.763142	Mean dependent var	0.001247
Adjusted R-squared	0.743404	S.D. dependent var	0.053098
S.E. of regression	0.026897	Akaike info criterion	-4.313378
Sum squared resid	0.086813	Schwarz criterion	-4.071950
Log likelihood	293.5263	F-statistic	38.66332
Durbin-Watson stat	1.724692	Prob(F-statistic)	0.000000

ITALY AND THE OTHER NINE COUNTRIES

1ST STEP: ECT7 Dependent Variable: FTSEMIB
Method: Least Squares Date: 05/30/13 Time: 12:12
Sample: 2002M01 2012M12 Included observations: 132

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.167419	0.341630	9.271501	0.0000
IBOVESPA	-0.133484	0.044346	-3.010072	0.0032
RTSI	0.046118	0.025533	1.806233	0.0733
CNXNIFTY	-0.134504	0.055934	-2.404698	0.0177
JKSE	-0.031126	0.044354	-0.701771	0.4842
SSE	-0.047018	0.017460	-2.692858	0.0081
PSIG	0.227595	0.098503	2.310540	0.0225
ISEQ	0.242342	0.025228	9.605949	0.0000
ATHEX	0.106810	0.031154	3.428513	0.0008
IBEX35	0.556197	0.083442	6.665641	0.0000

R-squared	0.985129	Mean dependent var	10.15091
Adjusted R-squared	0.984032	S.D. dependent var	0.314998
S.E. of regression	0.039804	Akaike info criterion	-3.536940
Sum squared resid	0.193296	Schwarz criterion	-3.318546
Log likelihood	243.4381	Hannan-Quinn criter.	-3.448195
F-statistic	897.9925	Durbin-Watson stat	0.563340
Prob(F-statistic)	0.000000		

2ND STEP: ECT7 Dependent Variable: D(FTSEMIB)
Method: Least Squares Date: 05/30/13 Time: 12:18
Sample (adjusted): 2002M02 2012M12
Included observations: 131 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.003541	0.002322	-1.524786	0.1299
D(IBOVESPA)	-0.049012	0.048290	-1.014946	0.3122
D(RTSI)	0.044561	0.030641	1.454310	0.1485
D(CNXNIFTY)	0.019983	0.043907	0.455132	0.6498
D(JKSE)	-0.033512	0.045552	-0.735686	0.4634
D(SSE)	-0.012908	0.029599	-0.436091	0.6636
D(PSIG)	0.147586	0.074959	1.968879	0.0513
D(ISEQ)	0.229962	0.048818	4.710600	0.0000
D(ATHEX)	0.090022	0.041930	2.146945	0.0338
D(IBEX35)	0.535247	0.063861	8.381390	0.0000
ECT7(-1)	-0.184051	0.059501	-3.093234	0.0025

R-squared	0.857890	Mean dependent var	-0.005203
Adjusted R-squared	0.846047	S.D. dependent var	0.062284
S.E. of regression	0.024438	Akaike info criterion	-4.505104
Sum squared resid	0.071667	Schwarz criterion	-4.263675
Log likelihood	306.0843	F-statistic	72.44143
Durbin-Watson stat	2.033458	Prob(F-statistic)	0.000000

IRELAND AND THE OTHER NINE COUNTRIES

1ST STEP: ECT8 Dependent Variable: ISEQ
Method: Least Squares Date: 05/30/13 Time: 12:13
Sample: 2002M01 2012M12 Included observations: 132

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.657139	1.198440	-1.382747	0.1693
IBOVESPA	-0.188559	0.123285	-1.529454	0.1287
RTSI	0.204433	0.067568	3.025571	0.0030
CNXNIFTY	-0.002025	0.155009	-0.013066	0.9896
JKSE	0.269396	0.117849	2.285950	0.0240
SSE	-0.142991	0.046911	-3.048115	0.0028
PSIG	0.649603	0.266084	2.441346	0.0161
FTSEMIB	1.776978	0.184987	9.605949	0.0000
ATHEX	0.006065	0.088328	0.068660	0.9454
IBEX35	-1.461075	0.228361	-6.398082	0.0000

R-squared	0.938833	Mean dependent var	8.413140
Adjusted R-squared	0.934321	S.D. dependent var	0.420577
S.E. of regression	0.107785	Akaike info criterion	-1.544621
Sum squared resid	1.417350	Schwarz criterion	-1.326227
Log likelihood	111.9450	Hannan-Quinn criter.	-1.455875
F-statistic	208.0613	Durbin-Watson stat	0.366471
Prob(F-statistic)	0.000000		

2ND STEP: ECT8 Dependent Variable: D(ISEQ)
Method: Least Squares Date: 05/30/13 Time: 12:19
Sample (adjusted): 2002M02 2012M12
Included observations: 131 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.002685	0.003957	-0.678550	0.4987
D(IBOVESPA)	0.136977	0.079992	1.712380	0.0894
D(RTSI)	0.029265	0.051642	0.566695	0.5720
D(CNXNIFTY)	-0.080426	0.073559	-1.093360	0.2764
D(JKSE)	0.123621	0.076411	1.617829	0.1083
D(SSE)	-0.097680	0.049066	-1.990802	0.0488
D(PSIG)	0.281016	0.124865	2.250558	0.0262
D(FTSEMIB)	0.695683	0.138900	5.008520	0.0000
D(ATHEX)	0.029667	0.073177	0.405412	0.6859
D(IBEX35)	-0.259998	0.136780	-1.900846	0.0597
ECT8(-1)	-0.081759	0.037753	-2.165602	0.0323

R-squared	0.612120	Mean dependent var	-0.003385
Adjusted R-squared	0.579797	S.D. dependent var	0.063749
S.E. of regression	0.041324	Akaike info criterion	-3.454503
Sum squared resid	0.204923	Schwarz criterion	-3.213074
Log likelihood	237.2700	F-statistic	18.93741
Durbin-Watson stat	1.939924	Prob(F-statistic)	0.000000

GREECE AND THE OTHER NINE COUNTRIES

1ST STEP: ECT9 Dependent Variable: ATHEX
Method: Least Squares Date: 05/30/13 Time: 12:14
Sample: 2002M01 2012M12 Included observations: 132

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-10.19681	0.824789	-12.36294	0.0000
IBOVESPA	0.482327	0.119863	4.023993	0.0001
RTSI	-0.110127	0.071111	-1.548655	0.1241
CNXNIFTY	0.375899	0.155192	2.422157	0.0169
JKSE	-0.900742	0.092548	-9.732660	0.0000
SSE	0.051972	0.049658	1.046609	0.2973
PSIG	0.390365	0.277066	1.408924	0.1614
FTSEMIB	0.822791	0.239985	3.428513	0.0008
ISEQ	0.006371	0.092795	0.068660	0.9454
IBEX35	0.582089	0.265314	2.193964	0.0301

R-squared	0.964130	Mean dependent var	7.687707
Adjusted R-squared	0.961484	S.D. dependent var	0.562922
S.E. of regression	0.110477	Akaike info criterion	-1.495291
Sum squared resid	1.489021	Schwarz criterion	-1.276897
Log likelihood	108.6892	Hannan-Quinn criter.	-1.406546
F-statistic	364.3507	Durbin-Watson stat	0.631674
Prob(F-statistic)	0.000000		

2ND STEP: ECT9 Dependent Variable: D(ATHEX)
Method: Least Squares Date: 05/30/13 Time: 12:19
Sample (adjusted): 2002M02 2012M12
Included observations: 131 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(RTSI)	0.142769	0.063552	2.246499	0.0265
C	-0.008821	0.004923	-1.791901	0.0757
D(IBOVESPA)	-0.088750	0.100557	-0.882582	0.3792
D(CNXNIFTY)	0.141172	0.095828	1.473181	0.1433
D(JKSE)	-0.011710	0.107362	-0.109068	0.9133
D(SSE)	0.092164	0.062560	1.473204	0.1433
D(PSIG)	0.155538	0.159480	0.975280	0.3314
D(FTSEMIB)	0.418121	0.183130	2.283190	0.0242
D(ISEQ)	-0.004006	0.112842	-0.035497	0.9717
D(IBEX35)	0.418475	0.165589	2.527198	0.0128
ECT9(-1)	-0.060824	0.050655	-1.200746	0.2322

R-squared	0.678397	Mean dependent var	-0.008022
Adjusted R-squared	0.651596	S.D. dependent var	0.087931
S.E. of regression	0.051902	Akaike info criterion	-2.998681
Sum squared resid	0.323260	Schwarz criterion	-2.757252
Log likelihood	207.4136	F-statistic	25.31306
Durbin-Watson stat	1.830671	Prob(F-statistic)	0.000000

SPAIN AND THE OTHER NINE COUNTRIES

1ST STEP: ECT10 Dependent Variable: IBEX35
Method: Least Squares Date: 05/30/13 Time: 12:14
Sample: 2002M01 2012M12 Included observations: 132

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.333042	0.413247	0.805916	0.4219
IBOVESPA	0.089000	0.041930	2.122567	0.0358
RTSI	0.002947	0.024032	0.122644	0.9026
CNXNIFTY	0.053978	0.052952	1.019379	0.3100
JKSE	0.032035	0.041184	0.777857	0.4382
SSE	-0.025212	0.016538	-1.524506	0.1300
PSIG	0.445275	0.084347	5.279083	0.0000
FTSEMIB	0.479978	0.072008	6.665641	0.0000
ISEQ	-0.171954	0.026876	-6.398082	0.0000
ATHEX	0.065209	0.029722	2.193964	0.0301

R-squared	0.980755	Mean dependent var	9.163309
Adjusted R-squared	0.979335	S.D. dependent var	0.257222
S.E. of regression	0.036977	Akaike info criterion	-3.684324
Sum squared resid	0.166808	Schwarz criterion	-3.465930
Log likelihood	253.1654	Hannan-Quinn criter.	-3.595578
F-statistic	690.7946	Durbin-Watson stat	0.682781
Prob(F-statistic)	0.000000		

2ND STEP: ECT10 Dependent Variable: D(IBEX35)
Method: Least Squares Date: 05/30/13 Time: 12:20
Sample (adjusted): 2002M02 2012M12
Included observations: 131 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.002744	0.002452	1.118962	0.2654
D(IBOVESPA)	0.145670	0.049170	2.962555	0.0037
D(RTSI)	-0.052544	0.031846	-1.649922	0.1016
D(CNXNIFTY)	-0.017023	0.045929	-0.370640	0.7116
D(JKSE)	0.013539	0.047957	0.282322	0.7782
D(SSE)	-0.038879	0.030719	-1.265649	0.2081
D(PSIG)	0.249146	0.077162	3.228870	0.0016
D(FTSEMIB)	0.630203	0.074655	8.441541	0.0000
D(ISEQ)	-0.087117	0.055230	-1.577332	0.1174
D(ATHEX)	0.107755	0.043914	2.453795	0.0156
ECT10(-1)	-0.318071	0.064587	-4.924716	0.0000

R-squared	0.840485	Mean dependent var	0.000110
Adjusted R-squared	0.827192	S.D. dependent var	0.061803
S.E. of regression	0.025692	Akaike info criterion	-4.405061
Sum squared resid	0.079208	Schwarz criterion	-4.163632
Log likelihood	299.5315	F-statistic	63.22795
Durbin-Watson stat	1.861470	Prob(F-statistic)	0.000000

B. VECM APPROACH

APPENDIX 3.3: VAR LAG DETERMINATION

VAR Lag Order Selection Criteria
Endogenous variables: IBOVESPA RTSI CNXNIFTY JKSE SSE PSIG FTSEMIB ISEQ ATHEX IBEX35
Exogenous variables: C
Date: 05/30/13 Time: 13:07
Sample: 2002M01 2012M12
Included observations: 124

Lag	LogL	LR	FPE	AIC	SC	HQ
0	797.8130	NA	1.43e-18	-12.70666	-12.47922	-12.61427
1	2086.766	2349.221	6.77e-27*	-31.88332	-29.38146*	-30.86701*
2	2162.686	126.1260	1.03e-26	-31.49494	-26.71866	-29.55470
3	2249.558	130.3074	1.37e-26	-31.28319	-24.23249	-28.41903
4	2348.613	132.6052	1.61e-26	-31.26794	-21.94282	-27.47986
5	2467.513	139.9956	1.54e-26	-31.57279	-19.97324	-26.86078
6	2596.099	130.6603*	1.47e-26	-32.03386	-18.15989	-26.39793
7	2726.214	111.2271	1.72e-26	-32.51958	-16.37119	-25.95973
8	2842.282	80.49889	3.54e-26	-32.77874*	-14.35594	-25.29497

* indicates lag order selected by the criterion
LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion

APPENDIX 3.4: JOHANSEN COINTEGRATING EQUATION TEST: LAG OPTIMUM (LAG 1)

Date: 06/16/13 Time: 13:58
Sample: 2002M01 2012M12
Included observations: 130
Series: IBOVESPA RTSI CNXNIFTY JKSE SSE PSIG FTSEMIB ISEQ ATHEX IBEX35
Lags interval: 1 to 1

Selected (0.05 level*) Number of Cointegrating Relations by Model

Data Trend:	None	None	Linear	Linear	Quadratic
Test Type	No Intercept No Trend	Intercept No Trend	Intercept No Trend	Intercept Trend	Intercept Trend
Trace	1	1	1	1	1
Max-Eig	1	1	1	1	1

*Critical values based on MacKinnon-Haug-Michelis (1999)

Information Criteria by Rank and Model

Data Trend:	None	None	Linear	Linear	Quadratic
Rank or No. of CEs	No Intercept No Trend	Intercept No Trend	Intercept No Trend	Intercept Trend	Intercept Trend
	Log Likelihood by Rank (rows) and Model (columns)				
0	2111.899	2111.899	2122.462	2122.462	2124.591
1	2150.438	2156.834	2167.119	2167.132	2169.239
2	2168.690	2180.190	2190.197	2192.990	2194.915
3	2186.725	2198.225	2207.561	2212.045	2213.675
4	2200.860	2214.249	2222.524	2227.785	2229.414
5	2214.047	2228.383	2235.982	2242.637	2244.250
6	2223.293	2241.461	2244.936	2254.720	2256.077
7	2228.362	2250.413	2252.890	2263.404	2264.234
8	2231.077	2254.887	2256.495	2271.066	2271.319
9	2233.209	2257.575	2259.054	2274.088	2274.330
10	2233.288	2259.659	2259.659	2276.589	2276.589

	Akaike Information Criteria by Rank (rows) and Model (columns)				
0	-30.95229	-30.95229	-30.96095	-30.96095	-30.83986
1	-31.23751	-31.32053	-31.34030	-31.32510	-31.21906
2	-31.21062	-31.35677	-31.38765	-31.39984*	-31.30639
3	-31.18038	-31.31115	-31.34710	-31.36992	-31.28730
4	-31.09015	-31.23460	-31.26960	-31.28900	-31.22176
5	-30.98534	-31.12897	-31.16896	-31.19442	-31.14231
6	-30.81989	-31.00710	-30.99902	-31.05723	-31.01658
7	-30.59018	-30.82174	-30.81369	-30.86776	-30.83437
8	-30.32426	-30.56750	-30.56146	-30.66255	-30.63567
9	-30.04937	-30.28576	-30.29315	-30.38596	-30.37430
10	-29.74290	-29.99475	-29.99475	-30.10137	-30.10137

	Schwarz Criteria by Rank (rows) and Model (columns)				
0	-28.74650*	-28.74650*	-28.53458	-28.53458	-28.19291
1	-28.59056	-28.65152	-28.47276	-28.43551	-28.13095
2	-28.12250	-28.22454	-28.07895	-28.04703	-27.77711
3	-27.65111	-27.71570	-27.59725	-27.55390	-27.31687
4	-27.11972	-27.17593	-27.07858	-27.00976	-26.81017
5	-26.57375	-26.60709	-26.53679	-26.45196	-26.28956
6	-25.96714	-26.02200	-25.92569	-25.85156	-25.72267
7	-25.29627	-25.37342	-25.29920	-25.19887	-25.09930
8	-24.58919	-24.65596	-24.60582	-24.53043	-24.45944
9	-23.87314	-23.91101	-23.89634	-23.79063	-23.75691
10	-23.12551	-23.15678	-23.15678	-23.04282	-23.04282

APPENDIX 3.5: JOHANSEN COINTEGRATION TEST: LAG OPTIMUM (LAG 1)

Date: 05/30/13 Time: 13:09
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments
Trend assumption: Linear deterministic trend
Series: IBOVESPA RTSI CNXNIFTY JKSE SSE PSIG FTSEMIB ISEQ ATHEX IBEX35
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.496934	274.3931	239.2354	0.0004
At most 1	0.298858	185.0786	197.3709	0.1714
At most 2	0.234436	138.9228	159.5297	0.3738
At most 3	0.205617	104.1943	125.6154	0.4687
At most 4	0.187026	74.26957	95.75366	0.5705
At most 5	0.128684	47.35225	69.81889	0.7475
At most 6	0.115176	29.44467	47.85613	0.7468
At most 7	0.053954	13.53705	29.79707	0.8655
At most 8	0.038609	6.326683	15.49471	0.6569
At most 9	0.009249	1.208027	3.841466	0.2717

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.496934	89.31452	64.50472	0.0001
At most 1	0.298858	46.15576	58.43354	0.4601
At most 2	0.234436	34.72858	52.36261	0.8085
At most 3	0.205617	29.92468	46.23142	0.7845
At most 4	0.187026	26.91732	40.07757	0.6388
At most 5	0.128684	17.90758	33.87687	0.8822
At most 6	0.115176	15.90761	27.58434	0.6736
At most 7	0.053954	7.210371	21.13162	0.9452
At most 8	0.038609	5.118656	14.26460	0.7268
At most 9	0.009249	1.208027	3.841466	0.2717

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegrating Coefficients (normalized by b'*S11*b=I):

IBOVESPA	RTSI	CNXNIFTY	JKSE	SSE	PSIG	FTSEMIB	ISEQ	ATHEX	IBEX35
-0.649848	-2.766368	10.44745	-11.59731	-1.847372	15.43060	-0.916987	0.454826	-8.814261	7.230386
-12.01075	2.216901	7.781642	1.631324	-3.142300	9.385603	-10.28497	-1.131099	5.820896	-5.580419
-3.671476	-3.458423	10.15387	0.257757	3.223987	-26.23023	3.713513	3.246682	0.532293	13.80923
1.987058	-3.427932	6.957139	1.067102	-0.119728	5.585864	22.28293	-5.632299	-0.070899	-25.51061
-5.630370	1.161164	-2.669423	6.626472	-1.120957	-4.973684	9.994886	-6.283538	-0.857546	5.768927
3.272270	4.437297	4.485295	-6.689945	0.533469	-7.609793	9.326316	-2.962684	-2.471203	-2.745837
-2.392341	0.376358	-1.779919	1.538227	1.238090	6.045351	-0.470292	-3.256174	1.913577	-1.298942
0.203937	0.273393	-2.689143	2.116760	-1.068055	0.306886	1.373278	1.044579	-0.265108	2.082163
3.525498	-2.220195	-3.085124	2.071354	-1.836045	-3.137343	-4.615774	0.491090	2.702811	4.975573
-0.998441	-1.864960	1.755660	1.568272	1.036302	-0.367345	-2.607029	3.104910	-0.462239	0.663537

Unrestricted Adjustment Coefficients (alpha):

D(IBOVESPA)	0.007463	0.015743	0.007850	-0.012052	-0.014249	-0.009375	-0.002037	-0.004943	0.000541	-0.002479
D(RTSI)	0.021348	0.001552	0.009397	0.007848	-0.013249	-0.022717	-0.002417	-0.007930	0.007112	-0.001705
D(CNXNIFTY)	-0.004595	-0.001292	-0.009702	-0.011233	-0.010683	-0.009539	-0.004090	-0.002179	0.006162	-0.004165
D(JKSE)	0.018016	-0.008914	-0.007142	-0.004404	-0.015842	-0.001245	-0.001824	-0.005843	0.002173	-0.002560
D(SSE)	0.039659	0.012605	-0.004203	-0.006697	-0.007053	-0.006180	-0.003850	0.008566	0.004452	-0.001992
D(PSIG)	0.002050	0.003900	0.007209	-0.001587	-0.009448	-0.000758	-0.010486	-0.001039	0.003763	-0.001931
D(FTSEMIB)	-0.001915	0.008989	-0.001816	-0.002093	-0.015493	-0.005596	-0.011689	-0.003087	0.003733	0.000144
D(ISEQ)	0.005201	0.007352	-0.002706	-0.003630	-0.001971	-0.005459	-0.014692	-0.007378	0.000739	-0.000844
D(ATHEX)	0.001075	-0.001928	-0.000383	-0.000578	-0.020970	-0.015469	-0.015937	0.001624	-0.000216	-0.001608
D(IBEX35)	-0.004969	0.012612	-0.001690	0.004884	-0.016593	-0.004238	-0.009796	-0.002050	0.001607	-0.001728

1 Cointegrating Equation(s): Log likelihood 2167.119

Normalized cointegrating coefficients (standard error in parentheses)

IBOVESPA	RTSI	CNXNIFTY	JKSE	SSE	PSIG	FTSEMIB	ISEQ	ATHEX	IBEX35
1.000000	4.256948	-16.07677	17.84619	2.842777	-23.74495	1.411080	-0.699896	13.56358	-11.12628
	(1.14495)	(2.56596)	(2.11505)	(0.77714)	(4.87209)	(3.96304)	(1.50385)	(1.50533)	(4.46373)

Adjustment coefficients (standard error in parentheses)

D(IBOVESPA)	-0.004850
	(0.00414)

D(RTSI)	-0.013873
	(0.00565)
D(CNXNIFTY)	0.002986
	(0.00442)
D(JKSE)	-0.011707
	(0.00366)
D(SSE)	-0.025772
	(0.00440)
D(PSIG)	-0.001332
	(0.00300)
D(FTSEMIB)	0.001245
	(0.00357)
D(ISEQ)	-0.003380
	(0.00355)
D(ATHEX)	-0.000698
	(0.00492)
D(IBEX35)	0.003229
	(0.00359)

2 Cointegrating Equation(s): Log likelihood 2190.197

Normalized cointegrating coefficients (standard error in parentheses)

IBOVESPA	RTSI	CNXNIFTY	JKSE	SSE	PSIG	FTSEMIB	ISEQ	ATHEX	IBEX35
1.000000	0.000000	-1.289068	0.611457	0.368889	-1.735728	0.879368	0.061175	0.099161	-0.017064
		(0.20842)	(0.18865)	(0.06837)	(0.43380)	(0.34993)	(0.12950)	(0.13242)	(0.39750)
0.000000	1.000000	-3.473781	4.048613	0.581141	-5.170188	0.124904	-0.178783	3.162928	-2.609666
		(0.52776)	(0.47770)	(0.17312)	(1.09850)	(0.88610)	(0.32791)	(0.33531)	(1.00657)

Adjustment coefficients (standard error in parentheses)

D(IBOVESPA)	-0.193940	0.014255
	(0.07458)	(0.02198)
D(RTSI)	-0.032509	-0.055617
	(0.10465)	(0.03084)
D(CNXNIFTY)	0.018506	0.009848
	(0.08175)	(0.02409)
D(JKSE)	0.095356	-0.069600
	(0.06711)	(0.01978)
D(SSE)	-0.177162	-0.081768
	(0.08025)	(0.02365)
D(PSIG)	-0.048173	0.002975
	(0.05537)	(0.01632)

D(FTSEMIB)	-0.106716	0.025226
	(0.06533)	(0.01926)
D(ISEQ)	-0.091677	0.001910
	(0.06528)	(0.01924)
D(ATHEX)	0.022455	-0.007246
	(0.09103)	(0.02683)
D(IBEX35)	-0.148255	0.041707
	(0.06493)	(0.01914)

3 Cointegrating Equation(s): Log likelihood 2207.561

Normalized cointegrating coefficients (standard error in parentheses)

IBOVESPA	RTSI	CNXNIFTY	JKSE	SSE	PSIG	FTSEMIB	ISEQ	ATHEX	IBEX35
1.000000	0.000000	0.000000	-2.615656	-0.919293	8.135284	-0.562476	-0.496665	-2.214945	-0.940205
			(0.35166)	(0.20661)	(1.31347)	(1.00038)	(0.39157)	(0.35566)	(1.18459)
0.000000	1.000000	0.000000	-4.647813	-2.890251	21.43022	-3.760576	-1.682050	-3.073127	-5.097347
			(0.88978)	(0.52277)	(3.32340)	(2.53121)	(0.99078)	(0.89991)	(2.99729)
0.000000	0.000000	1.000000	-2.503447	-0.999312	7.657480	-1.118516	-0.432746	-1.795178	-0.716131
			(0.29804)	(0.17511)	(1.11322)	(0.84786)	(0.33187)	(0.30144)	(1.00398)

Adjustment coefficients (standard error in parentheses)

D(IBOVESPA)	-0.222762	-0.012895	0.280193
	(0.07745)	(0.03050)	(0.10172)
D(RTSI)	-0.067010	-0.088116	0.330525
	(0.10888)	(0.04288)	(0.14299)
D(CNXNIFTY)	0.054125	0.043400	-0.156573
	(0.08473)	(0.03337)	(0.11128)
D(JKSE)	0.121577	-0.044901	0.046338
	(0.06968)	(0.02744)	(0.09151)
D(SSE)	-0.161732	-0.067234	0.469744
	(0.08376)	(0.03299)	(0.11001)
D(PSIG)	-0.074639	-0.021955	0.124957
	(0.05728)	(0.02256)	(0.07523)
D(FTSEMIB)	-0.100048	0.031506	0.031495
	(0.06828)	(0.02689)	(0.08967)
D(ISEQ)	-0.081743	0.011267	0.084070
	(0.06818)	(0.02685)	(0.08955)
D(ATHEX)	0.023862	-0.005921	-0.007666
	(0.09517)	(0.03748)	(0.12499)
D(IBEX35)	-0.142048	0.047553	0.029065
	(0.06786)	(0.02672)	(0.08913)

4 Cointegrating Equation(s): Log likelihood 2222.524

Normalized cointegrating coefficients (standard error in parentheses)

IBOVESPA	RTSI	CNXNIFTY	JKSE	SSE	PSIG	FTSEMIB	ISEQ	ATHEX	IBEX35
1.000000	0.000000	0.000000	0.000000	-1.340643	11.37836	5.611700	-2.994743	-0.093406	-13.13698
				(0.41612)	(2.34283)	(1.62692)	(0.77589)	(0.57163)	(2.21571)
0.000000	1.000000	0.000000	0.000000	-3.638957	27.19292	7.210441	-6.120935	0.696678	-26.77005
				(0.87391)	(4.92032)	(3.41679)	(1.62949)	(1.20052)	(4.65335)
0.000000	0.000000	1.000000	0.000000	-1.402587	10.76143	4.790791	-2.823659	0.235349	-12.38967
				(0.38876)	(2.18881)	(1.51996)	(0.72488)	(0.53405)	(2.07005)
0.000000	0.000000	0.000000	1.000000	-0.161088	1.239872	2.360469	-0.955048	0.811092	-4.662989
				(0.13314)	(0.74962)	(0.52055)	(0.24826)	(0.18290)	(0.70895)

Adjustment coefficients (standard error in parentheses)

D(IBOVESPA)	-0.246709	0.028417	0.196349	-0.071708
	(0.07713)	(0.03649)	(0.10857)	(0.07125)
D(RTSI)	-0.051416	-0.115018	0.385124	-0.234254
	(0.10984)	(0.05196)	(0.15462)	(0.10148)
D(CNXNIFTY)	0.031805	0.081906	-0.234723	0.036699
	(0.08477)	(0.04010)	(0.11932)	(0.07831)
D(JKSE)	0.112825	-0.029803	0.015697	-0.230016
	(0.07035)	(0.03328)	(0.09903)	(0.06500)
D(SSE)	-0.175040	-0.044275	0.423149	-0.447603
	(0.08444)	(0.03994)	(0.11886)	(0.07801)
D(PSIG)	-0.077793	-0.016514	0.113914	-0.017245
	(0.05796)	(0.02742)	(0.08159)	(0.05355)
D(FTSEMIB)	-0.104207	0.038681	0.016933	0.034175
	(0.06908)	(0.03268)	(0.09724)	(0.06382)
D(ISEQ)	-0.088956	0.023712	0.058813	-0.052896
	(0.06890)	(0.03259)	(0.09698)	(0.06365)
D(ATHEX)	0.022713	-0.003939	-0.011689	-0.016323
	(0.09635)	(0.04558)	(0.13563)	(0.08901)
D(IBEX35)	-0.132345	0.030813	0.063040	0.082979
	(0.06847)	(0.03239)	(0.09637)	(0.06325)

5 Cointegrating Equation(s): Log likelihood 2235.982

Normalized cointegrating coefficients (standard error in parentheses)

IBOVESPA	RTSI	CNXNIFTY	JKSE	SSE	PSIG	FTSEMIB	ISEQ	ATHEX	IBEX35
1.000000	0.000000	0.000000	0.000000	0.000000	2.336040	-0.105475	0.252430	1.213035	-5.740082

					(0.98212)	(0.87920)	(0.39185)	(0.30844)	(1.07485)
0.000000	1.000000	0.000000	0.000000	0.000000	2.649000	-8.307899	2.692988	4.242801	-6.692366
					(2.41651)	(2.16326)	(0.96414)	(0.75891)	(2.64467)
0.000000	0.000000	1.000000	0.000000	0.000000	1.301312	-1.190544	0.573549	1.602154	-4.651002
					(0.99320)	(0.88912)	(0.39627)	(0.31192)	(1.08698)
0.000000	0.000000	0.000000	1.000000	0.000000	0.153373	1.673510	-0.564877	0.968071	-3.774199
					(0.47490)	(0.42513)	(0.18948)	(0.14914)	(0.51974)
0.000000	0.000000	0.000000	0.000000	1.000000	-6.744767	-4.264502	2.422101	0.974489	5.517427
					(1.16311)	(1.04122)	(0.46406)	(0.36528)	(1.27293)

Adjustment coefficients (standard error in parentheses)

D(IBOVESPA)	-0.166483	0.011872	0.234384	-0.166127	-0.020533
	(0.08233)	(0.03628)	(0.10716)	(0.07984)	(0.02954)
D(RTSI)	0.023183	-0.130403	0.420492	-0.322050	-0.000106
	(0.11890)	(0.05239)	(0.15476)	(0.11531)	(0.04266)
D(CNXNIFTY)	0.091952	0.069502	-0.206207	-0.034090	-0.005408
	(0.09167)	(0.04039)	(0.11931)	(0.08890)	(0.03289)
D(JKSE)	0.202024	-0.048199	0.057987	-0.334996	-0.010010
	(0.07420)	(0.03269)	(0.09657)	(0.07196)	(0.02662)
D(SSE)	-0.135329	-0.052465	0.441977	-0.494340	-0.117712
	(0.09188)	(0.04048)	(0.11959)	(0.08911)	(0.03297)
D(PSIG)	-0.024599	-0.027484	0.139134	-0.079851	0.017979
	(0.06221)	(0.02741)	(0.08097)	(0.06033)	(0.02232)
D(FTSEMIB)	-0.016975	0.020691	0.058291	-0.068489	-0.012944
	(0.07288)	(0.03211)	(0.09486)	(0.07068)	(0.02615)
D(ISEQ)	-0.077861	0.021424	0.064074	-0.065954	-0.038789
	(0.07529)	(0.03317)	(0.09800)	(0.07302)	(0.02702)
D(ATHEX)	0.140783	-0.028289	0.044290	-0.155282	0.026412
	(0.10186)	(0.04488)	(0.13258)	(0.09879)	(0.03655)
D(IBEX35)	-0.038921	0.011546	0.107333	-0.026972	-0.017887
	(0.07178)	(0.03163)	(0.09342)	(0.06961)	(0.02575)

6 Cointegrating Equation(s): Log likelihood 2244.936

Normalized cointegrating coefficients (standard error in parentheses)

IBOVESPA	RTSI	CNXNIFTY	JKSE	SSE	PSIG	FTSEMIB	ISEQ	ATHEX	IBEX35
1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	5.303718	-1.683054	-0.980287	-2.561298
						(0.75297)	(0.31955)	(0.27550)	(0.20938)
0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	-2.174036	0.498207	1.755639	-3.087721
						(0.84705)	(0.35947)	(0.30992)	(0.23553)
0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	1.822694	-0.504629	0.380345	-2.880233

						(0.40591)	(0.17226)	(0.14851)	(0.11287)
0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	2.028650	-0.691952	0.824068	-3.565495
						(0.39051)	(0.16573)	(0.14288)	(0.10859)
0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	-19.88227	8.010356	7.307190	-3.660564
						(4.16412)	(1.76717)	(1.52358)	(1.15790)
0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	-2.315539	0.828532	0.938906	-1.360757
						(0.53634)	(0.22761)	(0.19624)	(0.14914)

Adjustment coefficients (standard error in parentheses)

D(IBOVESPA)	-0.197162	-0.029729	0.192333	-0.103406	-0.025535	0.131902
	(0.08367)	(0.04429)	(0.10921)	(0.08815)	(0.02939)	(0.19650)
D(RTSI)	-0.051153	-0.231204	0.318600	-0.170076	-0.012225	0.380100
	(0.11842)	(0.06269)	(0.15457)	(0.12477)	(0.04160)	(0.27812)
D(CNXNIFTY)	0.060737	0.027173	-0.248994	0.029728	-0.010497	0.234415
	(0.09332)	(0.04941)	(0.12181)	(0.09833)	(0.03278)	(0.21918)
D(JKSE)	0.197951	-0.053722	0.052404	-0.326668	-0.010674	0.445326
	(0.07620)	(0.04034)	(0.09947)	(0.08029)	(0.02677)	(0.17897)
D(SSE)	-0.155552	-0.079888	0.414257	-0.452996	-0.121009	0.885191
	(0.09403)	(0.04978)	(0.12274)	(0.09907)	(0.03303)	(0.22085)
D(PSIG)	-0.027079	-0.030847	0.135734	-0.074780	0.017575	-0.076957
	(0.06390)	(0.03383)	(0.08341)	(0.06732)	(0.02245)	(0.15007)
D(FTSEMIB)	-0.035287	-0.004140	0.033191	-0.031052	-0.015929	0.210396
	(0.07450)	(0.03944)	(0.09725)	(0.07849)	(0.02617)	(0.17497)
D(ISEQ)	-0.095725	-0.002800	0.039588	-0.029433	-0.041701	0.251292
	(0.07701)	(0.04077)	(0.10052)	(0.08114)	(0.02705)	(0.18086)
D(ATHEX)	0.090165	-0.096929	-0.025093	-0.051795	0.018160	0.227328
	(0.10264)	(0.05434)	(0.13397)	(0.10814)	(0.03606)	(0.24106)
D(IBEX35)	-0.052790	-0.007259	0.088324	0.001380	-0.020148	0.228096
	(0.07352)	(0.03892)	(0.09597)	(0.07746)	(0.02583)	(0.17267)

7 Cointegrating Equation(s): Log likelihood 2252.890

Normalized cointegrating coefficients (standard error in parentheses)

IBOVESPA	RTSI	CNXNIFTY	JKSE	SSE	PSIG	FTSEMIB	ISEQ	ATHEX	IBEX35
1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.594197	0.700327	-3.263209
							(0.15686)	(0.13856)	(0.20226)
0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	-0.435256	1.066742	-2.800002
							(0.15404)	(0.13606)	(0.19862)
0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.277979	0.957910	-3.121454
							(0.12000)	(0.10600)	(0.15473)

0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.179088	1.466896	-3.833973
							(0.12196)	(0.10773)	(0.15726)
0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-0.526472	1.007000	-1.029280
							(0.41832)	(0.36951)	(0.53938)
0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	-0.165688	0.205170	-1.054311
							(0.05484)	(0.04844)	(0.07071)
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	-0.429369	-0.316875	0.132343
							(0.04624)	(0.04084)	(0.05962)

Adjustment coefficients (standard error in parentheses)

D(IBOVESPA)	-0.192290	-0.030496	0.195958	-0.106539	-0.028056	0.119588	-0.637050
	(0.08479)	(0.04433)	(0.10965)	(0.08857)	(0.03025)	(0.19956)	(0.16581)
D(RTSI)	-0.045370	-0.232114	0.322903	-0.173794	-0.015217	0.365487	-0.168916
	(0.12002)	(0.06275)	(0.15522)	(0.12537)	(0.04283)	(0.28249)	(0.23472)
D(CNXNIFTY)	0.070521	0.025634	-0.241714	0.023437	-0.015561	0.209690	-0.462643
	(0.09446)	(0.04938)	(0.12216)	(0.09867)	(0.03371)	(0.22233)	(0.18473)
D(JKSE)	0.202314	-0.054409	0.055651	-0.329474	-0.012933	0.434299	-0.218593
	(0.07722)	(0.04037)	(0.09987)	(0.08066)	(0.02756)	(0.18175)	(0.15102)
D(SSE)	-0.146340	-0.081337	0.421111	-0.458918	-0.125776	0.861915	-0.457171
	(0.09520)	(0.04977)	(0.12312)	(0.09944)	(0.03397)	(0.22407)	(0.18618)
D(PSIG)	-0.001993	-0.034794	0.154399	-0.090910	0.004592	-0.140349	-0.147157
	(0.06326)	(0.03307)	(0.08181)	(0.06608)	(0.02257)	(0.14888)	(0.12371)
D(FTSEMIB)	-0.007323	-0.008539	0.053997	-0.049033	-0.030402	0.139731	-0.345620
	(0.07391)	(0.03864)	(0.09558)	(0.07720)	(0.02637)	(0.17395)	(0.14453)
D(ISEQ)	-0.060578	-0.008329	0.065737	-0.052032	-0.059890	0.162476	-0.235022
	(0.07558)	(0.03951)	(0.09774)	(0.07894)	(0.02697)	(0.17787)	(0.14780)
D(ATHEX)	0.128292	-0.102927	0.003274	-0.076310	-0.001571	0.130982	-0.341834
	(0.10187)	(0.05326)	(0.13174)	(0.10641)	(0.03635)	(0.23976)	(0.19922)
D(IBEX35)	-0.029354	-0.010946	0.105761	-0.013688	-0.032277	0.168874	-0.223380
	(0.07339)	(0.03837)	(0.09491)	(0.07666)	(0.02619)	(0.17273)	(0.14352)

8 Cointegrating Equation(s): Log likelihood 2256.495

Normalized cointegrating coefficients (standard error in parentheses)

IBOVESPA	RTSI	CNXNIFTY	JKSE	SSE	PSIG	FTSEMIB	ISEQ	ATHEX	IBEX35
1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.612917	-4.171929
								(0.41265)	(0.88405)
0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.130771	-2.134355
								(0.31429)	(0.67334)
0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.917018	-3.546574
								(0.19569)	(0.41924)

0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	1.440551	-4.107856
								(0.14072)	(0.30148)
0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	1.084448	-0.224134
								(0.47909)	(1.02640)
0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.229544	-0.800920
								(0.12123)	(0.25973)
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	-0.253712	0.788987
								(0.28601)	(0.61273)
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.147106	1.529323
								(0.66095)	(1.41601)

Adjustment coefficients (standard error in parentheses)

D(IBOVESPA)	-0.193298	-0.031847	0.209250	-0.117002	-0.022777	0.118072	-0.643838	0.197731	
	(0.08454)	(0.04422)	(0.11044)	(0.08916)	(0.03080)	(0.19896)	(0.16550)	(0.05937)	
D(RTSI)	-0.046987	-0.234282	0.344228	-0.190580	-0.006748	0.363053	-0.179806	0.144405	
	(0.11957)	(0.06254)	(0.15619)	(0.12610)	(0.04356)	(0.28140)	(0.23408)	(0.08397)	
D(CNXNIFTY)	0.070076	0.025038	-0.235854	0.018824	-0.013233	0.209022	-0.465635	0.137569	
	(0.09443)	(0.04939)	(0.12335)	(0.09958)	(0.03440)	(0.22223)	(0.18486)	(0.06631)	
D(JKSE)	0.201123	-0.056006	0.071362	-0.341841	-0.006692	0.432506	-0.226617	0.122966	
	(0.07684)	(0.04019)	(0.10037)	(0.08103)	(0.02799)	(0.18083)	(0.15042)	(0.05396)	
D(SSE)	-0.144593	-0.078995	0.398076	-0.440787	-0.134925	0.864544	-0.445408	0.111972	
	(0.09452)	(0.04944)	(0.12348)	(0.09968)	(0.03444)	(0.22246)	(0.18505)	(0.06638)	
D(PSIG)	-0.002204	-0.035078	0.157192	-0.093109	0.005702	-0.140668	-0.148584	0.123535	
	(0.06325)	(0.03308)	(0.08262)	(0.06670)	(0.02304)	(0.14885)	(0.12382)	(0.04442)	
D(FTSEMIB)	-0.007952	-0.009383	0.062297	-0.055567	-0.027105	0.138783	-0.349858	0.143622	
	(0.07380)	(0.03860)	(0.09641)	(0.07783)	(0.02689)	(0.17369)	(0.14448)	(0.05183)	
D(ISEQ)	-0.062082	-0.010346	0.085577	-0.067648	-0.052011	0.160212	-0.245153	0.074400	
	(0.07494)	(0.03920)	(0.09790)	(0.07903)	(0.02730)	(0.17637)	(0.14671)	(0.05263)	
D(ATHEX)	0.128623	-0.102483	-0.001094	-0.072872	-0.003306	0.131480	-0.339604	0.235869	
	(0.10186)	(0.05328)	(0.13306)	(0.10742)	(0.03711)	(0.23971)	(0.19940)	(0.07153)	
D(IBEX35)	-0.029772	-0.011507	0.111274	-0.018028	-0.030087	0.168245	-0.226196	0.097054	
	(0.07334)	(0.03836)	(0.09581)	(0.07735)	(0.02672)	(0.17261)	(0.14359)	(0.05151)	

9 Cointegrating Equation(s): Log likelihood 2259.054

Normalized cointegrating coefficients (standard error in parentheses)

IBOVESPA	RTSI	CNXNIFTY	JKSE	SSE	PSIG	FTSEMIB	ISEQ	ATHEX	IBEX35
1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	-5.923875
									(1.60495)
0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	-5.366520
									(1.29199)

0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	-6.167752
									(1.71555)
0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	-8.225487
									(2.43444)
0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	-3.323889
									(1.02290)
0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	-1.457042
									(0.17994)
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	1.514190
									(0.84993)
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	1.108839
									(0.87048)
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	2.858372
									(1.55247)
Adjustment coefficients (standard error in parentheses)									
D(IBOVESPA)	-0.191391	-0.033048	0.207582	-0.115881	-0.023770	0.116375	-0.646335	0.197997	0.065153
	(0.08700)	(0.04607)	(0.11189)	(0.08997)	(0.03260)	(0.19979)	(0.16767)	(0.05943)	(0.06640)
D(RTSI)	-0.021914	-0.250072	0.322286	-0.175848	-0.019806	0.340740	-0.212634	0.147897	-0.090492
	(0.12266)	(0.06496)	(0.15775)	(0.12685)	(0.04597)	(0.28169)	(0.23640)	(0.08380)	(0.09362)
D(CNXNIFTY)	0.091802	0.011356	-0.254866	0.031589	-0.024548	0.189688	-0.494080	0.140595	0.070757
	(0.09681)	(0.05127)	(0.12450)	(0.10011)	(0.03628)	(0.22232)	(0.18658)	(0.06614)	(0.07389)
D(JKSE)	0.208784	-0.060831	0.064658	-0.337340	-0.010682	0.425688	-0.236648	0.124033	-0.193578
	(0.07902)	(0.04185)	(0.10162)	(0.08171)	(0.02961)	(0.18146)	(0.15229)	(0.05398)	(0.06031)
D(SSE)	-0.128899	-0.088879	0.384342	-0.431565	-0.143099	0.850577	-0.465957	0.114158	-0.254241
	(0.09708)	(0.05141)	(0.12486)	(0.10040)	(0.03638)	(0.22295)	(0.18711)	(0.06633)	(0.07410)
D(PSIG)	0.011061	-0.043432	0.145583	-0.085315	-0.001207	-0.152473	-0.165951	0.125383	0.008938
	(0.06488)	(0.03436)	(0.08345)	(0.06710)	(0.02432)	(0.14901)	(0.12505)	(0.04433)	(0.04952)
D(FTSEMIB)	0.005208	-0.017670	0.050781	-0.047835	-0.033958	0.127072	-0.367088	0.145455	0.084041
	(0.07578)	(0.04013)	(0.09745)	(0.07836)	(0.02840)	(0.17402)	(0.14604)	(0.05177)	(0.05784)
D(ISEQ)	-0.059477	-0.011987	0.083297	-0.066118	-0.053367	0.157894	-0.248564	0.074763	-0.013213
	(0.07712)	(0.04084)	(0.09918)	(0.07975)	(0.02890)	(0.17709)	(0.14862)	(0.05268)	(0.05886)
D(ATHEX)	0.127861	-0.102003	-0.000427	-0.073320	-0.002909	0.132159	-0.338606	0.235762	0.003842
	(0.10482)	(0.05551)	(0.13481)	(0.10840)	(0.03928)	(0.24072)	(0.20202)	(0.07161)	(0.08001)
D(IBEX35)	-0.024108	-0.015074	0.106318	-0.014701	-0.033037	0.163205	-0.233612	0.097843	0.126811
	(0.07545)	(0.03996)	(0.09703)	(0.07802)	(0.02828)	(0.17327)	(0.14541)	(0.05154)	(0.05759)

APPENDIX 3.6: VECM ESTIMATION

Vector Error Correction Estimates
Date: 06/01/13 Time: 01:12
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1
IBOVESPA(-1)	1.000000
RTSI(-1)	4.256948
	(1.14495)
	[3.71802]
CNXNIFTY(-1)	-16.07677
	(2.56596)
	[-6.26541]
JKSE(-1)	17.84619
	(2.11505)
	[8.43772]
SSE(-1)	2.842777
	(0.77714)
	[3.65798]
PSIG(-1)	-23.74495
	(4.87209)
	[-4.87367]

FTSEMIB(-1)	1.411080
	(3.96304)
	[0.35606]
ISEQ(-1)	-0.699896
	(1.50385)
	[-0.46540]
ATHEX(-1)	13.56358
	(1.50533)
	[9.01039]
IBEX35(-1)	-11.12628
	(4.46373)
	[-2.49260]
C	110.6322

Error Correction:	D(IBOVESPA)	D(RTSI)	D(CNXNIFTY)	D(JKSE)	D(SSE)	D(PSIG)	D(FTSEMIB)	D(ISEQ)	D(ATHEX)	D(IBEX35)
CointEq1	-0.004850	-0.013873	0.002986	-0.011707	-0.025772	-0.001332	0.001245	-0.003380	-0.000698	0.003229
	(0.00414)	(0.00565)	(0.00442)	(0.00366)	(0.00440)	(0.00300)	(0.00357)	(0.00355)	(0.00492)	(0.00359)
	[-1.17204]	[-2.45333]	[0.67605]	[-3.19463]	[-5.85646]	[-0.44396]	[0.34861]	[-0.95093]	[-0.14196]	[0.89991]
D(IBOVESPA(-1))	0.066379	0.218664	0.204243	0.131557	0.003762	0.079274	0.042358	-0.031059	-0.070497	0.004310
	(0.14004)	(0.19137)	(0.14949)	(0.12402)	(0.14893)	(0.10154)	(0.12084)	(0.12029)	(0.16648)	(0.12144)
	[0.47399]	[1.14260]	[1.36624]	[1.06073]	[0.02526]	[0.78072]	[0.35054]	[-0.25821]	[-0.42346]	[0.03549]
D(RTSI(-1))	-0.010929	0.113982	-0.014638	0.108665	0.124116	0.034964	0.055778	0.104806	-0.010682	0.060027
	(0.09100)	(0.12436)	(0.09714)	(0.08059)	(0.09678)	(0.06598)	(0.07852)	(0.07816)	(0.10818)	(0.07891)
	[-0.12010]	[0.91655]	[-0.15069]	[1.34830]	[1.28248]	[0.52989]	[0.71035]	[1.34085]	[-0.09874]	[0.76066]
D(CNXNIFTY(-1))	-0.079233	-0.108603	-0.088170	-0.040863	-0.107551	0.031286	0.035994	0.076628	0.047844	0.075053

	(0.13079)	(0.17872)	(0.13961)	(0.11583)	(0.13908)	(0.09483)	(0.11285)	(0.11233)	(0.15547)	(0.11341)
	[-0.60582]	[-0.60766]	[-0.63154]	[-0.35279]	[-0.77328]	[0.32993]	[0.31896]	[0.68215]	[0.30773]	[0.66177]
D(JKSE(-1))	0.079485	-0.069256	-0.045823	0.034300	0.133864	0.011548	-0.040038	0.055842	0.038675	-0.046347
	(0.13636)	(0.18635)	(0.14557)	(0.12077)	(0.14502)	(0.09887)	(0.11766)	(0.11713)	(0.16211)	(0.11825)
	[0.58289]	[-0.37165]	[-0.31479]	[0.28402]	[0.92309]	[0.11680]	[-0.34028]	[0.47678]	[0.23858]	[-0.39194]
D(SSE(-1))	-0.058522	-0.013033	-0.037739	-0.027471	-0.152670	-0.024876	0.057791	0.080670	-0.028269	0.091861
	(0.09144)	(0.12495)	(0.09761)	(0.08098)	(0.09724)	(0.06630)	(0.07890)	(0.07854)	(0.10870)	(0.07929)
	[-0.64001]	[-0.10430]	[-0.38664]	[-0.33923]	[-1.57001]	[-0.37521]	[0.73248]	[1.02715]	[-0.26006]	[1.15853]
D(PSIG(-1))	-0.232117	-0.366790	0.013208	-0.204085	-0.426299	-0.195838	-0.277172	-0.376161	0.013332	-0.102890
	(0.24310)	(0.33220)	(0.25950)	(0.21529)	(0.25853)	(0.17626)	(0.20976)	(0.20880)	(0.28899)	(0.21080)
	[-0.95482]	[-1.10411]	[0.05090]	[-0.94794]	[-1.64897]	[-1.11106]	[-1.32138]	[-1.80152]	[0.04613]	[-0.48808]
D(FTSEMIB(-1))	0.092056	-0.034578	-0.111426	0.025565	-0.129949	0.040264	-0.189182	0.055524	-0.149972	-0.086657
	(0.26210)	(0.35818)	(0.27979)	(0.23212)	(0.27874)	(0.19004)	(0.22616)	(0.22513)	(0.31158)	(0.22728)
	[0.35122]	[-0.09654]	[-0.39825]	[0.11014]	[-0.46621]	[0.21187]	[-0.83651]	[0.24663]	[-0.48132]	[-0.38127]
D(ISEQ(-1))	0.148299	0.459095	0.189211	0.219430	0.066393	0.125521	0.244620	0.179802	0.404252	0.160358
	(0.15808)	(0.21602)	(0.16875)	(0.14000)	(0.16811)	(0.11462)	(0.13640)	(0.13578)	(0.18792)	(0.13708)
	[0.93812]	[2.12520]	[1.12126]	[1.56736]	[0.39493]	[1.09512]	[1.79338]	[1.32423]	[2.15116]	[1.16981]
D(ATHEX(-1))	0.121043	0.222491	0.056887	-0.019701	0.475718	-0.045991	-0.134957	-0.027354	-0.084713	-0.220119
	(0.13973)	(0.19095)	(0.14916)	(0.12375)	(0.14860)	(0.10132)	(0.12057)	(0.12002)	(0.16611)	(0.12117)
	[0.86623]	[1.16516]	[0.38138]	[-0.15920]	[3.20130]	[-0.45394]	[-1.11932]	[-0.22791]	[-0.50997]	[-1.81660]
D(IBEX35(-1))	0.003824	-0.053699	0.069328	0.052569	-0.367612	0.167490	0.391196	0.102688	0.335479	0.261794
	(0.23886)	(0.32641)	(0.25498)	(0.21154)	(0.25402)	(0.17319)	(0.20610)	(0.20516)	(0.28395)	(0.20713)
	[0.01601]	[-0.16451]	[0.27190]	[0.24851]	[-1.44718]	[0.96709]	[1.89806]	[0.50052]	[1.18146]	[1.26391]
C	0.012753	0.015205	0.013068	0.015388	0.004974	-5.36E-05	-0.007347	-0.004988	-0.007616	-0.002899
	(0.00704)	(0.00961)	(0.00751)	(0.00623)	(0.00748)	(0.00510)	(0.00607)	(0.00604)	(0.00836)	(0.00610)

	[1.81256]	[1.58138]	[1.73992]	[2.46949]	[0.66472]	[-0.01051]	[-1.21016]	[-0.82540]	[-0.91053]	[-0.47518]
R-squared	0.064615	0.195578	0.061017	0.232105	0.255491	0.106532	0.081659	0.125109	0.116793	0.057862
Adj. R-squared	-0.022582	0.120589	-0.026515	0.160522	0.186088	0.023242	-0.003950	0.043552	0.034460	-0.029964
Sum sq. resids	0.622006	1.161553	0.708782	0.487853	0.703450	0.326996	0.463095	0.458878	0.879009	0.467719
S.E. equation	0.072603	0.099215	0.077502	0.064299	0.077210	0.052642	0.062646	0.062360	0.086309	0.062958
F-statistic	0.741028	2.608101	0.697084	3.242440	3.681249	1.279054	0.953865	1.534000	1.418551	0.658822
Log likelihood	162.7901	122.1935	154.3012	178.5809	154.7920	204.5853	181.9663	182.5609	140.3101	181.3204
Akaike AIC	-2.319847	-1.695284	-2.189249	-2.562783	-2.196801	-2.962851	-2.614866	-2.624014	-1.974002	-2.604929
Schwarz SC	-2.055152	-1.430589	-1.924554	-2.298088	-1.932105	-2.698155	-2.350170	-2.359319	-1.709306	-2.340234
Mean dependent	0.011297	0.012758	0.012638	0.017337	0.003058	0.001424	-0.005158	-0.002912	-0.007259	3.02E-05
S.D. dependent	0.071797	0.105799	0.076495	0.070178	0.085583	0.053264	0.062523	0.063764	0.087836	0.062036

Determinant resid covar (dof adj.)	4.13E-27
Determinant resid covariance	1.57E-27
Log likelihood	2167.119
Akaike information criterion	-31.34030
Schwarz criterion	-28.47276

RBIICPIIGS

Vector Error Correction Estimates
Date: 06/01/13 Time: 01:14
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1
RTSI(-1)	1.000000
IBOVESPA(-1)	0.234910
	(0.49540)
	[0.47419]
CNXNIFTY(-1)	-3.776596
	(0.60916)
	[-6.19971]
JKSE(-1)	4.192250
	(0.51925)
	[8.07366]
SSE(-1)	0.667797
	(0.18662)
	[3.57829]
PSIG(-1)	-5.577928
	(1.14454)
	[-4.87351]
FTSEMIB(-1)	0.331477
	(0.95191)
	[0.34822]

ISEQ(-1)	-0.164413
	(0.34290)
	[-0.47947]
ATHEX(-1)	3.186222
	(0.37336)
	[8.53402]
IBEX35(-1)	-2.613675
	(1.05631)
	[-2.47434]
C	25.98863

Error Correction:	D(RTSI)	D(IBOVESPA)	D(CNXNIFTY)	D(JKSE)	D(SSE)	D(PSIG)	D(FTSEMIB)	D(ISEQ)	D(ATHEX)	D(IBEX35)
CointEq1	-0.059057	-0.020646	0.012712	-0.049838	-0.109711	-0.005670	0.005299	-0.014388	-0.002973	0.013746
	(0.02407)	(0.01762)	(0.01880)	(0.01560)	(0.01873)	(0.01277)	(0.01520)	(0.01513)	(0.02094)	(0.01528)
	[-2.45333]	[-1.17204]	[0.67605]	[-3.19463]	[-5.85646]	[-0.44396]	[0.34861]	[-0.95093]	[-0.14196]	[0.89991]
D(RTSI(-1))	0.113982	-0.010929	-0.014638	0.108665	0.124116	0.034964	0.055778	0.104806	-0.010682	0.060027
	(0.12436)	(0.09100)	(0.09714)	(0.08059)	(0.09678)	(0.06598)	(0.07852)	(0.07816)	(0.10818)	(0.07891)
	[0.91655]	[-0.12010]	[-0.15069]	[1.34830]	[1.28248]	[0.52989]	[0.71035]	[1.34085]	[-0.09874]	[0.76066]
D(IBOVESPA(-1))	0.218664	0.066379	0.204243	0.131557	0.003762	0.079274	0.042358	-0.031059	-0.070497	0.004310
	(0.19137)	(0.14004)	(0.14949)	(0.12402)	(0.14893)	(0.10154)	(0.12084)	(0.12029)	(0.16648)	(0.12144)
	[1.14260]	[0.47399]	[1.36624]	[1.06073]	[0.02526]	[0.78072]	[0.35054]	[-0.25821]	[-0.42346]	[0.03549]
D(CNXNIFTY(-1))	-0.108603	-0.079233	-0.088170	-0.040863	-0.107551	0.031286	0.035994	0.076628	0.047844	0.075053
	(0.17872)	(0.13079)	(0.13961)	(0.11583)	(0.13908)	(0.09483)	(0.11285)	(0.11233)	(0.15547)	(0.11341)
	[-0.60766]	[-0.60582]	[-0.63154]	[-0.35279]	[-0.77328]	[0.32993]	[0.31896]	[0.68215]	[0.30773]	[0.66177]
D(JKSE(-1))	-0.069256	0.079485	-0.045823	0.034300	0.133864	0.011548	-0.040038	0.055842	0.038675	-0.046347

	(0.18635)	(0.13636)	(0.14557)	(0.12077)	(0.14502)	(0.09887)	(0.11766)	(0.11713)	(0.16211)	(0.11825)
	[-0.37165]	[0.58289]	[-0.31479]	[0.28402]	[0.92309]	[0.11680]	[-0.34028]	[0.47678]	[0.23858]	[-0.39194]
D(SSE(-1))	-0.013033	-0.058522	-0.037739	-0.027471	-0.152670	-0.024876	0.057791	0.080670	-0.028269	0.091861
	(0.12495)	(0.09144)	(0.09761)	(0.08098)	(0.09724)	(0.06630)	(0.07890)	(0.07854)	(0.10870)	(0.07929)
	[-0.10430]	[-0.64001]	[-0.38664]	[-0.33923]	[-1.57001]	[-0.37521]	[0.73248]	[1.02715]	[-0.26006]	[1.15853]
D(PSIG(-1))	-0.366790	-0.232117	0.013208	-0.204085	-0.426299	-0.195838	-0.277172	-0.376161	0.013332	-0.102890
	(0.33220)	(0.24310)	(0.25950)	(0.21529)	(0.25853)	(0.17626)	(0.20976)	(0.20880)	(0.28899)	(0.21080)
	[-1.10411]	[-0.95482]	[0.05090]	[-0.94794]	[-1.64897]	[-1.11106]	[-1.32138]	[-1.80152]	[0.04613]	[-0.48808]
D(FTSEMIB(-1))	-0.034578	0.092056	-0.111426	0.025565	-0.129949	0.040264	-0.189182	0.055524	-0.149972	-0.086657
	(0.35818)	(0.26210)	(0.27979)	(0.23212)	(0.27874)	(0.19004)	(0.22616)	(0.22513)	(0.31158)	(0.22728)
	[-0.09654]	[0.35122]	[-0.39825]	[0.11014]	[-0.46621]	[0.21187]	[-0.83651]	[0.24663]	[-0.48132]	[-0.38127]
D(ISEQ(-1))	0.459095	0.148299	0.189211	0.219430	0.066393	0.125521	0.244620	0.179802	0.404252	0.160358
	(0.21602)	(0.15808)	(0.16875)	(0.14000)	(0.16811)	(0.11462)	(0.13640)	(0.13578)	(0.18792)	(0.13708)
	[2.12520]	[0.93812]	[1.12126]	[1.56736]	[0.39493]	[1.09512]	[1.79338]	[1.32423]	[2.15116]	[1.16981]
D(ATHEX(-1))	0.222491	0.121043	0.056887	-0.019701	0.475718	-0.045991	-0.134957	-0.027354	-0.084713	-0.220119
	(0.19095)	(0.13973)	(0.14916)	(0.12375)	(0.14860)	(0.10132)	(0.12057)	(0.12002)	(0.16611)	(0.12117)
	[1.16516]	[0.86623]	[0.38138]	[-0.15920]	[3.20130]	[-0.45394]	[-1.11932]	[-0.22791]	[-0.50997]	[-1.81660]
D(IBEX35(-1))	-0.053699	0.003824	0.069328	0.052569	-0.367612	0.167490	0.391196	0.102688	0.335479	0.261794
	(0.32641)	(0.23886)	(0.25498)	(0.21154)	(0.25402)	(0.17319)	(0.20610)	(0.20516)	(0.28395)	(0.20713)
	[-0.16451]	[0.01601]	[0.27190]	[0.24851]	[-1.44718]	[0.96709]	[1.89806]	[0.50052]	[1.18146]	[1.26391]
C	0.015205	0.012753	0.013068	0.015388	0.004974	-5.36E-05	-0.007347	-0.004988	-0.007616	-0.002899
	(0.00961)	(0.00704)	(0.00751)	(0.00623)	(0.00748)	(0.00510)	(0.00607)	(0.00604)	(0.00836)	(0.00610)
	[1.58138]	[1.81256]	[1.73992]	[2.46949]	[0.66472]	[-0.01051]	[-1.21016]	[-0.82540]	[-0.91053]	[-0.47518]
R-squared	0.195578	0.064615	0.061017	0.232105	0.255491	0.106532	0.081659	0.125109	0.116793	0.057862
Adj. R-squared	0.120589	-0.022582	-0.026515	0.160522	0.186088	0.023242	-0.003950	0.043552	0.034460	-0.029964
Sum sq. resids	1.161553	0.622006	0.708782	0.487853	0.703450	0.326996	0.463095	0.458878	0.879009	0.467719

S.E. equation	0.099215	0.072603	0.077502	0.064299	0.077210	0.052642	0.062646	0.062360	0.086309	0.062958
F-statistic	2.608101	0.741028	0.697084	3.242440	3.681249	1.279054	0.953865	1.534000	1.418551	0.658822
Log likelihood	122.1935	162.7901	154.3012	178.5809	154.7920	204.5853	181.9663	182.5609	140.3101	181.3204
Akaike AIC	-1.695284	-2.319847	-2.189249	-2.562783	-2.196801	-2.962851	-2.614866	-2.624014	-1.974002	-2.604929
Schwarz SC	-1.430589	-2.055152	-1.924554	-2.298088	-1.932105	-2.698155	-2.350170	-2.359319	-1.709306	-2.340234
Mean dependent	0.012758	0.011297	0.012638	0.017337	0.003058	0.001424	-0.005158	-0.002912	-0.007259	3.02E-05
S.D. dependent	0.105799	0.071797	0.076495	0.070178	0.085583	0.053264	0.062523	0.063764	0.087836	0.062036

Determinant resid cov (dof adj.)	4.13E-27
Determinant resid covariance	1.57E-27
Log likelihood	2167.119
Akaike information criterion	-31.34030
Schwarz criterion	-28.47276

IBRICPIIGS

Vector Error Correction Estimates
Date: 06/01/13 Time: 01:21
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1
CNXNIFTY(-1)	1.000000
IBOVESPA(-1)	-0.062202
	(0.12386)
	[-0.50218]
RTSI(-1)	-0.264789
	(0.06796)
	[-3.89623]
JKSE(-1)	-1.110060
	(0.11670)
	[-9.51236]
SSE(-1)	-0.176825
	(0.05042)
	[-3.50682]
PSIG(-1)	1.476972
	(0.30376)
	[4.86226]
FTSEMIB(-1)	-0.087771

	(0.24949)									
	[-0.35181]									
ISEQ(-1)	0.043535									
	(0.09449)									
	[0.46075]									
ATHEX(-1)	-0.843675									
	(0.09689)									
	[-8.70765]									
IBEX35(-1)	0.692072									
	(0.27897)									
	[2.48082]									
C	-6.881494									

Error Correction:	D(CNXNIFTY)	D(IBOVESPA)	D(RTSI)	D(JKSE)	D(SSE)	D(PSIG)	D(FTSEMIB)	D(ISEQ)	D(ATHEX)	D(IBEX35)
CointEq1	-0.048010	0.077972	0.223035	0.188219	0.414333	0.021415	-0.020011	0.054337	0.011227	-0.051915
	(0.07102)	(0.06653)	(0.09091)	(0.05892)	(0.07075)	(0.04824)	(0.05740)	(0.05714)	(0.07909)	(0.05769)
	[-0.67605]	[1.17204]	[2.45333]	[3.19463]	[5.85646]	[0.44396]	[-0.34861]	[0.95093]	[0.14196]	[-0.89991]
D(CNXNIFTY(-1))	-0.088170	-0.079233	-0.108603	-0.040863	-0.107551	0.031286	0.035994	0.076628	0.047844	0.075053
	(0.13961)	(0.13079)	(0.17872)	(0.11583)	(0.13908)	(0.09483)	(0.11285)	(0.11233)	(0.15547)	(0.11341)
	[-0.63154]	[-0.60582]	[-0.60766]	[-0.35279]	[-0.77328]	[0.32993]	[0.31896]	[0.68215]	[0.30773]	[0.66177]
D(IBOVESPA(-1))	0.204243	0.066379	0.218664	0.131557	0.003762	0.079274	0.042358	-0.031059	-0.070497	0.004310
	(0.14949)	(0.14004)	(0.19137)	(0.12402)	(0.14893)	(0.10154)	(0.12084)	(0.12029)	(0.16648)	(0.12144)
	[1.36624]	[0.47399]	[1.14260]	[1.06073]	[0.02526]	[0.78072]	[0.35054]	[-0.25821]	[-0.42346]	[0.03549]
D(RTSI(-1))	-0.014638	-0.010929	0.113982	0.108665	0.124116	0.034964	0.055778	0.104806	-0.010682	0.060027

	(0.09714)	(0.09100)	(0.12436)	(0.08059)	(0.09678)	(0.06598)	(0.07852)	(0.07816)	(0.10818)	(0.07891)
	[-0.15069]	[-0.12010]	[0.91655]	[1.34830]	[1.28248]	[0.52989]	[0.71035]	[1.34085]	[-0.09874]	[0.76066]
D(JKSE(-1))	-0.045823	0.079485	-0.069256	0.034300	0.133864	0.011548	-0.040038	0.055842	0.038675	-0.046347
	(0.14557)	(0.13636)	(0.18635)	(0.12077)	(0.14502)	(0.09887)	(0.11766)	(0.11713)	(0.16211)	(0.11825)
	[-0.31479]	[0.58289]	[-0.37165]	[0.28402]	[0.92309]	[0.11680]	[-0.34028]	[0.47678]	[0.23858]	[-0.39194]
D(SSE(-1))	-0.037739	-0.058522	-0.013033	-0.027471	-0.152670	-0.024876	0.057791	0.080670	-0.028269	0.091861
	(0.09761)	(0.09144)	(0.12495)	(0.08098)	(0.09724)	(0.06630)	(0.07890)	(0.07854)	(0.10870)	(0.07929)
	[-0.38664]	[-0.64001]	[-0.10430]	[-0.33923]	[-1.57001]	[-0.37521]	[0.73248]	[1.02715]	[-0.26006]	[1.15853]
D(PSIG(-1))	0.013208	-0.232117	-0.366790	-0.204085	-0.426299	-0.195838	-0.277172	-0.376161	0.013332	-0.102890
	(0.25950)	(0.24310)	(0.33220)	(0.21529)	(0.25853)	(0.17626)	(0.20976)	(0.20880)	(0.28899)	(0.21080)
	[0.05090]	[-0.95482]	[-1.10411]	[-0.94794]	[-1.64897]	[-1.11106]	[-1.32138]	[-1.80152]	[0.04613]	[-0.48808]
D(FTSEMIB(-1))	-0.111426	0.092056	-0.034578	0.025565	-0.129949	0.040264	-0.189182	0.055524	-0.149972	-0.086657
	(0.27979)	(0.26210)	(0.35818)	(0.23212)	(0.27874)	(0.19004)	(0.22616)	(0.22513)	(0.31158)	(0.22728)
	[-0.39825]	[0.35122]	[-0.09654]	[0.11014]	[-0.46621]	[0.21187]	[-0.83651]	[0.24663]	[-0.48132]	[-0.38127]
D(ISEQ(-1))	0.189211	0.148299	0.459095	0.219430	0.066393	0.125521	0.244620	0.179802	0.404252	0.160358
	(0.16875)	(0.15808)	(0.21602)	(0.14000)	(0.16811)	(0.11462)	(0.13640)	(0.13578)	(0.18792)	(0.13708)
	[1.12126]	[0.93812]	[2.12520]	[1.56736]	[0.39493]	[1.09512]	[1.79338]	[1.32423]	[2.15116]	[1.16981]
D(ATHEX(-1))	0.056887	0.121043	0.222491	-0.019701	0.475718	-0.045991	-0.134957	-0.027354	-0.084713	-0.220119
	(0.14916)	(0.13973)	(0.19095)	(0.12375)	(0.14860)	(0.10132)	(0.12057)	(0.12002)	(0.16611)	(0.12117)
	[0.38138]	[0.86623]	[1.16516]	[-0.15920]	[3.20130]	[-0.45394]	[-1.11932]	[-0.22791]	[-0.50997]	[-1.81660]
D(IBEX35(-1))	0.069328	0.003824	-0.053699	0.052569	-0.367612	0.167490	0.391196	0.102688	0.335479	0.261794
	(0.25498)	(0.23886)	(0.32641)	(0.21154)	(0.25402)	(0.17319)	(0.20610)	(0.20516)	(0.28395)	(0.20713)
	[0.27190]	[0.01601]	[-0.16451]	[0.24851]	[-1.44718]	[0.96709]	[1.89806]	[0.50052]	[1.18146]	[1.26391]
C	0.013068	0.012753	0.015205	0.015388	0.004974	-5.36E-05	-0.007347	-0.004988	-0.007616	-0.002899
	(0.00751)	(0.00704)	(0.00961)	(0.00623)	(0.00748)	(0.00510)	(0.00607)	(0.00604)	(0.00836)	(0.00610)

	[1.73992]	[1.81256]	[1.58138]	[2.46949]	[0.66472]	[-0.01051]	[-1.21016]	[-0.82540]	[-0.91053]	[-0.47518]
R-squared	0.061017	0.064615	0.195578	0.232105	0.255491	0.106532	0.081659	0.125109	0.116793	0.057862
Adj. R-squared	-0.026515	-0.022582	0.120589	0.160522	0.186088	0.023242	-0.003950	0.043552	0.034460	-0.029964
Sum sq. resids	0.708782	0.622006	1.161553	0.487853	0.703450	0.326996	0.463095	0.458878	0.879009	0.467719
S.E. equation	0.077502	0.072603	0.099215	0.064299	0.077210	0.052642	0.062646	0.062360	0.086309	0.062958
F-statistic	0.697084	0.741028	2.608101	3.242440	3.681249	1.279054	0.953865	1.534000	1.418551	0.658822
Log likelihood	154.3012	162.7901	122.1935	178.5809	154.7920	204.5853	181.9663	182.5609	140.3101	181.3204
Akaike AIC	-2.189249	-2.319847	-1.695284	-2.562783	-2.196801	-2.962851	-2.614866	-2.624014	-1.974002	-2.604929
Schwarz SC	-1.924554	-2.055152	-1.430589	-2.298088	-1.932105	-2.698155	-2.350170	-2.359319	-1.709306	-2.340234
Mean dependent	0.012638	0.011297	0.012758	0.017337	0.003058	0.001424	-0.005158	-0.002912	-0.007259	3.02E-05
S.D. dependent	0.076495	0.071797	0.105799	0.070178	0.085583	0.053264	0.062523	0.063764	0.087836	0.062036

Determinant resid cov (dof adj.)	4.13E-27
Determinant resid covariance	1.57E-27
Log likelihood	2167.119
Akaike information criterion	-31.34030
Schwarz criterion	-28.47276

Vector Error Correction Estimates
Date: 06/01/13 Time: 01:22
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1
JKSE(-1)	1.000000
IBOVESPA(-1)	0.056034
	(0.11427)
	[0.49035]
RTSI(-1)	0.238535
	(0.06484)
	[3.67891]
CNXNIFTY(-1)	-0.900852
	(0.13061)
	[-6.89705]
SSE(-1)	0.159293
	(0.04539)
	[3.50912]
PSIG(-1)	-1.330533
	(0.26356)
	[-5.04840]
FTSEMIB(-1)	0.079069

	(0.23058)									
	[0.34291]									
ISEQ(-1)	-0.039218									
	(0.08361)									
	[-0.46908]									
ATHEX(-1)	0.760027									
	(0.06179)									
	[12.3011]									
IBEX35(-1)	-0.623454									
	(0.25105)									
	[-2.48342]									
C	6.199207									

Error Correction:	D(JKSE)	D(IBOVESPA)	D(RTSI)	D(CNXNIFTY)	D(SSE)	D(PSIG)	D(FTSEMIB)	D(ISEQ)	D(ATHEX)	D(IBEX35)
CointEq1	-0.208934	-0.086554	-0.247582	0.053294	-0.459935	-0.023772	0.022213	-0.060318	-0.012463	0.057629
	(0.06540)	(0.07385)	(0.10092)	(0.07883)	(0.07853)	(0.05354)	(0.06372)	(0.06343)	(0.08779)	(0.06404)
	[-3.19463]	[-1.17204]	[-2.45333]	[0.67605]	[-5.85646]	[-0.44396]	[0.34861]	[-0.95093]	[-0.14196]	[0.89991]
D(JKSE(-1))	0.034300	0.079485	-0.069256	-0.045823	0.133864	0.011548	-0.040038	0.055842	0.038675	-0.046347
	(0.12077)	(0.13636)	(0.18635)	(0.14557)	(0.14502)	(0.09887)	(0.11766)	(0.11713)	(0.16211)	(0.11825)
	[0.28402]	[0.58289]	[-0.37165]	[-0.31479]	[0.92309]	[0.11680]	[-0.34028]	[0.47678]	[0.23858]	[-0.39194]
D(IBOVESPA(-1))	0.131557	0.066379	0.218664	0.204243	0.003762	0.079274	0.042358	-0.031059	-0.070497	0.004310
	(0.12402)	(0.14004)	(0.19137)	(0.14949)	(0.14893)	(0.10154)	(0.12084)	(0.12029)	(0.16648)	(0.12144)
	[1.06073]	[0.47399]	[1.14260]	[1.36624]	[0.02526]	[0.78072]	[0.35054]	[-0.25821]	[-0.42346]	[0.03549]
D(RTSI(-1))	0.108665	-0.010929	0.113982	-0.014638	0.124116	0.034964	0.055778	0.104806	-0.010682	0.060027

	(0.08059)	(0.09100)	(0.12436)	(0.09714)	(0.09678)	(0.06598)	(0.07852)	(0.07816)	(0.10818)	(0.07891)
	[1.34830]	[-0.12010]	[0.91655]	[-0.15069]	[1.28248]	[0.52989]	[0.71035]	[1.34085]	[-0.09874]	[0.76066]
D(CNXNIFTY(-1))	-0.040863	-0.079233	-0.108603	-0.088170	-0.107551	0.031286	0.035994	0.076628	0.047844	0.075053
	(0.11583)	(0.13079)	(0.17872)	(0.13961)	(0.13908)	(0.09483)	(0.11285)	(0.11233)	(0.15547)	(0.11341)
	[-0.35279]	[-0.60582]	[-0.60766]	[-0.63154]	[-0.77328]	[0.32993]	[0.31896]	[0.68215]	[0.30773]	[0.66177]
D(SSE(-1))	-0.027471	-0.058522	-0.013033	-0.037739	-0.152670	-0.024876	0.057791	0.080670	-0.028269	0.091861
	(0.08098)	(0.09144)	(0.12495)	(0.09761)	(0.09724)	(0.06630)	(0.07890)	(0.07854)	(0.10870)	(0.07929)
	[-0.33923]	[-0.64001]	[-0.10430]	[-0.38664]	[-1.57001]	[-0.37521]	[0.73248]	[1.02715]	[-0.26006]	[1.15853]
D(PSIG(-1))	-0.204085	-0.232117	-0.366790	0.013208	-0.426299	-0.195838	-0.277172	-0.376161	0.013332	-0.102890
	(0.21529)	(0.24310)	(0.33220)	(0.25950)	(0.25853)	(0.17626)	(0.20976)	(0.20880)	(0.28899)	(0.21080)
	[-0.94794]	[-0.95482]	[-1.10411]	[0.05090]	[-1.64897]	[-1.11106]	[-1.32138]	[-1.80152]	[0.04613]	[-0.48808]
D(FTSEMIB(-1))	0.025565	0.092056	-0.034578	-0.111426	-0.129949	0.040264	-0.189182	0.055524	-0.149972	-0.086657
	(0.23212)	(0.26210)	(0.35818)	(0.27979)	(0.27874)	(0.19004)	(0.22616)	(0.22513)	(0.31158)	(0.22728)
	[0.11014]	[0.35122]	[-0.09654]	[-0.39825]	[-0.46621]	[0.21187]	[-0.83651]	[0.24663]	[-0.48132]	[-0.38127]
D(ISEQ(-1))	0.219430	0.148299	0.459095	0.189211	0.066393	0.125521	0.244620	0.179802	0.404252	0.160358
	(0.14000)	(0.15808)	(0.21602)	(0.16875)	(0.16811)	(0.11462)	(0.13640)	(0.13578)	(0.18792)	(0.13708)
	[1.56736]	[0.93812]	[2.12520]	[1.12126]	[0.39493]	[1.09512]	[1.79338]	[1.32423]	[2.15116]	[1.16981]
D(ATHEX(-1))	-0.019701	0.121043	0.222491	0.056887	0.475718	-0.045991	-0.134957	-0.027354	-0.084713	-0.220119
	(0.12375)	(0.13973)	(0.19095)	(0.14916)	(0.14860)	(0.10132)	(0.12057)	(0.12002)	(0.16611)	(0.12117)
	[-0.15920]	[0.86623]	[1.16516]	[0.38138]	[3.20130]	[-0.45394]	[-1.11932]	[-0.22791]	[-0.50997]	[-1.81660]
D(IBEX35(-1))	0.052569	0.003824	-0.053699	0.069328	-0.367612	0.167490	0.391196	0.102688	0.335479	0.261794
	(0.21154)	(0.23886)	(0.32641)	(0.25498)	(0.25402)	(0.17319)	(0.20610)	(0.20516)	(0.28395)	(0.20713)
	[0.24851]	[0.01601]	[-0.16451]	[0.27190]	[-1.44718]	[0.96709]	[1.89806]	[0.50052]	[1.18146]	[1.26391]
C	0.015388	0.012753	0.015205	0.013068	0.004974	-5.36E-05	-0.007347	-0.004988	-0.007616	-0.002899
	(0.00623)	(0.00704)	(0.00961)	(0.00751)	(0.00748)	(0.00510)	(0.00607)	(0.00604)	(0.00836)	(0.00610)

	[2.46949]	[1.81256]	[1.58138]	[1.73992]	[0.66472]	[-0.01051]	[-1.21016]	[-0.82540]	[-0.91053]	[-0.47518]
R-squared	0.232105	0.064615	0.195578	0.061017	0.255491	0.106532	0.081659	0.125109	0.116793	0.057862
Adj. R-squared	0.160522	-0.022582	0.120589	-0.026515	0.186088	0.023242	-0.003950	0.043552	0.034460	-0.029964
Sum sq. resids	0.487853	0.622006	1.161553	0.708782	0.703450	0.326996	0.463095	0.458878	0.879009	0.467719
S.E. equation	0.064299	0.072603	0.099215	0.077502	0.077210	0.052642	0.062646	0.062360	0.086309	0.062958
F-statistic	3.242440	0.741028	2.608101	0.697084	3.681249	1.279054	0.953865	1.534000	1.418551	0.658822
Log likelihood	178.5809	162.7901	122.1935	154.3012	154.7920	204.5853	181.9663	182.5609	140.3101	181.3204
Akaike AIC	-2.562783	-2.319847	-1.695284	-2.189249	-2.196801	-2.962851	-2.614866	-2.624014	-1.974002	-2.604929
Schwarz SC	-2.298088	-2.055152	-1.430589	-1.924554	-1.932105	-2.698155	-2.350170	-2.359319	-1.709306	-2.340234
Mean dependent	0.017337	0.011297	0.012758	0.012638	0.003058	0.001424	-0.005158	-0.002912	-0.007259	3.02E-05
S.D. dependent	0.070178	0.071797	0.105799	0.076495	0.085583	0.053264	0.062523	0.063764	0.087836	0.062036

Determinant resid cov (dof adj.)	4.13E-27
Determinant resid covariance	1.57E-27
Log likelihood	2167.119
Akaike information criterion	-31.34030
Schwarz criterion	-28.47276

CBRIIPIIGS

Vector Error Correction Estimates
Date: 06/01/13 Time: 01:23
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1
SSE(-1)	1.000000
IBOVESPA(-1)	0.351769
	(0.71883)
	[0.48936]
RTSI(-1)	1.497461
	(0.39896)
	[3.75341]
CNXNIFTY(-1)	-5.655306
	(0.96620)
	[-5.85316]
JKSE(-1)	6.277731
	(0.77715)
	[8.07793]
PSIG(-1)	-8.352729
	(1.28701)
	[-6.49002]
FTSEMIB(-1)	0.496374
	(1.40256)

	[0.35390]									
ISEQ(-1)	-0.246201									
	(0.51421)									
	[-0.47879]									
ATHEX(-1)	4.771243									
	(0.57076)									
	[8.35940]									
IBEX35(-1)	-3.913876									
	(1.55848)									
	[-2.51135]									
C	38.91695									

Error Correction:	D(SSE)	D(IBOVESPA)	D(RTSI)	D(CNXNIFTY)	D(JKSE)	D(PSIG)	D(FTSEMIB)	D(ISEQ)	D(ATHEX)	D(IBEX35)
CointEq1	-0.073264	-0.013787	-0.039438	0.008489	-0.033282	-0.003787	0.003538	-0.009608	-0.001985	0.009180
	(0.01251)	(0.01176)	(0.01608)	(0.01256)	(0.01042)	(0.00853)	(0.01015)	(0.01010)	(0.01398)	(0.01020)
	[-5.85646]	[-1.17204]	[-2.45333]	[0.67605]	[-3.19463]	[-0.44396]	[0.34861]	[-0.95093]	[-0.14196]	[0.89991]
D(SSE(-1))	-0.152670	-0.058522	-0.013033	-0.037739	-0.027471	-0.024876	0.057791	0.080670	-0.028269	0.091861
	(0.09724)	(0.09144)	(0.12495)	(0.09761)	(0.08098)	(0.06630)	(0.07890)	(0.07854)	(0.10870)	(0.07929)
	[-1.57001]	[-0.64001]	[-0.10430]	[-0.38664]	[-0.33923]	[-0.37521]	[0.73248]	[1.02715]	[-0.26006]	[1.15853]
D(IBOVESPA(-1))	0.003762	0.066379	0.218664	0.204243	0.131557	0.079274	0.042358	-0.031059	-0.070497	0.004310
	(0.14893)	(0.14004)	(0.19137)	(0.14949)	(0.12402)	(0.10154)	(0.12084)	(0.12029)	(0.16648)	(0.12144)
	[0.02526]	[0.47399]	[1.14260]	[1.36624]	[1.06073]	[0.78072]	[0.35054]	[-0.25821]	[-0.42346]	[0.03549]
D(RTSI(-1))	0.124116	-0.010929	0.113982	-0.014638	0.108665	0.034964	0.055778	0.104806	-0.010682	0.060027
	(0.09678)	(0.09100)	(0.12436)	(0.09714)	(0.08059)	(0.06598)	(0.07852)	(0.07816)	(0.10818)	(0.07891)
	[1.28248]	[-0.12010]	[0.91655]	[-0.15069]	[1.34830]	[0.52989]	[0.71035]	[1.34085]	[-0.09874]	[0.76066]

D(CNXNIFTY(-1))	-0.107551	-0.079233	-0.108603	-0.088170	-0.040863	0.031286	0.035994	0.076628	0.047844	0.075053
	(0.13908)	(0.13079)	(0.17872)	(0.13961)	(0.11583)	(0.09483)	(0.11285)	(0.11233)	(0.15547)	(0.11341)
	[-0.77328]	[-0.60582]	[-0.60766]	[-0.63154]	[-0.35279]	[0.32993]	[0.31896]	[0.68215]	[0.30773]	[0.66177]
D(JKSE(-1))	0.133864	0.079485	-0.069256	-0.045823	0.034300	0.011548	-0.040038	0.055842	0.038675	-0.046347
	(0.14502)	(0.13636)	(0.18635)	(0.14557)	(0.12077)	(0.09887)	(0.11766)	(0.11713)	(0.16211)	(0.11825)
	[0.92309]	[0.58289]	[-0.37165]	[-0.31479]	[0.28402]	[0.11680]	[-0.34028]	[0.47678]	[0.23858]	[-0.39194]
D(PSIG(-1))	-0.426299	-0.232117	-0.366790	0.013208	-0.204085	-0.195838	-0.277172	-0.376161	0.013332	-0.102890
	(0.25853)	(0.24310)	(0.33220)	(0.25950)	(0.21529)	(0.17626)	(0.20976)	(0.20880)	(0.28899)	(0.21080)
	[-1.64897]	[-0.95482]	[-1.10411]	[0.05090]	[-0.94794]	[-1.11106]	[-1.32138]	[-1.80152]	[0.04613]	[-0.48808]
D(FTSEMIB(-1))	-0.129949	0.092056	-0.034578	-0.111426	0.025565	0.040264	-0.189182	0.055524	-0.149972	-0.086657
	(0.27874)	(0.26210)	(0.35818)	(0.27979)	(0.23212)	(0.19004)	(0.22616)	(0.22513)	(0.31158)	(0.22728)
	[-0.46621]	[0.35122]	[-0.09654]	[-0.39825]	[0.11014]	[0.21187]	[-0.83651]	[0.24663]	[-0.48132]	[-0.38127]
D(ISEQ(-1))	0.066393	0.148299	0.459095	0.189211	0.219430	0.125521	0.244620	0.179802	0.404252	0.160358
	(0.16811)	(0.15808)	(0.21602)	(0.16875)	(0.14000)	(0.11462)	(0.13640)	(0.13578)	(0.18792)	(0.13708)
	[0.39493]	[0.93812]	[2.12520]	[1.12126]	[1.56736]	[1.09512]	[1.79338]	[1.32423]	[2.15116]	[1.16981]
D(ATHEX(-1))	0.475718	0.121043	0.222491	0.056887	-0.019701	-0.045991	-0.134957	-0.027354	-0.084713	-0.220119
	(0.14860)	(0.13973)	(0.19095)	(0.14916)	(0.12375)	(0.10132)	(0.12057)	(0.12002)	(0.16611)	(0.12117)
	[3.20130]	[0.86623]	[1.16516]	[0.38138]	[-0.15920]	[-0.45394]	[-1.11932]	[-0.22791]	[-0.50997]	[-1.81660]
D(IBEX35(-1))	-0.367612	0.003824	-0.053699	0.069328	0.052569	0.167490	0.391196	0.102688	0.335479	0.261794
	(0.25402)	(0.23886)	(0.32641)	(0.25498)	(0.21154)	(0.17319)	(0.20610)	(0.20516)	(0.28395)	(0.20713)
	[-1.44718]	[0.01601]	[-0.16451]	[0.27190]	[0.24851]	[0.96709]	[1.89806]	[0.50052]	[1.18146]	[1.26391]
C	0.004974	0.012753	0.015205	0.013068	0.015388	-5.36E-05	-0.007347	-0.004988	-0.007616	-0.002899
	(0.00748)	(0.00704)	(0.00961)	(0.00751)	(0.00623)	(0.00510)	(0.00607)	(0.00604)	(0.00836)	(0.00610)
	[0.66472]	[1.81256]	[1.58138]	[1.73992]	[2.46949]	[-0.01051]	[-1.21016]	[-0.82540]	[-0.91053]	[-0.47518]
R-squared	0.255491	0.064615	0.195578	0.061017	0.232105	0.106532	0.081659	0.125109	0.116793	0.057862

Adj. R-squared	0.186088	-0.022582	0.120589	-0.026515	0.160522	0.023242	-0.003950	0.043552	0.034460	-0.029964
Sum sq. resids	0.703450	0.622006	1.161553	0.708782	0.487853	0.326996	0.463095	0.458878	0.879009	0.467719
S.E. equation	0.077210	0.072603	0.099215	0.077502	0.064299	0.052642	0.062646	0.062360	0.086309	0.062958
F-statistic	3.681249	0.741028	2.608101	0.697084	3.242440	1.279054	0.953865	1.534000	1.418551	0.658822
Log likelihood	154.7920	162.7901	122.1935	154.3012	178.5809	204.5853	181.9663	182.5609	140.3101	181.3204
Akaike AIC	-2.196801	-2.319847	-1.695284	-2.189249	-2.562783	-2.962851	-2.614866	-2.624014	-1.974002	-2.604929
Schwarz SC	-1.932105	-2.055152	-1.430589	-1.924554	-2.298088	-2.698155	-2.350170	-2.359319	-1.709306	-2.340234
Mean dependent	0.003058	0.011297	0.012758	0.012638	0.017337	0.001424	-0.005158	-0.002912	-0.007259	3.02E-05
S.D. dependent	0.085583	0.071797	0.105799	0.076495	0.070178	0.053264	0.062523	0.063764	0.087836	0.062036

Determinant resid cov (dof adj.)	4.13E-27
Determinant resid covariance	1.57E-27
Log likelihood	2167.119
Akaike information criterion	-31.34030
Schwarz criterion	-28.47276

Vector Error Correction Estimates
Date: 06/01/13 Time: 01:24
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1
PSIG(-1)	1.000000
IBOVESPA(-1)	-0.042114
	(0.08954)
	[-0.47033]
RTSI(-1)	-0.179278
	(0.04862)
	[-3.68769]
CNXNIFTY(-1)	0.677061
	(0.11565)
	[5.85432]
JKSE(-1)	-0.751578
	(0.08965)
	[-8.38334]
SSE(-1)	-0.119721
	(0.02557)
	[-4.68175]

FTSEMIB(-1)	-0.059427
	(0.17008)
	[-0.34939]
ISEQ(-1)	0.029476
	(0.06207)
	[0.47488]
ATHEX(-1)	-0.571220
	(0.06734)
	[-8.48293]
IBEX35(-1)	0.468575
	(0.17018)
	[2.75347]
C	-4.659190

Error Correction:	D(PSIG)	D(IBOVESPA)	D(RTSI)	D(CNXNIFTY)	D(JKSE)	D(SSE)	D(FTSEMIB)	D(ISEQ)	D(ATHEX)	D(IBEX35)
CointEq1	0.031629	0.115163	0.329416	-0.070909	0.277994	0.611958	-0.029556	0.080254	0.016582	-0.076677
	(0.07124)	(0.09826)	(0.13427)	(0.10489)	(0.08702)	(0.10449)	(0.08478)	(0.08440)	(0.11681)	(0.08520)
	[0.44396]	[1.17204]	[2.45333]	[-0.67605]	[3.19463]	[5.85646]	[-0.34861]	[0.95093]	[0.14196]	[-0.89991]
D(PSIG(-1))	-0.195838	-0.232117	-0.366790	0.013208	-0.204085	-0.426299	-0.277172	-0.376161	0.013332	-0.102890
	(0.17626)	(0.24310)	(0.33220)	(0.25950)	(0.21529)	(0.25853)	(0.20976)	(0.20880)	(0.28899)	(0.21080)
	[-1.11106]	[-0.95482]	[-1.10411]	[0.05090]	[-0.94794]	[-1.64897]	[-1.32138]	[-1.80152]	[0.04613]	[-0.48808]
D(IBOVESPA(-1))	0.079274	0.066379	0.218664	0.204243	0.131557	0.003762	0.042358	-0.031059	-0.070497	0.004310
	(0.10154)	(0.14004)	(0.19137)	(0.14949)	(0.12402)	(0.14893)	(0.12084)	(0.12029)	(0.16648)	(0.12144)
	[0.78072]	[0.47399]	[1.14260]	[1.36624]	[1.06073]	[0.02526]	[0.35054]	[-0.25821]	[-0.42346]	[0.03549]

D(RTSI(-1))	0.034964	-0.010929	0.113982	-0.014638	0.108665	0.124116	0.055778	0.104806	-0.010682	0.060027
	(0.06598)	(0.09100)	(0.12436)	(0.09714)	(0.08059)	(0.09678)	(0.07852)	(0.07816)	(0.10818)	(0.07891)
	[0.52989]	[-0.12010]	[0.91655]	[-0.15069]	[1.34830]	[1.28248]	[0.71035]	[1.34085]	[-0.09874]	[0.76066]
D(CNXNIFTY(-1))	0.031286	-0.079233	-0.108603	-0.088170	-0.040863	-0.107551	0.035994	0.076628	0.047844	0.075053
	(0.09483)	(0.13079)	(0.17872)	(0.13961)	(0.11583)	(0.13908)	(0.11285)	(0.11233)	(0.15547)	(0.11341)
	[0.32993]	[-0.60582]	[-0.60766]	[-0.63154]	[-0.35279]	[-0.77328]	[0.31896]	[0.68215]	[0.30773]	[0.66177]
D(JKSE(-1))	0.011548	0.079485	-0.069256	-0.045823	0.034300	0.133864	-0.040038	0.055842	0.038675	-0.046347
	(0.09887)	(0.13636)	(0.18635)	(0.14557)	(0.12077)	(0.14502)	(0.11766)	(0.11713)	(0.16211)	(0.11825)
	[0.11680]	[0.58289]	[-0.37165]	[-0.31479]	[0.28402]	[0.92309]	[-0.34028]	[0.47678]	[0.23858]	[-0.39194]
D(SSE(-1))	-0.024876	-0.058522	-0.013033	-0.037739	-0.027471	-0.152670	0.057791	0.080670	-0.028269	0.091861
	(0.06630)	(0.09144)	(0.12495)	(0.09761)	(0.08098)	(0.09724)	(0.07890)	(0.07854)	(0.10870)	(0.07929)
	[-0.37521]	[-0.64001]	[-0.10430]	[-0.38664]	[-0.33923]	[-1.57001]	[0.73248]	[1.02715]	[-0.26006]	[1.15853]
D(FTSEMIB(-1))	0.040264	0.092056	-0.034578	-0.111426	0.025565	-0.129949	-0.189182	0.055524	-0.149972	-0.086657
	(0.19004)	(0.26210)	(0.35818)	(0.27979)	(0.23212)	(0.27874)	(0.22616)	(0.22513)	(0.31158)	(0.22728)
	[0.21187]	[0.35122]	[-0.09654]	[-0.39825]	[0.11014]	[-0.46621]	[-0.83651]	[0.24663]	[-0.48132]	[-0.38127]
D(ISEQ(-1))	0.125521	0.148299	0.459095	0.189211	0.219430	0.066393	0.244620	0.179802	0.404252	0.160358
	(0.11462)	(0.15808)	(0.21602)	(0.16875)	(0.14000)	(0.16811)	(0.13640)	(0.13578)	(0.18792)	(0.13708)
	[1.09512]	[0.93812]	[2.12520]	[1.12126]	[1.56736]	[0.39493]	[1.79338]	[1.32423]	[2.15116]	[1.16981]
D(ATHEX(-1))	-0.045991	0.121043	0.222491	0.056887	-0.019701	0.475718	-0.134957	-0.027354	-0.084713	-0.220119
	(0.10132)	(0.13973)	(0.19095)	(0.14916)	(0.12375)	(0.14860)	(0.12057)	(0.12002)	(0.16611)	(0.12117)
	[-0.45394]	[0.86623]	[1.16516]	[0.38138]	[-0.15920]	[3.20130]	[-1.11932]	[-0.22791]	[-0.50997]	[-1.81660]
D(IBEX35(-1))	0.167490	0.003824	-0.053699	0.069328	0.052569	-0.367612	0.391196	0.102688	0.335479	0.261794
	(0.17319)	(0.23886)	(0.32641)	(0.25498)	(0.21154)	(0.25402)	(0.20610)	(0.20516)	(0.28395)	(0.20713)
	[0.96709]	[0.01601]	[-0.16451]	[0.27190]	[0.24851]	[-1.44718]	[1.89806]	[0.50052]	[1.18146]	[1.26391]
C	-5.36E-05	0.012753	0.015205	0.013068	0.015388	0.004974	-0.007347	-0.004988	-0.007616	-0.002899

	(0.00510)	(0.00704)	(0.00961)	(0.00751)	(0.00623)	(0.00748)	(0.00607)	(0.00604)	(0.00836)	(0.00610)
	[-0.01051]	[1.81256]	[1.58138]	[1.73992]	[2.46949]	[0.66472]	[-1.21016]	[-0.82540]	[-0.91053]	[-0.47518]
R-squared	0.106532	0.064615	0.195578	0.061017	0.232105	0.255491	0.081659	0.125109	0.116793	0.057862
Adj. R-squared	0.023242	-0.022582	0.120589	-0.026515	0.160522	0.186088	-0.003950	0.043552	0.034460	-0.029964
Sum sq. resids	0.326996	0.622006	1.161553	0.708782	0.487853	0.703450	0.463095	0.458878	0.879009	0.467719
S.E. equation	0.052642	0.072603	0.099215	0.077502	0.064299	0.077210	0.062646	0.062360	0.086309	0.062958
F-statistic	1.279054	0.741028	2.608101	0.697084	3.242440	3.681249	0.953865	1.534000	1.418551	0.658822
Log likelihood	204.5853	162.7901	122.1935	154.3012	178.5809	154.7920	181.9663	182.5609	140.3101	181.3204
Akaike AIC	-2.962851	-2.319847	-1.695284	-2.189249	-2.562783	-2.196801	-2.614866	-2.624014	-1.974002	-2.604929
Schwarz SC	-2.698155	-2.055152	-1.430589	-1.924554	-2.298088	-1.932105	-2.350170	-2.359319	-1.709306	-2.340234
Mean dependent	0.001424	0.011297	0.012758	0.012638	0.017337	0.003058	-0.005158	-0.002912	-0.007259	3.02E-05
S.D. dependent	0.053264	0.071797	0.105799	0.076495	0.070178	0.085583	0.062523	0.063764	0.087836	0.062036

Determinant resid cov (dof adj.)	4.13E-27
Determinant resid covariance	1.57E-27
Log likelihood	2167.119
Akaike information criterion	-31.34030
Schwarz criterion	-28.47276

IBRIICPIGS

Vector Error Correction Estimates
Date: 06/01/13 Time: 01:25
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1
FTSEMIB(-1)	1.000000
IBOVESPA(-1)	0.708677
	(1.45455)
	[0.48722]
RTSI(-1)	3.016802
	(0.80748)
	[3.73609]
CNXNIFTY(-1)	-11.39324
	(1.89695)
	[-6.00607]
JKSE(-1)	12.64719
	(1.56639)
	[8.07410]
SSE(-1)	2.014612
	(0.55654)
	[3.61990]
PSIG(-1)	-16.82750

	(3.39668)									
	[-4.95411]									
ISEQ(-1)	-0.496000									
	(0.81809)									
	[-0.60629]									
ATHEX(-1)	9.612200									
	(1.10193)									
	[8.72310]									
IBEX35(-1)	-7.884940									
	(2.76271)									
	[-2.85406]									
C	78.40254									

Error Correction:	D(FTSEMIB)	D(IBOVESPA)	D(RTSI)	D(CNXNIFTY)	D(JKSE)	D(SSE)	D(PSIG)	D(ISEQ)	D(ATHEX)	D(IBEX35)
CointEq1	0.001756	-0.006844	-0.019576	0.004214	-0.016520	-0.036367	-0.001880	-0.004769	-0.000985	0.004557
	(0.00504)	(0.00584)	(0.00798)	(0.00623)	(0.00517)	(0.00621)	(0.00423)	(0.00502)	(0.00694)	(0.00506)
	[0.34861]	[-1.17204]	[-2.45333]	[0.67605]	[-3.19463]	[-5.85646]	[-0.44396]	[-0.95093]	[-0.14196]	[0.89991]
D(FTSEMIB(-1))	-0.189182	0.092056	-0.034578	-0.111426	0.025565	-0.129949	0.040264	0.055524	-0.149972	-0.086657
	(0.22616)	(0.26210)	(0.35818)	(0.27979)	(0.23212)	(0.27874)	(0.19004)	(0.22513)	(0.31158)	(0.22728)
	[-0.83651]	[0.35122]	[-0.09654]	[-0.39825]	[0.11014]	[-0.46621]	[0.21187]	[0.24663]	[-0.48132]	[-0.38127]
D(IBOVESPA(-1))	0.042358	0.066379	0.218664	0.204243	0.131557	0.003762	0.079274	-0.031059	-0.070497	0.004310
	(0.12084)	(0.14004)	(0.19137)	(0.14949)	(0.12402)	(0.14893)	(0.10154)	(0.12029)	(0.16648)	(0.12144)
	[0.35054]	[0.47399]	[1.14260]	[1.36624]	[1.06073]	[0.02526]	[0.78072]	[-0.25821]	[-0.42346]	[0.03549]
D(RTSI(-1))	0.055778	-0.010929	0.113982	-0.014638	0.108665	0.124116	0.034964	0.104806	-0.010682	0.060027
	(0.07852)	(0.09100)	(0.12436)	(0.09714)	(0.08059)	(0.09678)	(0.06598)	(0.07816)	(0.10818)	(0.07891)

	[0.71035]	[-0.12010]	[0.91655]	[-0.15069]	[1.34830]	[1.28248]	[0.52989]	[1.34085]	[-0.09874]	[0.76066]
D(CNXNIFTY(-1))	0.035994	-0.079233	-0.108603	-0.088170	-0.040863	-0.107551	0.031286	0.076628	0.047844	0.075053
	(0.11285)	(0.13079)	(0.17872)	(0.13961)	(0.11583)	(0.13908)	(0.09483)	(0.11233)	(0.15547)	(0.11341)
	[0.31896]	[-0.60582]	[-0.60766]	[-0.63154]	[-0.35279]	[-0.77328]	[0.32993]	[0.68215]	[0.30773]	[0.66177]
D(JKSE(-1))	-0.040038	0.079485	-0.069256	-0.045823	0.034300	0.133864	0.011548	0.055842	0.038675	-0.046347
	(0.11766)	(0.13636)	(0.18635)	(0.14557)	(0.12077)	(0.14502)	(0.09887)	(0.11713)	(0.16211)	(0.11825)
	[-0.34028]	[0.58289]	[-0.37165]	[-0.31479]	[0.28402]	[0.92309]	[0.11680]	[0.47678]	[0.23858]	[-0.39194]
D(SSE(-1))	0.057791	-0.058522	-0.013033	-0.037739	-0.027471	-0.152670	-0.024876	0.080670	-0.028269	0.091861
	(0.07890)	(0.09144)	(0.12495)	(0.09761)	(0.08098)	(0.09724)	(0.06630)	(0.07854)	(0.10870)	(0.07929)
	[0.73248]	[-0.64001]	[-0.10430]	[-0.38664]	[-0.33923]	[-1.57001]	[-0.37521]	[1.02715]	[-0.26006]	[1.15853]
D(PSIG(-1))	-0.277172	-0.232117	-0.366790	0.013208	-0.204085	-0.426299	-0.195838	-0.376161	0.013332	-0.102890
	(0.20976)	(0.24310)	(0.33220)	(0.25950)	(0.21529)	(0.25853)	(0.17626)	(0.20880)	(0.28899)	(0.21080)
	[-1.32138]	[-0.95482]	[-1.10411]	[0.05090]	[-0.94794]	[-1.64897]	[-1.11106]	[-1.80152]	[0.04613]	[-0.48808]
D(ISEQ(-1))	0.244620	0.148299	0.459095	0.189211	0.219430	0.066393	0.125521	0.179802	0.404252	0.160358
	(0.13640)	(0.15808)	(0.21602)	(0.16875)	(0.14000)	(0.16811)	(0.11462)	(0.13578)	(0.18792)	(0.13708)
	[1.79338]	[0.93812]	[2.12520]	[1.12126]	[1.56736]	[0.39493]	[1.09512]	[1.32423]	[2.15116]	[1.16981]
D(ATHEX(-1))	-0.134957	0.121043	0.222491	0.056887	-0.019701	0.475718	-0.045991	-0.027354	-0.084713	-0.220119
	(0.12057)	(0.13973)	(0.19095)	(0.14916)	(0.12375)	(0.14860)	(0.10132)	(0.12002)	(0.16611)	(0.12117)
	[-1.11932]	[0.86623]	[1.16516]	[0.38138]	[-0.15920]	[3.20130]	[-0.45394]	[-0.22791]	[-0.50997]	[-1.81660]
D(IBEX35(-1))	0.391196	0.003824	-0.053699	0.069328	0.052569	-0.367612	0.167490	0.102688	0.335479	0.261794
	(0.20610)	(0.23886)	(0.32641)	(0.25498)	(0.21154)	(0.25402)	(0.17319)	(0.20516)	(0.28395)	(0.20713)
	[1.89806]	[0.01601]	[-0.16451]	[0.27190]	[0.24851]	[-1.44718]	[0.96709]	[0.50052]	[1.18146]	[1.26391]
C	-0.007347	0.012753	0.015205	0.013068	0.015388	0.004974	-5.36E-05	-0.004988	-0.007616	-0.002899
	(0.00607)	(0.00704)	(0.00961)	(0.00751)	(0.00623)	(0.00748)	(0.00510)	(0.00604)	(0.00836)	(0.00610)
	[-1.21016]	[1.81256]	[1.58138]	[1.73992]	[2.46949]	[0.66472]	[-0.01051]	[-0.82540]	[-0.91053]	[-0.47518]

R-squared	0.081659	0.064615	0.195578	0.061017	0.232105	0.255491	0.106532	0.125109	0.116793	0.057862
Adj. R-squared	-0.003950	-0.022582	0.120589	-0.026515	0.160522	0.186088	0.023242	0.043552	0.034460	-0.029964
Sum sq. resids	0.463095	0.622006	1.161553	0.708782	0.487853	0.703450	0.326996	0.458878	0.879009	0.467719
S.E. equation	0.062646	0.072603	0.099215	0.077502	0.064299	0.077210	0.052642	0.062360	0.086309	0.062958
F-statistic	0.953865	0.741028	2.608101	0.697084	3.242440	3.681249	1.279054	1.534000	1.418551	0.658822
Log likelihood	181.9663	162.7901	122.1935	154.3012	178.5809	154.7920	204.5853	182.5609	140.3101	181.3204
Akaike AIC	-2.614866	-2.319847	-1.695284	-2.189249	-2.562783	-2.196801	-2.962851	-2.624014	-1.974002	-2.604929
Schwarz SC	-2.350170	-2.055152	-1.430589	-1.924554	-2.298088	-1.932105	-2.698155	-2.359319	-1.709306	-2.340234
Mean dependent	-0.005158	0.011297	0.012758	0.012638	0.017337	0.003058	0.001424	-0.002912	-0.007259	3.02E-05
S.D. dependent	0.062523	0.071797	0.105799	0.076495	0.070178	0.085583	0.053264	0.063764	0.087836	0.062036

Determinant resid cov (dof adj.)	4.13E-27
Determinant resid covariance	1.57E-27
Log likelihood	2167.119
Akaike information criterion	-31.34030
Schwarz criterion	-28.47276

IBRIICPIGS

Vector Error Correction Estimates
Date: 06/01/13 Time: 01:26
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1
ISEQ(-1)	1.000000
IBOVESPA(-1)	-1.428784 (3.01543) [-0.47382]
RTSI(-1)	-6.082259 (1.58910) [-3.82749]
CNXNIFTY(-1)	22.97024 (3.92488) [5.85247]
JKSE(-1)	-25.49835 (3.10288) [-8.21765]
SSE(-1)	-4.061715 (1.11471) [-3.64376]
PSIG(-1)	33.92640 (6.77191)

	[5.00987]									
FTSEMIB(-1)	-2.016128									
	(4.46936)									
	[-0.45110]									
ATHEX(-1)	-19.37943									
	(2.32109)									
	[-8.34929]									
IBEX35(-1)	15.89705									
	(5.42174)									
	[2.93209]									
C	-158.0696									

Error Correction:	D(ISEQ)	D(IBOVESPA)	D(RTSI)	D(CNXNIFTY)	D(JKSE)	D(SSE)	D(PSIG)	D(FTSEMIB)	D(ATHEX)	D(IBEX35)
CointEq1	0.002366	0.003394	0.009710	-0.002090	0.008194	0.018038	0.000932	-0.000871	0.000489	-0.002260
	(0.00249)	(0.00290)	(0.00396)	(0.00309)	(0.00256)	(0.00308)	(0.00210)	(0.00250)	(0.00344)	(0.00251)
	[0.95093]	[1.17204]	[2.45333]	[-0.67605]	[3.19463]	[5.85646]	[0.44396]	[-0.34861]	[0.14196]	[-0.89991]
D(ISEQ(-1))	0.179802	0.148299	0.459095	0.189211	0.219430	0.066393	0.125521	0.244620	0.404252	0.160358
	(0.13578)	(0.15808)	(0.21602)	(0.16875)	(0.14000)	(0.16811)	(0.11462)	(0.13640)	(0.18792)	(0.13708)
	[1.32423]	[0.93812]	[2.12520]	[1.12126]	[1.56736]	[0.39493]	[1.09512]	[1.79338]	[2.15116]	[1.16981]
D(IBOVESPA(-1))	-0.031059	0.066379	0.218664	0.204243	0.131557	0.003762	0.079274	0.042358	-0.070497	0.004310
	(0.12029)	(0.14004)	(0.19137)	(0.14949)	(0.12402)	(0.14893)	(0.10154)	(0.12084)	(0.16648)	(0.12144)
	[-0.25821]	[0.47399]	[1.14260]	[1.36624]	[1.06073]	[0.02526]	[0.78072]	[0.35054]	[-0.42346]	[0.03549]
D(RTSI(-1))	0.104806	-0.010929	0.113982	-0.014638	0.108665	0.124116	0.034964	0.055778	-0.010682	0.060027
	(0.07816)	(0.09100)	(0.12436)	(0.09714)	(0.08059)	(0.09678)	(0.06598)	(0.07852)	(0.10818)	(0.07891)
	[1.34085]	[-0.12010]	[0.91655]	[-0.15069]	[1.34830]	[1.28248]	[0.52989]	[0.71035]	[-0.09874]	[0.76066]

D(CNXNIFTY(-1))	0.076628	-0.079233	-0.108603	-0.088170	-0.040863	-0.107551	0.031286	0.035994	0.047844	0.075053
	(0.11233)	(0.13079)	(0.17872)	(0.13961)	(0.11583)	(0.13908)	(0.09483)	(0.11285)	(0.15547)	(0.11341)
	[0.68215]	[-0.60582]	[-0.60766]	[-0.63154]	[-0.35279]	[-0.77328]	[0.32993]	[0.31896]	[0.30773]	[0.66177]
D(JKSE(-1))	0.055842	0.079485	-0.069256	-0.045823	0.034300	0.133864	0.011548	-0.040038	0.038675	-0.046347
	(0.11713)	(0.13636)	(0.18635)	(0.14557)	(0.12077)	(0.14502)	(0.09887)	(0.11766)	(0.16211)	(0.11825)
	[0.47678]	[0.58289]	[-0.37165]	[-0.31479]	[0.28402]	[0.92309]	[0.11680]	[-0.34028]	[0.23858]	[-0.39194]
D(SSE(-1))	0.080670	-0.058522	-0.013033	-0.037739	-0.027471	-0.152670	-0.024876	0.057791	-0.028269	0.091861
	(0.07854)	(0.09144)	(0.12495)	(0.09761)	(0.08098)	(0.09724)	(0.06630)	(0.07890)	(0.10870)	(0.07929)
	[1.02715]	[-0.64001]	[-0.10430]	[-0.38664]	[-0.33923]	[-1.57001]	[-0.37521]	[0.73248]	[-0.26006]	[1.15853]
D(PSIG(-1))	-0.376161	-0.232117	-0.366790	0.013208	-0.204085	-0.426299	-0.195838	-0.277172	0.013332	-0.102890
	(0.20880)	(0.24310)	(0.33220)	(0.25950)	(0.21529)	(0.25853)	(0.17626)	(0.20976)	(0.28899)	(0.21080)
	[-1.80152]	[-0.95482]	[-1.10411]	[0.05090]	[-0.94794]	[-1.64897]	[-1.11106]	[-1.32138]	[0.04613]	[-0.48808]
D(FTSEMIB(-1))	0.055524	0.092056	-0.034578	-0.111426	0.025565	-0.129949	0.040264	-0.189182	-0.149972	-0.086657
	(0.22513)	(0.26210)	(0.35818)	(0.27979)	(0.23212)	(0.27874)	(0.19004)	(0.22616)	(0.31158)	(0.22728)
	[0.24663]	[0.35122]	[-0.09654]	[-0.39825]	[0.11014]	[-0.46621]	[0.21187]	[-0.83651]	[-0.48132]	[-0.38127]
D(ATHEX(-1))	-0.027354	0.121043	0.222491	0.056887	-0.019701	0.475718	-0.045991	-0.134957	-0.084713	-0.220119
	(0.12002)	(0.13973)	(0.19095)	(0.14916)	(0.12375)	(0.14860)	(0.10132)	(0.12057)	(0.16611)	(0.12117)
	[-0.22791]	[0.86623]	[1.16516]	[0.38138]	[-0.15920]	[3.20130]	[-0.45394]	[-1.11932]	[-0.50997]	[-1.81660]
D(IBEX35(-1))	0.102688	0.003824	-0.053699	0.069328	0.052569	-0.367612	0.167490	0.391196	0.335479	0.261794
	(0.20516)	(0.23886)	(0.32641)	(0.25498)	(0.21154)	(0.25402)	(0.17319)	(0.20610)	(0.28395)	(0.20713)
	[0.50052]	[0.01601]	[-0.16451]	[0.27190]	[0.24851]	[-1.44718]	[0.96709]	[1.89806]	[1.18146]	[1.26391]
C	-0.004988	0.012753	0.015205	0.013068	0.015388	0.004974	-5.36E-05	-0.007347	-0.007616	-0.002899
	(0.00604)	(0.00704)	(0.00961)	(0.00751)	(0.00623)	(0.00748)	(0.00510)	(0.00607)	(0.00836)	(0.00610)
	[-0.82540]	[1.81256]	[1.58138]	[1.73992]	[2.46949]	[0.66472]	[-0.01051]	[-1.21016]	[-0.91053]	[-0.47518]
R-squared	0.125109	0.064615	0.195578	0.061017	0.232105	0.255491	0.106532	0.081659	0.116793	0.057862
Adj. R-squared	0.043552	-0.022582	0.120589	-0.026515	0.160522	0.186088	0.023242	-0.003950	0.034460	-0.029964

Sum sq. resids	0.458878	0.622006	1.161553	0.708782	0.487853	0.703450	0.326996	0.463095	0.879009	0.467719
S.E. equation	0.062360	0.072603	0.099215	0.077502	0.064299	0.077210	0.052642	0.062646	0.086309	0.062958
F-statistic	1.534000	0.741028	2.608101	0.697084	3.242440	3.681249	1.279054	0.953865	1.418551	0.658822
Log likelihood	182.5609	162.7901	122.1935	154.3012	178.5809	154.7920	204.5853	181.9663	140.3101	181.3204
Akaike AIC	-2.624014	-2.319847	-1.695284	-2.189249	-2.562783	-2.196801	-2.962851	-2.614866	-1.974002	-2.604929
Schwarz SC	-2.359319	-2.055152	-1.430589	-1.924554	-2.298088	-1.932105	-2.698155	-2.350170	-1.709306	-2.340234
Mean dependent	-0.002912	0.011297	0.012758	0.012638	0.017337	0.003058	0.001424	-0.005158	-0.007259	3.02E-05
S.D. dependent	0.063764	0.071797	0.105799	0.076495	0.070178	0.085583	0.053264	0.062523	0.087836	0.062036

Determinant resid cov (dof adj.)	4.13E-27
Determinant resid covariance	1.57E-27
Log likelihood	2167.119
Akaike information criterion	-31.34030
Schwarz criterion	-28.47276

Vector Error Correction Estimates
Date: 06/01/13 Time: 01:27
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1
ATHEX(-1)	1.000000
IBOVESPA(-1)	0.073727
	(0.14561)
	[0.50632]
RTSI(-1)	0.313851
	(0.08347)
	[3.76009]
CNXNIFTY(-1)	-1.185290
	(0.19416)
	[-6.10482]
JKSE(-1)	1.315743
	(0.11062)
	[11.8944]
SSE(-1)	0.209589
	(0.05969)
	[3.51132]
PSIG(-1)	-1.750640

	(0.35442)									
	[-4.93946]									
FTSEMIB(-1)	0.104034									
	(0.29042)									
	[0.35822]									
ISEQ(-1)	-0.051601									
	(0.11197)									
	[-0.46083]									
IBEX35(-1)	-0.820305									
	(0.32449)									
	[-2.52797]									
C	8.156566									

Error Correction:	D(ATHEX)	D(IBOVESPA)	D(RTSI)	D(CNXNIFTY)	D(JKSE)	D(SSE)	D(PSIG)	D(FTSEMIB)	D(ISEQ)	D(IBEX35)
CointEq1	-0.009472	-0.065783	-0.188169	0.040505	-0.158796	-0.349563	-0.018067	0.016883	-0.045843	0.043799
	(0.06672)	(0.05613)	(0.07670)	(0.05991)	(0.04971)	(0.05969)	(0.04070)	(0.04843)	(0.04821)	(0.04867)
	[-0.14196]	[-1.17204]	[-2.45333]	[0.67605]	[-3.19463]	[-5.85646]	[-0.44396]	[0.34861]	[-0.95093]	[0.89991]
D(ATHEX(-1))	-0.084713	0.121043	0.222491	0.056887	-0.019701	0.475718	-0.045991	-0.134957	-0.027354	-0.220119
	(0.16611)	(0.13973)	(0.19095)	(0.14916)	(0.12375)	(0.14860)	(0.10132)	(0.12057)	(0.12002)	(0.12117)
	[-0.50997]	[0.86623]	[1.16516]	[0.38138]	[-0.15920]	[3.20130]	[-0.45394]	[-1.11932]	[-0.22791]	[-1.81660]
D(IBOVESPA(-1))	-0.070497	0.066379	0.218664	0.204243	0.131557	0.003762	0.079274	0.042358	-0.031059	0.004310
	(0.16648)	(0.14004)	(0.19137)	(0.14949)	(0.12402)	(0.14893)	(0.10154)	(0.12084)	(0.12029)	(0.12144)
	[-0.42346]	[0.47399]	[1.14260]	[1.36624]	[1.06073]	[0.02526]	[0.78072]	[0.35054]	[-0.25821]	[0.03549]
D(RTSI(-1))	-0.010682	-0.010929	0.113982	-0.014638	0.108665	0.124116	0.034964	0.055778	0.104806	0.060027

	(0.10818)	(0.09100)	(0.12436)	(0.09714)	(0.08059)	(0.09678)	(0.06598)	(0.07852)	(0.07816)	(0.07891)
	[-0.09874]	[-0.12010]	[0.91655]	[-0.15069]	[1.34830]	[1.28248]	[0.52989]	[0.71035]	[1.34085]	[0.76066]
D(CNXNIFTY(-1))	0.047844	-0.079233	-0.108603	-0.088170	-0.040863	-0.107551	0.031286	0.035994	0.076628	0.075053
	(0.15547)	(0.13079)	(0.17872)	(0.13961)	(0.11583)	(0.13908)	(0.09483)	(0.11285)	(0.11233)	(0.11341)
	[0.30773]	[-0.60582]	[-0.60766]	[-0.63154]	[-0.35279]	[-0.77328]	[0.32993]	[0.31896]	[0.68215]	[0.66177]
D(JKSE(-1))	0.038675	0.079485	-0.069256	-0.045823	0.034300	0.133864	0.011548	-0.040038	0.055842	-0.046347
	(0.16211)	(0.13636)	(0.18635)	(0.14557)	(0.12077)	(0.14502)	(0.09887)	(0.11766)	(0.11713)	(0.11825)
	[0.23858]	[0.58289]	[-0.37165]	[-0.31479]	[0.28402]	[0.92309]	[0.11680]	[-0.34028]	[0.47678]	[-0.39194]
D(SSE(-1))	-0.028269	-0.058522	-0.013033	-0.037739	-0.027471	-0.152670	-0.024876	0.057791	0.080670	0.091861
	(0.10870)	(0.09144)	(0.12495)	(0.09761)	(0.08098)	(0.09724)	(0.06630)	(0.07890)	(0.07854)	(0.07929)
	[-0.26006]	[-0.64001]	[-0.10430]	[-0.38664]	[-0.33923]	[-1.57001]	[-0.37521]	[0.73248]	[1.02715]	[1.15853]
D(PSIG(-1))	0.013332	-0.232117	-0.366790	0.013208	-0.204085	-0.426299	-0.195838	-0.277172	-0.376161	-0.102890
	(0.28899)	(0.24310)	(0.33220)	(0.25950)	(0.21529)	(0.25853)	(0.17626)	(0.20976)	(0.20880)	(0.21080)
	[0.04613]	[-0.95482]	[-1.10411]	[0.05090]	[-0.94794]	[-1.64897]	[-1.11106]	[-1.32138]	[-1.80152]	[-0.48808]
D(FTSEMIB(-1))	-0.149972	0.092056	-0.034578	-0.111426	0.025565	-0.129949	0.040264	-0.189182	0.055524	-0.086657
	(0.31158)	(0.26210)	(0.35818)	(0.27979)	(0.23212)	(0.27874)	(0.19004)	(0.22616)	(0.22513)	(0.22728)
	[-0.48132]	[0.35122]	[-0.09654]	[-0.39825]	[0.11014]	[-0.46621]	[0.21187]	[-0.83651]	[0.24663]	[-0.38127]
D(ISEQ(-1))	0.404252	0.148299	0.459095	0.189211	0.219430	0.066393	0.125521	0.244620	0.179802	0.160358
	(0.18792)	(0.15808)	(0.21602)	(0.16875)	(0.14000)	(0.16811)	(0.11462)	(0.13640)	(0.13578)	(0.13708)
	[2.15116]	[0.93812]	[2.12520]	[1.12126]	[1.56736]	[0.39493]	[1.09512]	[1.79338]	[1.32423]	[1.16981]
D(IBEX35(-1))	0.335479	0.003824	-0.053699	0.069328	0.052569	-0.367612	0.167490	0.391196	0.102688	0.261794
	(0.28395)	(0.23886)	(0.32641)	(0.25498)	(0.21154)	(0.25402)	(0.17319)	(0.20610)	(0.20516)	(0.20713)
	[1.18146]	[0.01601]	[-0.16451]	[0.27190]	[0.24851]	[-1.44718]	[0.96709]	[1.89806]	[0.50052]	[1.26391]
C	-0.007616	0.012753	0.015205	0.013068	0.015388	0.004974	-5.36E-05	-0.007347	-0.004988	-0.002899

	(0.00836)	(0.00704)	(0.00961)	(0.00751)	(0.00623)	(0.00748)	(0.00510)	(0.00607)	(0.00604)	(0.00610)
	[-0.91053]	[1.81256]	[1.58138]	[1.73992]	[2.46949]	[0.66472]	[-0.01051]	[-1.21016]	[-0.82540]	[-0.47518]
R-squared	0.116793	0.064615	0.195578	0.061017	0.232105	0.255491	0.106532	0.081659	0.125109	0.057862
Adj. R-squared	0.034460	-0.022582	0.120589	-0.026515	0.160522	0.186088	0.023242	-0.003950	0.043552	-0.029964
Sum sq. resids	0.879009	0.622006	1.161553	0.708782	0.487853	0.703450	0.326996	0.463095	0.458878	0.467719
S.E. equation	0.086309	0.072603	0.099215	0.077502	0.064299	0.077210	0.052642	0.062646	0.062360	0.062958
F-statistic	1.418551	0.741028	2.608101	0.697084	3.242440	3.681249	1.279054	0.953865	1.534000	0.658822
Log likelihood	140.3101	162.7901	122.1935	154.3012	178.5809	154.7920	204.5853	181.9663	182.5609	181.3204
Akaike AIC	-1.974002	-2.319847	-1.695284	-2.189249	-2.562783	-2.196801	-2.962851	-2.614866	-2.624014	-2.604929
Schwarz SC	-1.709306	-2.055152	-1.430589	-1.924554	-2.298088	-1.932105	-2.698155	-2.350170	-2.359319	-2.340234
Mean dependent	-0.007259	0.011297	0.012758	0.012638	0.017337	0.003058	0.001424	-0.005158	-0.002912	3.02E-05
S.D. dependent	0.087836	0.071797	0.105799	0.076495	0.070178	0.085583	0.053264	0.062523	0.063764	0.062036

Determinant resid cov (dof adj.)	4.13E-27
Determinant resid covariance	1.57E-27
Log likelihood	2167.119

Vector Error Correction Estimates
Date: 06/01/13 Time: 01:28
Sample (adjusted): 2002M03 2012M12
Included observations: 130 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1
IBEX35(-1)	1.000000
IBOVESPA(-1)	-0.089877
	(0.19004)
	[-0.47293]
RTSI(-1)	-0.382603
	(0.10394)
	[-3.68102]
CNXNIFTY(-1)	1.444937
	(0.24605)
	[5.87259]
JKSE(-1)	-1.603968
	(0.19783)
	[-8.10793]
SSE(-1)	-0.255501
	(0.07173)
	[-3.56176]
PSIG(-1)	2.134132
	(0.39423)

	[5.41348]
FTSEMIB(-1)	-0.126824
	(0.32047)
	[-0.39574]
ISEQ(-1)	0.062905
	(0.11512)
	[0.54643]
ATHEX(-1)	-1.219058
	(0.14282)
	[-8.53562]
C	-9.943328

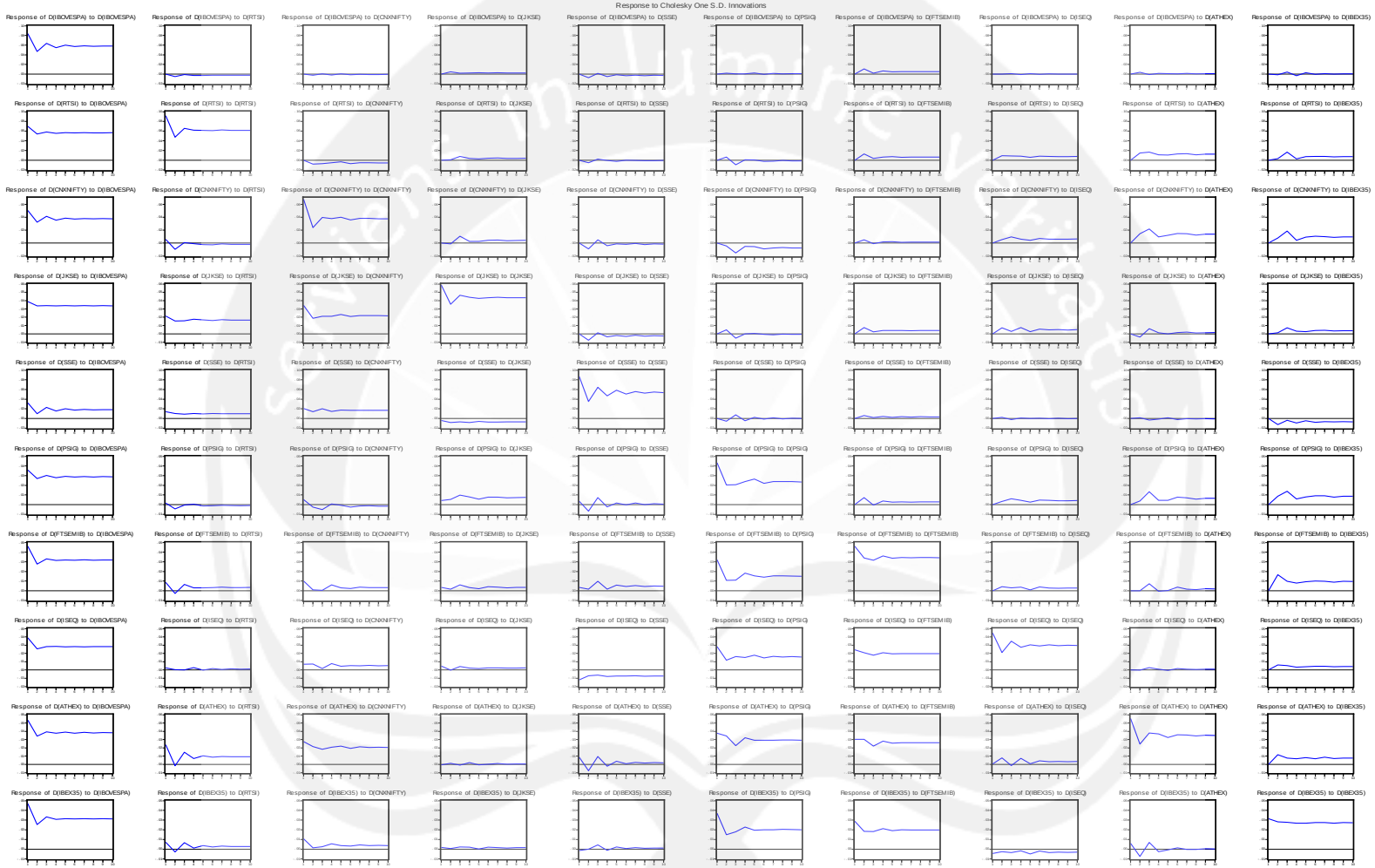
Error Correction:	D(IBEX35)	D(IBOVESPA)	D(RTSI)	D(CNXNIFTY)	D(JKSE)	D(SSE)	D(PSIG)	D(FTSEMIB)	D(ISEQ)	D(ATHEX)
CointEq1	-0.035929	0.053962	0.154356	-0.033226	0.130261	0.286748	0.014821	-0.013849	0.037605	0.007770
	(0.03992)	(0.04604)	(0.06292)	(0.04915)	(0.04077)	(0.04896)	(0.03338)	(0.03973)	(0.03955)	(0.05473)
	[-0.89991]	[1.17204]	[2.45333]	[-0.67605]	[3.19463]	[5.85646]	[0.44396]	[-0.34861]	[0.95093]	[0.14196]
D(IBEX35(-1))	0.261794	0.003824	-0.053699	0.069328	0.052569	-0.367612	0.167490	0.391196	0.102688	0.335479
	(0.20713)	(0.23886)	(0.32641)	(0.25498)	(0.21154)	(0.25402)	(0.17319)	(0.20610)	(0.20516)	(0.28395)
	[1.26391]	[0.01601]	[-0.16451]	[0.27190]	[0.24851]	[-1.44718]	[0.96709]	[1.89806]	[0.50052]	[1.18146]
D(IBOVESPA(-1))	0.004310	0.066379	0.218664	0.204243	0.131557	0.003762	0.079274	0.042358	-0.031059	-0.070497
	(0.12144)	(0.14004)	(0.19137)	(0.14949)	(0.12402)	(0.14893)	(0.10154)	(0.12084)	(0.12029)	(0.16648)
	[0.03549]	[0.47399]	[1.14260]	[1.36624]	[1.06073]	[0.02526]	[0.78072]	[0.35054]	[-0.25821]	[-0.42346]
D(RTSI(-1))	0.060027	-0.010929	0.113982	-0.014638	0.108665	0.124116	0.034964	0.055778	0.104806	-0.010682
	(0.07891)	(0.09100)	(0.12436)	(0.09714)	(0.08059)	(0.09678)	(0.06598)	(0.07852)	(0.07816)	(0.10818)
	[0.76066]	[-0.12010]	[0.91655]	[-0.15069]	[1.34830]	[1.28248]	[0.52989]	[0.71035]	[1.34085]	[-0.09874]

D(CNXNIFTY(-1))	0.075053	-0.079233	-0.108603	-0.088170	-0.040863	-0.107551	0.031286	0.035994	0.076628	0.047844
	(0.11341)	(0.13079)	(0.17872)	(0.13961)	(0.11583)	(0.13908)	(0.09483)	(0.11285)	(0.11233)	(0.15547)
	[0.66177]	[-0.60582]	[-0.60766]	[-0.63154]	[-0.35279]	[-0.77328]	[0.32993]	[0.31896]	[0.68215]	[0.30773]
D(JKSE(-1))	-0.046347	0.079485	-0.069256	-0.045823	0.034300	0.133864	0.011548	-0.040038	0.055842	0.038675
	(0.11825)	(0.13636)	(0.18635)	(0.14557)	(0.12077)	(0.14502)	(0.09887)	(0.11766)	(0.11713)	(0.16211)
	[-0.39194]	[0.58289]	[-0.37165]	[-0.31479]	[0.28402]	[0.92309]	[0.11680]	[-0.34028]	[0.47678]	[0.23858]
D(SSE(-1))	0.091861	-0.058522	-0.013033	-0.037739	-0.027471	-0.152670	-0.024876	0.057791	0.080670	-0.028269
	(0.07929)	(0.09144)	(0.12495)	(0.09761)	(0.08098)	(0.09724)	(0.06630)	(0.07890)	(0.07854)	(0.10870)
	[1.15853]	[-0.64001]	[-0.10430]	[-0.38664]	[-0.33923]	[-1.57001]	[-0.37521]	[0.73248]	[1.02715]	[-0.26006]
D(PSIG(-1))	-0.102890	-0.232117	-0.366790	0.013208	-0.204085	-0.426299	-0.195838	-0.277172	-0.376161	0.013332
	(0.21080)	(0.24310)	(0.33220)	(0.25950)	(0.21529)	(0.25853)	(0.17626)	(0.20976)	(0.20880)	(0.28899)
	[-0.48808]	[-0.95482]	[-1.10411]	[0.05090]	[-0.94794]	[-1.64897]	[-1.11106]	[-1.32138]	[-1.80152]	[0.04613]
D(FTSEMIB(-1))	-0.086657	0.092056	-0.034578	-0.111426	0.025565	-0.129949	0.040264	-0.189182	0.055524	-0.149972
	(0.22728)	(0.26210)	(0.35818)	(0.27979)	(0.23212)	(0.27874)	(0.19004)	(0.22616)	(0.22513)	(0.31158)
	[-0.38127]	[0.35122]	[-0.09654]	[-0.39825]	[0.11014]	[-0.46621]	[0.21187]	[-0.83651]	[0.24663]	[-0.48132]
D(ISEQ(-1))	0.160358	0.148299	0.459095	0.189211	0.219430	0.066393	0.125521	0.244620	0.179802	0.404252
	(0.13708)	(0.15808)	(0.21602)	(0.16875)	(0.14000)	(0.16811)	(0.11462)	(0.13640)	(0.13578)	(0.18792)
	[1.16981]	[0.93812]	[2.12520]	[1.12126]	[1.56736]	[0.39493]	[1.09512]	[1.79338]	[1.32423]	[2.15116]
D(ATHEX(-1))	-0.220119	0.121043	0.222491	0.056887	-0.019701	0.475718	-0.045991	-0.134957	-0.027354	-0.084713
	(0.12117)	(0.13973)	(0.19095)	(0.14916)	(0.12375)	(0.14860)	(0.10132)	(0.12057)	(0.12002)	(0.16611)
	[-1.81660]	[0.86623]	[1.16516]	[0.38138]	[-0.15920]	[3.20130]	[-0.45394]	[-1.11932]	[-0.22791]	[-0.50997]
C	-0.002899	0.012753	0.015205	0.013068	0.015388	0.004974	-5.36E-05	-0.007347	-0.004988	-0.007616
	(0.00610)	(0.00704)	(0.00961)	(0.00751)	(0.00623)	(0.00748)	(0.00510)	(0.00607)	(0.00604)	(0.00836)
	[-0.47518]	[1.81256]	[1.58138]	[1.73992]	[2.46949]	[0.66472]	[-0.01051]	[-1.21016]	[-0.82540]	[-0.91053]
R-squared	0.057862	0.064615	0.195578	0.061017	0.232105	0.255491	0.106532	0.081659	0.125109	0.116793
Adj. R-squared	-0.029964	-0.022582	0.120589	-0.026515	0.160522	0.186088	0.023242	-0.003950	0.043552	0.034460

Sum sq. resids	0.467719	0.622006	1.161553	0.708782	0.487853	0.703450	0.326996	0.463095	0.458878	0.879009
S.E. equation	0.062958	0.072603	0.099215	0.077502	0.064299	0.077210	0.052642	0.062646	0.062360	0.086309
F-statistic	0.658822	0.741028	2.608101	0.697084	3.242440	3.681249	1.279054	0.953865	1.534000	1.418551
Log likelihood	181.3204	162.7901	122.1935	154.3012	178.5809	154.7920	204.5853	181.9663	182.5609	140.3101
Akaike AIC	-2.604929	-2.319847	-1.695284	-2.189249	-2.562783	-2.196801	-2.962851	-2.614866	-2.624014	-1.974002
Schwarz SC	-2.340234	-2.055152	-1.430589	-1.924554	-2.298088	-1.932105	-2.698155	-2.350170	-2.359319	-1.709306
Mean dependent	3.02E-05	0.011297	0.012758	0.012638	0.017337	0.003058	0.001424	-0.005158	-0.002912	-0.007259
S.D. dependent	0.062036	0.071797	0.105799	0.076495	0.070178	0.085583	0.053264	0.062523	0.063764	0.087836

Determinant resid cov (dof adj.)	4.13E-27
Determinant resid covariance	1.57E-27
Log likelihood	2167.119
Akaike information criterion	-31.34030
Schwarz criterion	-28.47276

Appendix 3.7: Impulse response (graph)



Appendix 3.8: Impulse response (Value)

Response of D(IBOVESPA):

Period	D(IBOVESPA)	D(RTSI)	D(CNXNIFTY)	D(JKSE)	D(SSE)	D(PSIG)	D(FTSEMIB)	D(ISEQ)	D(ATHEX)	D(IBEX35)
1	0.084050	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	0.046679	-0.005354	-0.002415	0.004713	-0.007589	0.001894	0.010555	0.000136	0.003714	-0.001338
3	0.063520	-0.001248	0.000610	0.001791	0.001191	0.000164	0.001672	0.000773	-0.001078	0.004051
4	0.054966	-0.002723	-0.001941	0.002322	-0.005384	0.000308	0.006407	-0.000887	0.001396	-0.003179
5	0.059777	-0.002832	0.000200	0.002593	-0.001586	0.002084	0.004734	0.000746	0.000706	0.002538
6	0.057068	-0.002434	-0.001532	0.002273	-0.003582	-0.000464	0.005032	-0.000401	0.000543	-0.000666
7	0.058503	-0.002610	-0.000474	0.002599	-0.002349	0.001545	0.005028	0.000367	0.001250	0.000849
8	0.057798	-0.002590	-0.000841	0.002325	-0.003279	0.000458	0.005096	-0.000111	0.000331	0.000112
9	0.058115	-0.002586	-0.000849	0.002431	-0.002583	0.000957	0.004971	8.01E-05	0.001029	0.000458
10	0.057988	-0.002591	-0.000779	0.002477	-0.003060	0.000680	0.005090	9.98E-05	0.000720	0.000356
11	0.058037	-0.002573	-0.000803	0.002395	-0.002741	0.000864	0.004999	9.85E-06	0.000781	0.000358

Response of D(RTSI):

Period	D(IBOVESPA)	D(RTSI)	D(CNXNIFTY)	D(JKSE)	D(SSE)	D(PSIG)	D(FTSEMIB)	D(ISEQ)	D(ATHEX)	D(IBEX35)
1	0.069874	0.091677	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	0.053799	0.047314	-0.007963	0.000987	-0.005487	0.006294	0.012976	0.009252	0.014836	0.003315
3	0.058084	0.065607	-0.007251	0.007771	0.002349	-0.009508	0.003761	0.008604	0.016465	0.016478
4	0.055421	0.061725	-0.005491	0.003563	-0.000502	0.000677	0.006149	0.008173	0.011040	0.002636
5	0.056968	0.061677	-0.003609	0.002794	-0.002264	0.000528	0.007538	0.005980	0.010473	0.007096
6	0.056406	0.060804	-0.007354	0.003969	-0.000127	-0.002261	0.005953	0.008043	0.012876	0.007910
7	0.056621	0.062247	-0.005377	0.004567	-0.000739	-0.001909	0.006521	0.007792	0.013274	0.007580
8	0.056471	0.061457	-0.005322	0.003563	-0.000865	-0.000484	0.006488	0.007372	0.011251	0.006774
9	0.056506	0.061621	-0.005727	0.003736	-0.000924	-0.001465	0.006520	0.007277	0.012286	0.007175
10	0.056584	0.061525	-0.005812	0.004085	-0.000674	-0.001346	0.006437	0.007764	0.012530	0.007502
11	0.056499	0.061727	-0.005532	0.003890	-0.000821	-0.001319	0.006469	0.007435	0.012109	0.007145

Response of D(CNXNIFTY):

Period	D(IBOVESPA)	D(RTSI)	D(CNXNIFTY)	D(JKSE)	D(SSE)	D(PSIG)	D(FTSEMIB)	D(ISEQ)	D(ATHEX)	D(IBEX35)
1	0.050660	0.005573	0.067861	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	0.032180	-0.009795	0.023910	-0.001104	-0.008927	-0.004491	0.005133	0.005423	0.014509	0.007824
3	0.041403	0.000686	0.039679	0.010610	0.005137	-0.015188	-0.000803	0.009565	0.021886	0.018746
4	0.035468	-0.000973	0.037848	0.002523	-0.004150	-0.005016	0.001735	0.006061	0.009730	0.004366
5	0.038606	-0.002218	0.039952	0.002758	-0.001325	-0.005308	0.002168	0.004226	0.012114	0.009207
6	0.037389	-0.002500	0.035785	0.004454	-0.002008	-0.009138	0.001346	0.007300	0.014910	0.010532
7	0.037956	-0.001153	0.038412	0.004708	-0.000714	-0.007723	0.001383	0.006261	0.014403	0.009889
8	0.037483	-0.001939	0.038173	0.003550	-0.002230	-0.006754	0.001702	0.006036	0.012464	0.008723
9	0.037810	-0.001884	0.037770	0.003926	-0.001389	-0.007540	0.001558	0.005943	0.013828	0.009665
10	0.037687	-0.001853	0.037677	0.004256	-0.001634	-0.007692	0.001530	0.006504	0.013895	0.009719
11	0.037713	-0.001698	0.038037	0.004003	-0.001498	-0.007374	0.001541	0.006063	0.013481	0.009401

Response of D(JKSE):

Period	D(IBOVESPA)	D(RTSI)	D(CNXNIFTY)	D(JKSE)	D(SSE)	D(PSIG)	D(FTSEMIB)	D(ISEQ)	D(ATHEX)	D(IBEX35)
1	0.038861	0.021407	0.034300	0.058718	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	0.033786	0.015468	0.018798	0.035619	-0.007720	0.004843	0.007703	0.007190	-0.003812	0.001263
3	0.033852	0.015690	0.021295	0.046423	0.001251	-0.005153	0.002351	0.003036	0.006202	0.007317
4	0.033622	0.017550	0.021160	0.044174	-0.003648	-0.000163	0.003982	0.007686	0.001259	0.003306
5	0.033906	0.016824	0.023499	0.042629	-0.001884	0.000420	0.004129	0.002744	-5.28E-05	0.002684
6	0.033609	0.016036	0.020786	0.043481	-0.003087	-0.000706	0.003961	0.005732	0.001691	0.003999
7	0.034023	0.016993	0.021951	0.043993	-0.001743	-0.001211	0.003817	0.004788	0.002163	0.004264
8	0.033614	0.016597	0.021882	0.043448	-0.002716	-0.000251	0.003950	0.005102	0.000989	0.003377
9	0.033868	0.016683	0.021944	0.043426	-0.002308	-0.000560	0.003960	0.004628	0.001367	0.003708
10	0.033758	0.016556	0.021639	0.043637	-0.002453	-0.000694	0.003917	0.005113	0.001584	0.003851
11	0.033816	0.016736	0.021896	0.043594	-0.002313	-0.000645	0.003912	0.004867	0.001460	0.003758

Response of D(SSE):

Period	D(IBOVESPA)	D(RTSI)	D(CNXNIFTY)	D(JKSE)	D(SSE)	D(PSIG)	D(FTSEMIB)	D(ISEQ)	D(ATHEX)	D(IBEX35)
1	0.032196	0.013761	0.020612	-0.004295	0.087050	0.000000	0.000000	0.000000	0.000000	0.000000
2	0.009957	0.010127	0.013819	-0.008451	0.035013	-0.005859	0.005913	0.002224	0.001441	-0.012574
3	0.022850	0.008794	0.020304	-0.006885	0.064715	0.007256	0.001721	-0.002382	-0.003375	-0.003783
4	0.015381	0.010151	0.014615	-0.008308	0.046576	-0.004989	0.004243	0.000633	-0.001407	-0.009431
5	0.019991	0.009311	0.017290	-0.006283	0.058673	0.002411	0.002490	-0.000221	0.001180	-0.004550
6	0.017130	0.010066	0.016823	-0.007531	0.050675	-0.001647	0.003702	0.000194	-0.002564	-0.008160
7	0.018771	0.009547	0.016860	-0.007511	0.055707	0.001178	0.002915	-0.000715	-0.000388	-0.006507
8	0.017888	0.009644	0.016616	-0.007067	0.052486	-0.000899	0.003484	0.000344	-0.001102	-0.006918
9	0.018402	0.009792	0.016835	-0.007323	0.054698	0.000288	0.003019	-0.000392	-0.000767	-0.006706
10	0.018049	0.009661	0.016795	-0.007278	0.053169	-0.000236	0.003366	1.23E-05	-0.001143	-0.007058
11	0.018303	0.009702	0.016776	-0.007307	0.054151	5.11E-05	0.003157	-0.000256	-0.000866	-0.006736

Response of D(PSIG):

Period	D(IBOVESPA)	D(RTSI)	D(CNXNIFTY)	D(JKSE)	D(SSE)	D(PSIG)	D(FTSEMIB)	D(ISEQ)	D(ATHEX)	D(IBEX35)
1	0.035924	0.001496	0.005057	0.004077	0.003477	0.043334	0.000000	0.000000	0.000000	0.000000
2	0.027016	-0.004516	-0.002511	0.005244	-0.006908	0.020411	0.007290	0.003222	0.003634	0.008708
3	0.030151	-0.000541	-0.005205	0.009845	0.007254	0.020673	-0.000514	0.006157	0.013289	0.013839
4	0.027961	0.000320	0.000691	0.007891	-0.002417	0.023894	0.003732	0.004510	0.004494	0.005820
5	0.029234	-0.001543	-0.000856	0.005493	0.001647	0.026350	0.002609	0.002490	0.004470	0.007839
6	0.028630	-0.001270	-0.002577	0.007768	-0.000277	0.022043	0.002813	0.004714	0.007676	0.009068
7	0.029119	-0.000691	-0.001377	0.007720	0.001601	0.023906	0.002454	0.004338	0.007019	0.009019
8	0.028617	-0.000897	-0.001162	0.006944	-1.86E-05	0.023978	0.002825	0.003845	0.005601	0.007774
9	0.028969	-0.001103	-0.001608	0.007139	0.000861	0.023960	0.002680	0.003955	0.006580	0.008605
10	0.028819	-0.000961	-0.001620	0.007425	0.000505	0.023465	0.002691	0.004258	0.006629	0.008621
11	0.028870	-0.000903	-0.001415	0.007238	0.000750	0.023892	0.002659	0.004018	0.006383	0.008415

Response of D(FTSEMIB):

Period	D(IBOVESPA)	D(RTSI)	D(CNXNIFTY)	D(JKSE)	D(SSE)	D(PSIG)	D(FTSEMIB)	D(ISEQ)	D(ATHEX)	D(IBEX35)
1	0.046076	0.008596	0.009956	0.003543	0.003427	0.032013	0.046090	0.000000	0.000000	0.000000
2	0.027556	-0.002817	0.000905	0.001607	0.001671	0.010845	0.033909	0.004123	1.20E-05	0.016583
3	0.032906	0.006532	0.000456	0.006064	0.009704	0.010913	0.031645	0.003012	0.007160	0.009871
4	0.031394	0.003084	0.006069	0.003263	0.001709	0.018339	0.036043	0.003637	-0.000399	0.007903
5	0.031929	0.003053	0.003034	0.002078	0.005750	0.015315	0.033820	0.000909	0.000196	0.009332
6	0.031669	0.003189	0.002235	0.004257	0.004309	0.014009	0.034386	0.003906	0.003789	0.010136
7	0.032007	0.003647	0.003809	0.003702	0.005276	0.015342	0.034227	0.002666	0.001615	0.009783
8	0.031550	0.003320	0.003303	0.003066	0.004336	0.015339	0.034352	0.002527	0.001234	0.008890
9	0.031934	0.003264	0.003164	0.003531	0.004902	0.015086	0.034334	0.002766	0.002187	0.009813
10	0.031741	0.003385	0.003178	0.003582	0.004722	0.014916	0.034272	0.002887	0.001915	0.009606
11	0.031797	0.003411	0.003349	0.003419	0.004798	0.015216	0.034303	0.002674	0.001780	0.009433

Response of D(ISEQ):

Period	D(IBOVESPA)	D(RTSI)	D(CNXNIFTY)	D(JKSE)	D(SSE)	D(PSIG)	D(FTSEMIB)	D(ISEQ)	D(ATHEX)	D(IBEX35)
1	0.038893	0.002458	0.007033	0.004703	-0.011859	0.028219	0.024343	0.044749	0.000000	0.000000
2	0.025550	0.000376	0.007101	-0.000139	-0.007121	0.011865	0.020999	0.021111	-0.000119	0.006236
3	0.028356	3.77E-05	0.001684	0.004080	-0.006060	0.016189	0.017779	0.034884	0.002914	0.005166
4	0.028417	0.002778	0.007747	0.002379	-0.007870	0.015246	0.020784	0.027500	0.000789	0.003460
5	0.027864	-0.000254	0.004513	0.001729	-0.007295	0.017753	0.019447	0.030557	-0.000357	0.003950
6	0.028317	0.001662	0.005356	0.002641	-0.007334	0.014578	0.019870	0.029171	0.001819	0.004511
7	0.028114	0.000689	0.005030	0.002559	-0.007097	0.016599	0.019651	0.030420	0.000965	0.004363
8	0.028138	0.001333	0.005606	0.002245	-0.007456	0.015749	0.019820	0.029296	0.000625	0.003971
9	0.028147	0.000810	0.005053	0.002356	-0.007232	0.016249	0.019733	0.029954	0.001017	0.004258
10	0.028173	0.001146	0.005328	0.002470	-0.007321	0.015752	0.019770	0.029707	0.001005	0.004300
11	0.028133	0.000996	0.005233	0.002364	-0.007247	0.016124	0.019729	0.029811	0.000891	0.004166

Response of D(ATHEX):

Period	D(IBOVESPA)	D(RTSI)	D(CNXNIFTY)	D(JKSE)	D(SSE)	D(PSIG)	D(FTSEMIB)	D(ISEQ)	D(ATHEX)	D(IBEX35)
1	0.053449	0.023721	0.027643	-0.000523	0.008662	0.037688	0.030340	0.000484	0.055565	0.000000
2	0.034046	-0.001597	0.021662	0.001285	-0.007775	0.034488	0.030358	0.007805	0.024460	0.011847
3	0.039482	0.014793	0.018337	-0.000959	0.009513	0.022729	0.022048	-0.001273	0.038111	0.007756
4	0.037768	0.007169	0.020836	0.002292	-0.002260	0.032197	0.028256	0.007483	0.036793	0.006929
5	0.038981	0.010372	0.022214	-0.000611	0.003830	0.029292	0.025699	0.000709	0.032437	0.008213
6	0.037688	0.008667	0.019273	0.000356	0.000798	0.029145	0.026243	0.004347	0.035902	0.006823
7	0.038927	0.009646	0.021336	0.000945	0.002563	0.029338	0.026334	0.003182	0.035497	0.008638
8	0.037990	0.009227	0.020463	0.000182	0.001533	0.029437	0.026128	0.003445	0.034394	0.007108
9	0.038525	0.009403	0.020854	0.000437	0.002042	0.029491	0.026301	0.003144	0.035252	0.007759
10	0.038296	0.009213	0.020546	0.000497	0.001769	0.029322	0.026226	0.003538	0.034972	0.007744
11	0.038380	0.009430	0.020753	0.000445	0.001999	0.029361	0.026208	0.003247	0.035061	0.007651

Response of D(IBEX35):

Period	D(IBOVESPA)	D(RTSI)	D(CNXNIFTY)	D(JKSE)	D(SSE)	D(PSIG)	D(FTSEMIB)	D(ISEQ)	D(ATHEX)	D(IBEX35)
1	0.047078	0.007097	0.010774	0.001741	-0.001456	0.037159	0.028799	-0.004596	0.006054	0.031534
2	0.025308	-0.002772	0.001241	0.000514	-5.10E-05	0.014872	0.018348	-0.002663	-0.007627	0.028279
3	0.033206	0.006662	0.002377	0.002251	0.004242	0.018002	0.018247	-0.003572	0.006851	0.027595
4	0.030828	0.001144	0.005637	0.002022	-0.001227	0.022741	0.021159	-0.001759	-0.002538	0.026681
5	0.031390	0.003589	0.003700	0.000121	0.002188	0.019540	0.019098	-0.005051	-0.000764	0.026868
6	0.031236	0.002214	0.003182	0.002101	0.000547	0.020044	0.019985	-0.001993	0.001397	0.027525
7	0.031490	0.003228	0.004340	0.001493	0.001545	0.020055	0.019661	-0.003508	-0.000234	0.027491
8	0.031111	0.002685	0.003753	0.001169	0.000834	0.020411	0.019751	-0.003183	-0.000224	0.026711
9	0.031446	0.002823	0.003914	0.001483	0.001192	0.020123	0.019802	-0.003230	0.000275	0.027445
10	0.031256	0.002798	0.003766	0.001460	0.001101	0.020086	0.019704	-0.003074	7.41E-05	0.027218
11	0.031330	0.002875	0.003949	0.001399	0.001129	0.020216	0.019760	-0.003248	5.90E-05	0.027159

Cholesky Ordering: D(IBOVESPA) D(RTSI) D(CNXNIFTY) D(JKSE) D(SSE) D(PSIG) D(FTSEMIB) D(ISEQ) D(ATHEX) D(IBEX35)

Appendix 3.9: Variance decomposition

Variance Decomposition of D(IBOVESPA):

Period	S.E.	D(IBOVESPA)	D(RTSI)	D(CNXNIFTY)	D(JKSE)	D(SSE)	D(PSIG)	D(FTSEMIB)	D(ISEQ)	D(ATHEX)	D(IBEX35)
1	0.072717	100.0000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	0.074526	97.06741	0.060387	0.001374	0.199630	0.265285	0.229335	1.245086	0.724499	0.176421	0.030567
3	0.074719	96.70118	0.134628	0.041714	0.209701	0.277524	0.230132	1.275839	0.813852	0.226755	0.088671
4	0.074744	96.64971	0.150587	0.042343	0.209798	0.293148	0.241797	1.277206	0.818687	0.227930	0.088792
5	0.074746	96.64527	0.151746	0.042371	0.209825	0.293643	0.241879	1.277148	0.819554	0.228847	0.089715
6	0.074747	96.64440	0.151870	0.042482	0.209870	0.293651	0.242107	1.277256	0.819780	0.228869	0.089715
7	0.074747	96.64430	0.151901	0.042491	0.209871	0.293652	0.242107	1.277267	0.819813	0.228876	0.089726
8	0.074747	96.64428	0.151906	0.042491	0.209871	0.293655	0.242109	1.277267	0.819817	0.228876	0.089726
9	0.074747	96.64428	0.151907	0.042491	0.209871	0.293655	0.242109	1.277267	0.819817	0.228876	0.089726
10	0.074747	96.64428	0.151907	0.042491	0.209871	0.293655	0.242109	1.277267	0.819817	0.228876	0.089726
11	0.074747	96.64428	0.151907	0.042491	0.209871	0.293655	0.242109	1.277267	0.819817	0.228876	0.089726

Variance Decomposition of D(RTSI):

Period	S.E.	D(IBOVESPA)	D(RTSI)	D(CNXNIFTY)	D(JKSE)	D(SSE)	D(PSIG)	D(FTSEMIB)	D(ISEQ)	D(ATHEX)	D(IBEX35)
1	0.101286	39.68794	60.31206	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	0.109344	42.47367	52.60830	0.061575	0.074303	0.024124	0.678029	0.630933	3.369718	0.044925	0.034418
3	0.110102	42.37436	52.20390	0.148345	0.113594	0.062504	0.676396	0.769384	3.566374	0.044561	0.040583
4	0.110198	42.37169	52.15343	0.148532	0.113737	0.076553	0.675509	0.768179	3.606348	0.044846	0.041183
5	0.110211	42.37121	52.14776	0.148849	0.113971	0.078363	0.675350	0.768240	3.609716	0.044978	0.041565
6	0.110213	42.37143	52.14642	0.148904	0.114010	0.078407	0.675423	0.768332	3.610498	0.045014	0.041563
7	0.110213	42.37146	52.14622	0.148925	0.114017	0.078419	0.675421	0.768357	3.610602	0.045014	0.041565
8	0.110213	42.37147	52.14619	0.148925	0.114017	0.078423	0.675421	0.768358	3.610617	0.045014	0.041565
9	0.110213	42.37147	52.14619	0.148926	0.114017	0.078424	0.675421	0.768358	3.610619	0.045014	0.041565
10	0.110213	42.37147	52.14619	0.148926	0.114017	0.078424	0.675421	0.768358	3.610619	0.045014	0.041565
11	0.110213	42.37147	52.14619	0.148926	0.114017	0.078424	0.675421	0.768358	3.610619	0.045014	0.041565

Variance Decomposition of D(CNXNIFTY):

Period	S.E.	D(IBOVESPA)	D(RTSI)	D(CNXNIFTY)	D(JKSE)	D(SSE)	D(PSIG)	D(FTSEMIB)	D(ISEQ)	D(ATHEX)	D(IBEX35)
1	0.077325	38.17528	2.834947	58.98977	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	0.079485	39.08617	2.685804	56.25988	0.031380	0.423608	0.135840	0.210226	0.729678	0.418907	0.018509
3	0.079636	38.99388	2.708413	56.12050	0.065164	0.422129	0.142009	0.329806	0.771004	0.420451	0.026647
4	0.079653	38.98930	2.714866	56.09611	0.065234	0.426305	0.146291	0.330049	0.777750	0.423993	0.030093
5	0.079655	38.98816	2.715902	56.09374	0.065232	0.427461	0.146565	0.330144	0.777996	0.424059	0.030747
6	0.079655	38.98810	2.715948	56.09340	0.065246	0.427459	0.146677	0.330159	0.778119	0.424138	0.030761
7	0.079655	38.98810	2.715959	56.09333	0.065249	0.427459	0.146684	0.330173	0.778138	0.424138	0.030765
8	0.079655	38.98810	2.715962	56.09332	0.065249	0.427459	0.146685	0.330174	0.778140	0.424139	0.030765
9	0.079655	38.98810	2.715962	56.09332	0.065249	0.427460	0.146685	0.330174	0.778141	0.424139	0.030765
10	0.079655	38.98810	2.715962	56.09332	0.065249	0.427460	0.146685	0.330174	0.778141	0.424139	0.030765
11	0.079655	38.98810	2.715962	56.09332	0.065249	0.427460	0.146685	0.330174	0.778141	0.424139	0.030765

Variance Decomposition of D(JKSE):

Period	S.E.	D(IBOVESPA)	D(RTSI)	D(CNXNIFTY)	D(JKSE)	D(SSE)	D(PSIG)	D(FTSEMIB)	D(ISEQ)	D(ATHEX)	D(IBEX35)
1	0.066740	29.23014	7.060626	15.23799	48.47124	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	0.072454	34.51124	7.034134	12.93148	41.15027	1.11E-06	0.838025	0.137316	1.964832	1.083072	0.349624
3	0.073007	34.73375	7.254545	12.73797	40.53179	0.079144	0.944910	0.214390	2.080395	1.075752	0.347351
4	0.073055	34.73048	7.274547	12.72164	40.47862	0.093340	0.943775	0.214201	2.119129	1.076900	0.347368
5	0.073063	34.73059	7.278404	12.72017	40.47074	0.094151	0.944088	0.214706	2.122789	1.076852	0.347509
6	0.073064	34.73128	7.278800	12.71976	40.46920	0.094180	0.944103	0.214824	2.123525	1.076810	0.347519
7	0.073064	34.73136	7.278879	12.71970	40.46898	0.094201	0.944098	0.214841	2.123618	1.076805	0.347518
8	0.073064	34.73136	7.278890	12.71969	40.46896	0.094205	0.944097	0.214841	2.123633	1.076804	0.347518
9	0.073064	34.73136	7.278892	12.71969	40.46895	0.094206	0.944097	0.214842	2.123635	1.076804	0.347518
10	0.073064	34.73136	7.278892	12.71969	40.46895	0.094206	0.944097	0.214842	2.123635	1.076804	0.347518
11	0.073064	34.73136	7.278892	12.71969	40.46895	0.094206	0.944097	0.214842	2.123635	1.076804	0.347518

Variance Decomposition of D(SSE):

Period	S.E.	D(IBOVESPA)	D(RTSI)	D(CNXNIFTY)	D(JKSE)	D(SSE)	D(PSIG)	D(FTSEMIB)	D(ISEQ)	D(ATHEX)	D(IBEX35)
1	0.087347	16.73946	1.858709	2.010168	0.478124	78.91354	0.000000	0.000000	0.000000	0.000000	0.000000
2	0.088628	16.49951	2.647828	1.953177	0.615911	76.68408	0.052838	0.472622	0.583360	0.354530	0.136138
3	0.089016	16.75881	2.713961	2.000301	0.627125	76.01772	0.192926	0.530132	0.666328	0.351807	0.140894
4	0.089076	16.81174	2.724740	1.999582	0.626680	75.91494	0.192666	0.540764	0.687772	0.352211	0.148903
5	0.089082	16.81387	2.727437	1.999355	0.626622	75.90729	0.193370	0.540794	0.690028	0.352330	0.148902
6	0.089082	16.81405	2.727786	1.999328	0.626622	75.90645	0.193370	0.540787	0.690309	0.352360	0.148941
7	0.089082	16.81411	2.727825	1.999332	0.626625	75.90627	0.193385	0.540794	0.690358	0.352364	0.148942
8	0.089082	16.81413	2.727831	1.999333	0.626625	75.90623	0.193385	0.540796	0.690366	0.352364	0.148942
9	0.089082	16.81413	2.727832	1.999333	0.626625	75.90623	0.193385	0.540796	0.690367	0.352364	0.148942
10	0.089082	16.81413	2.727832	1.999333	0.626625	75.90623	0.193385	0.540796	0.690368	0.352364	0.148942
11	0.089082	16.81413	2.727832	1.999333	0.626625	75.90623	0.193385	0.540796	0.690368	0.352364	0.148942

Variance Decomposition of D(PSIG):

Period	S.E.	D(IBOVESPA)	D(RTSI)	D(CNXNIFTY)	D(JKSE)	D(SSE)	D(PSIG)	D(FTSEMIB)	D(ISEQ)	D(ATHEX)	D(IBEX35)
1	0.052464	39.56491	2.816934	5.764950	0.102617	0.887743	50.86284	0.000000	0.000000	0.000000	0.000000
2	0.055266	41.62342	2.938382	5.349960	0.099103	1.342435	45.85369	1.278946	0.681165	0.099940	0.732957
3	0.055431	41.56613	3.005089	5.319726	0.098688	1.399582	45.66210	1.290149	0.782237	0.125931	0.750362
4	0.055446	41.54775	3.018718	5.317276	0.098766	1.414920	45.64227	1.291202	0.789026	0.126811	0.753264
5	0.055448	41.54677	3.019806	5.317073	0.098940	1.414930	45.63999	1.291142	0.790336	0.127406	0.753611
6	0.055448	41.54688	3.019946	5.317095	0.098968	1.414911	45.63931	1.291272	0.790595	0.127403	0.753622
7	0.055448	41.54690	3.019978	5.317086	0.098969	1.414914	45.63921	1.291277	0.790632	0.127408	0.753627
8	0.055448	41.54689	3.019983	5.317085	0.098969	1.414917	45.63920	1.291277	0.790636	0.127408	0.753626
9	0.055448	41.54689	3.019984	5.317085	0.098969	1.414917	45.63920	1.291277	0.790637	0.127408	0.753627
10	0.055448	41.54689	3.019984	5.317085	0.098969	1.414917	45.63920	1.291277	0.790637	0.127408	0.753627
11	0.055448	41.54689	3.019984	5.317085	0.098969	1.414917	45.63920	1.291277	0.790637	0.127408	0.753627

Variance Decomposition of D(FTSEMIB):

Period	S.E.	D(IBOVESPA)	D(RTSI)	D(CNXNIFTY)	D(JKSE)	D(SSE)	D(PSIG)	D(FTSEMIB)	D(ISEQ)	D(ATHEX)	D(IBEX35)
1	0.062414	39.09866	4.732208	3.900327	0.003309	0.037932	18.40509	33.82248	0.000000	0.000000	0.000000
2	0.064828	38.41817	4.610480	3.623245	0.030665	0.060730	17.40914	31.69532	1.593753	0.192827	2.365676
3	0.065067	38.13689	4.720282	3.596673	0.030448	0.368060	17.46333	31.48926	1.594462	0.213615	2.386982
4	0.065083	38.12192	4.723689	3.596981	0.030465	0.370452	17.45685	31.47762	1.599268	0.227937	2.394821
5	0.065087	38.12029	4.723716	3.598106	0.031034	0.370793	17.45792	31.47515	1.600327	0.228147	2.394518
6	0.065088	38.12051	4.723794	3.598108	0.031038	0.370787	17.45759	31.47469	1.600552	0.228244	2.394683
7	0.065088	38.12049	4.723823	3.598103	0.031038	0.370820	17.45759	31.47464	1.600569	0.228247	2.394679
8	0.065088	38.12048	4.723826	3.598103	0.031039	0.370822	17.45759	31.47464	1.600571	0.228248	2.394680
9	0.065088	38.12048	4.723826	3.598103	0.031039	0.370822	17.45759	31.47464	1.600572	0.228248	2.394680
10	0.065088	38.12048	4.723826	3.598103	0.031039	0.370822	17.45759	31.47464	1.600572	0.228248	2.394680
11	0.065088	38.12048	4.723826	3.598103	0.031039	0.370822	17.45759	31.47464	1.600572	0.228248	2.394680

Variance Decomposition of D(ISEQ):

Period	S.E.	D(IBOVESPA)	D(RTSI)	D(CNXNIFTY)	D(JKSE)	D(SSE)	D(PSIG)	D(FTSEMIB)	D(ISEQ)	D(ATHEX)	D(IBEX35)
1	0.062335	30.93061	2.998879	1.539086	0.324979	1.509060	11.60918	9.572429	41.51578	0.000000	0.000000
2	0.065972	31.57925	5.138018	2.129012	0.483110	1.712023	10.79765	9.446662	38.27661	0.150310	0.287345
3	0.066335	31.60501	5.329043	2.115180	0.478225	1.854158	10.70642	9.351489	38.12711	0.148956	0.284413
4	0.066380	31.60596	5.359382	2.115089	0.480563	1.861086	10.69319	9.340403	38.09903	0.154022	0.291275
5	0.066389	31.61039	5.361843	2.115387	0.480834	1.860580	10.69182	9.339143	38.09458	0.154129	0.291299
6	0.066390	31.61112	5.362437	2.115438	0.480849	1.860594	10.69137	9.338956	38.09374	0.154159	0.291336
7	0.066391	31.61119	5.362532	2.115428	0.480848	1.860625	10.69132	9.338913	38.09365	0.154159	0.291334
8	0.066391	31.61119	5.362544	2.115427	0.480848	1.860628	10.69132	9.338907	38.09364	0.154159	0.291335
9	0.066391	31.61119	5.362546	2.115428	0.480848	1.860628	10.69131	9.338907	38.09364	0.154159	0.291335
10	0.066391	31.61119	5.362546	2.115428	0.480848	1.860628	10.69131	9.338907	38.09364	0.154159	0.291335
11	0.066391	31.61119	5.362546	2.115428	0.480848	1.860628	10.69131	9.338907	38.09364	0.154159	0.291335

Variance Decomposition of D(ATHEX) and D(IBEX35):

Period	S.E.	D(IBOVESPA)	D(RTSI)	D(CNXNIFTY)	D(JKSE)	D(SSE)	D(PSIG)	D(FTSEMIB)	D(ISEQ)	D(ATHEX)	D(IBEX35)
1	0.085953	31.70279	7.910459	6.331464	0.018133	0.895361	9.598317	10.32496	0.050189	33.16833	0.000000
2	0.090879	31.11546	7.230308	6.313365	0.127744	1.261365	10.50752	9.979484	2.769816	29.71663	0.978300
3	0.091385	31.12252	7.384556	6.287875	0.127889	1.340397	10.54527	9.895210	2.790783	29.51291	0.992593
4	0.091428	31.11052	7.393423	6.291623	0.128589	1.357285	10.54293	9.890349	2.803016	29.48773	0.994532
5	0.091433	31.10894	7.394531	6.291522	0.129164	1.357326	10.54326	9.889605	2.804405	29.48578	0.995459
6	0.091434	31.10935	7.394589	6.291526	0.129202	1.357307	10.54318	9.889538	2.804794	29.48500	0.995520
7	0.091435	31.10940	7.394627	6.291510	0.129202	1.357317	10.54315	9.889516	2.804834	29.48492	0.995524
8	0.091435	31.10940	7.394633	6.291508	0.129202	1.357321	10.54315	9.889513	2.804839	29.48491	0.995524
9	0.091435	31.10940	7.394634	6.291508	0.129202	1.357321	10.54315	9.889513	2.804840	29.48491	0.995524
10	0.091435	31.10940	7.394634	6.291508	0.129202	1.357321	10.54315	9.889513	2.804840	29.48491	0.995524
11	0.091435	31.10940	7.394634	6.291508	0.129202	1.357321	10.54315	9.889512	2.804840	29.48491	0.995524

Period	S.E.	D(IBOVESPA)	D(RTSI)	D(CNXNIFTY)	D(JKSE)	D(SSE)	D(PSIG)	D(FTSEMIB)	D(ISEQ)	D(ATHEX)	D(IBEX35)
1	0.062908	40.55274	2.225334	3.700592	0.004913	0.123697	19.45115	14.41623	0.498268	1.578370	17.44871
2	0.064370	39.79675	2.381841	3.556753	0.037055	0.189103	18.88416	13.79263	1.148114	2.657105	17.55650
3	0.064553	39.57494	2.446304	3.564902	0.041257	0.364947	18.97023	13.75119	1.142858	2.642153	17.50122
4	0.064566	39.55990	2.446655	3.563880	0.041766	0.365029	18.97137	13.74628	1.146380	2.656299	17.50244
5	0.064569	39.55835	2.446747	3.565239	0.042199	0.365544	18.97171	13.74632	1.147033	2.656033	17.50083
6	0.064569	39.55845	2.446827	3.565212	0.042199	0.365545	18.97152	13.74621	1.147145	2.656123	17.50077
7	0.064569	39.55842	2.446844	3.565212	0.042200	0.365571	18.97153	13.74619	1.147151	2.656120	17.50076
8	0.064569	39.55842	2.446845	3.565212	0.042200	0.365572	18.97153	13.74619	1.147153	2.656122	17.50076
9	0.064569	39.55842	2.446846	3.565212	0.042200	0.365572	18.97153	13.74619	1.147153	2.656122	17.50076
10	0.064569	39.55842	2.446846	3.565212	0.042200	0.365572	18.97153	13.74619	1.147153	2.656122	17.50076
11	0.064569	39.55842	2.446846	3.565212	0.042200	0.365572	18.97153	13.74619	1.147153	2.656122	17.50076

Cholesky Ordering: D(IBOVESPA) D(RTSI) D(CNXNIFTY) D(JKSE) D(SSE) D(PSIG) D(FTSEMIB) D(ISEQ) D(ATHEX) D(IBEX35)