

CHAPTER V

CONCLUSION AND RECOMMENDATION

This chapter provides the conclusion of the research study, suggestion for further research, and also gives the research limitations. The purpose of this research is to investigate the causal and dynamics relationship among stock return, return volatility, and trading volume in South-East Asia Market from period May 2011 to December 2014

5.1 Conclusions

From the result of this research study on the causal and dynamics relationship among stock return, return volatility, and trading volume in South-East Asia Market, it can be concluded as follows:

1. Estimation Vector Auto-Regression (VAR) model concluded that Thailand market return have no impact to trading volume, and vice versa. It is different with Vietnam market, the stock market return in Vietnam have impact to trading volume, and vice versa. Stock return does not have impact to trading volume, but trading volume does have impact to return in Philippines, Malaysia, and Indonesia.
2. Engle-Granger Causality test indicates the relationship is bidirectional, unidirectional, or there is no causality relationship. The bidirectional (causality) relationship between stock return and trading volume is in Vietnam market. The unidirectional relationship is in Malaysia.

Trading volume does Granger causes stock return, but stock return does not Granger causes trading volume. There is no causality relationship between trading volume and stock market return in Thailand, Philippines, and Indonesia.

3. Employing EGARCH model, all countries, except Philippines, provided evidence for trading volume information being useful in predicting future return volatility.

5.2 Research Limitations

There are several limitations of analysis of this research study. It can be from variables, length period, the research method, and so on. The several limitations which are:

1. The research use four years as the sample data period which from May 2011 – December 2014 providing 192 observations. The short period of this research may produce different result with the research using longer period.
2. This research use South-East Asia market as sample. Based on sample used, the findings can't be used for other continents and countries to predict future stock market return and volatility.
3. Trading volume is useful information in predicting stock market return and volatility. Trading volume is one of information which has ability to predict future return and volatility. There are many indicators that can be used as proxy of information.

4. The main research method of this study is Vector Auto-Regression (VAR) model and Exponential Generalized Auto-Regressive Conditional Heteroskedasticity (E-GARCH). The coefficient of variables is difficult to make interpretation in VAR and E-GARCH.

5.3 Recommendation

The several limitations of this research should be solved in further research. Thus, the recommendation can be given based on the result of this research study as follows:

1. This research use weekly data for each country in South-East Asia market from period May 2011 – 2014. It is possibility better if further research will be using longer period. Longer period in analysis may provide more accurate result.
2. This research uses trading volume to predict future stock return and its volatility. There is some useful information in predicting future return and volatility, besides trading volume. The macroeconomics and other stock market return can be as others indicator to forecast stock return and its volatility in the future.
3. VAR and EGARCH model is appropriate model to analyze the causal and dynamics relationship among stock returns, return volatility, and trading volume in South-East Asia market. Comparing the EGARCH, there are other models which have similar purpose as EGARCH. Further research which investigates the stock return and its volatility can adopt other types

of GARCH model, such as Integrated GARCH, GARCH in mean, Threshold GARCH, Power ARCH, Component GARCH, etc.



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APPENDIX 1: Time Series Data (Price, Volume, Return. and Detrended Volume)

Stock Exchange of Thailand Index – FTSE All-share Index

Date	Price	Volume (billion share)	R	DV
April 24, 2011	1335.01	12.748		
May 1, 2011	1277.67	8.899	-0.04295	-0.30193
May 8, 2011	1320.21	13.561	0.033295	0.523879
May 15, 2011	1300.19	6.935	-0.01516	-0.48861
May 22, 2011	1297.09	11.456	-0.00238	0.651911
May 29, 2011	1278.89	7.565	-0.01403	-0.33965
June 5, 2011	1228.1	8.262	-0.03971	0.092135
June 12, 2011	1226.76	6.736	-0.00109	-0.1847
June 19, 2011	1232.2	6.51	0.004434	-0.03355
June 26, 2011	1260.27	5.042	0.02278	-0.2255
July 3, 2011	1324.35	18.79	0.050846	2.726696
July 10, 2011	1307.1	7.387	-0.01303	-0.60687
July 17, 2011	1361.97	10.999	0.041978	0.488967
July 24, 2011	1376.98	10.621	0.011021	-0.03437
July 31, 2011	1318.77	13.742	-0.04227	0.293852
August 7, 2011	1280.63	11.174	-0.02892	-0.18687
August 14, 2011	1291.29	11.194	0.008324	0.00179
August 21, 2011	1248.06	12.527	-0.03348	0.119082
August 28, 2011	1284.98	9.034	0.029582	-0.27884
September 4, 2011	1278.56	8.495	-0.005	-0.05966
September 11, 2011	1240.74	6.726	-0.02958	-0.20824
September 18, 2011	1150.4	8.969	-0.07281	0.333482
September 25, 2011	1100.06	13.508	-0.04376	0.506076
October 2, 2011	1092.66	13.541	-0.00673	0.002443
October 9, 2011	1154.26	11.523	0.056376	-0.14903
October 16, 2011	1103.91	8.293	-0.04362	-0.28031
October 23, 2011	1183.34	6.389	0.071953	-0.22959
October 30, 2011	1161.35	6.89	-0.01858	0.078416
November 6, 2011	1168.49	8.605	0.006148	0.248911
November 13, 2011	1176.44	9.232	0.006804	0.072865
November 20, 2011	1156.39	6.43	-0.01704	-0.30351
November 27, 2011	1241.1	8.91	0.073254	0.385692
December 4, 2011	1246.54	10.51	0.004383	0.179574
December 11, 2011	1243.57	9.47	-0.00238	-0.09895
December 18, 2011	1246.25	8.3	0.002155	-0.12355

December 25, 2011	1239.4	4.26	-0.0055	-0.48675
January 1, 2012	1246.6	4.84	0.005809	0.13615
January 8, 2012	1255.9	7.32	0.00746	0.512397
January 15, 2012	1277.18	8.35	0.016944	0.14071
January 22, 2012	1299.08	7.47	0.017147	-0.10539
January 29, 2012	1328.99	10.6	0.023024	0.419009
February 5, 2012	1347.97	10.78	0.014282	0.016981
February 12, 2012	1376.48	9.33	0.02115	-0.13451
February 19, 2012	1396.55	11.8	0.014581	0.264737
February 26, 2012	1417.38	10.88	0.014915	-0.07797
March 4, 2012	1407.86	11.47	-0.00672	0.054228
March 11, 2012	1452.4	13.28	0.031637	0.157803
March 18, 2012	1457.42	15.28	0.003456	0.150602
March 25, 2012	1456.92	9.55	-0.00034	-0.375
April 1, 2012	1442.74	6.3	-0.00973	-0.34031
April 8, 2012	1427.78	7.9	-0.01037	0.253968
April 15, 2012	1461.38	6.67	0.023533	-0.1557
April 22, 2012	1478.05	8.49	0.011407	0.272864
April 29, 2012	1500.19	8.34	0.014979	-0.01767
May 6, 2012	1446.76	10.83	-0.03562	0.298561
May 13, 2012	1400.62	9.51	-0.03189	-0.12188
May 20, 2012	1371.82	6.83	-0.02056	-0.28181
May 27, 2012	1345.93	5.6	-0.01887	-0.18009
June 3, 2012	1362.27	4.72	0.01214	-0.15714
June 10, 2012	1413.43	7.02	0.037555	0.487288
June 17, 2012	1395.97	5.52	-0.01235	-0.21368
June 24, 2012	1422.82	5.3	0.019234	-0.03986
July 1, 2012	1452.46	6.49	0.020832	0.224528
July 8, 2012	1465.38	5.75	0.008895	-0.11402
July 15, 2012	1460.59	8.45	-0.00327	0.469565
July 22, 2012	1425.56	6.31	-0.02398	-0.25325
July 29, 2012	1453	6.13	0.019249	-0.02853
August 5, 2012	1477	7.41	0.016518	0.208809
August 12, 2012	1478.64	7.24	0.00111	-0.02294
August 19, 2012	1483.91	7.03	0.003564	-0.02901
August 26, 2012	1471.04	6.82	-0.00867	-0.02987
September 2, 2012	1498.23	9.02	0.018484	0.322581
September 9, 2012	1537.82	11.26	0.026425	0.248337
September 16, 2012	1545.82	16.19	0.005202	0.437833
September 23, 2012	1555.93	13.13	0.00654	-0.18901
September 30, 2012	1571.8	15.5	0.0102	0.180503
October 7, 2012	1558.08	16.56	-0.00873	0.068387
October 14, 2012	1559.93	13.34	0.001187	-0.19444

October 21, 2012	1529.82	12.12	-0.0193	-0.09145
October 28, 2012	1564.42	11.29	0.022617	-0.06848
November 4, 2012	1550.76	10.68	-0.00873	-0.05403
November 11, 2012	1536.8	11.68	-0.009	0.093633
November 18, 2012	1540.22	9.25	0.002225	-0.20805
November 25, 2012	1588.52	10.37	0.031359	0.121081
December 2, 2012	1610.19	10.6	0.013642	0.022179
December 9, 2012	1643.89	8.62	0.020929	-0.18679
December 16, 2012	1661.85	16.19	0.010925	0.87819
December 23, 2012	1681.92	8.26	0.012077	-0.48981
December 30, 2012	1714.49	7.71	0.019365	-0.06659
January 6, 2013	1703.44	5.85	-0.00645	-0.24125
January 13, 2013	1727.03	10.79	0.013848	0.844444
January 20, 2013	1764.64	6.49	0.021777	-0.39852
January 27, 2013	1805.73	5.11	0.023285	-0.21263
February 3, 2013	1797.58	10.27	-0.00451	1.009785
February 10, 2013	1826.05	10.33	0.015838	0.005842
February 17, 2013	1856.13	9.61	0.016473	-0.0697
February 24, 2013	1856.46	6.57	0.000178	-0.31634
March 3, 2013	1883.63	7.1	0.014635	0.08067
March 10, 2013	1923.98	7	0.021421	-0.01408
March 17, 2013	1779.39	13.71	-0.07515	0.958571
March 24, 2013	1875.49	6.82	0.054007	-0.50255
March 31, 2013	1790.49	9.86	-0.04532	0.445748
April 7, 2013	1831.08	14.66	0.02267	0.486815
April 14, 2013	1849.38	11.45	0.009994	-0.21896
April 21, 2013	1895.74	17.47	0.025068	0.525764
April 28, 2013	1884.66	14.85	-0.00584	-0.14997
May 5, 2013	1938.09	17.06	0.02835	0.148822
May 12, 2013	1940.94	17.62	0.001471	0.032825
May 19, 2013	1914.4	11.81	-0.01367	-0.32974
May 26, 2013	1848.44	16.66	-0.03445	0.410669
June 2, 2013	1798.99	12.06	-0.02675	-0.27611
June 9, 2013	1746.11	13.09	-0.02939	0.085406
June 16, 2013	1656	16.9	-0.05161	0.291062
June 23, 2013	1728.54	8.57	0.043804	-0.4929
June 30, 2013	1706.38	9.15	-0.01282	0.067678
July 7, 2013	1728.69	12.07	0.013074	0.319126
July 14, 2013	1757.17	9.39	0.016475	-0.22204
July 21, 2013	1748.28	7.94	-0.00506	-0.15442
July 28, 2013	1682.64	15.51	-0.03755	0.953401
August 4, 2013	1693.89	10.93	0.006686	-0.29529
August 11, 2013	1718.13	11.58	0.01431	0.059469

August 18, 2013	1578.8	9	-0.08109	-0.2228
August 25, 2013	1526.75	11.25	-0.03297	0.25
September 1, 2013	1579.33	8.55	0.034439	-0.24
September 8, 2013	1665.89	10.05	0.054808	0.175439
September 15, 2013	1772.89	10.36	0.06423	0.030846
September 22, 2013	1683.21	12.6	-0.05058	0.216216
September 29, 2013	1691.08	13.72	0.004676	0.088889
October 6, 2013	1734.48	18.86	0.025664	0.374636
October 13, 2013	1766.21	6.44	0.018294	-0.65854
October 20, 2013	1727.57	13.29	-0.02188	1.063665
October 27, 2013	1702.31	12.24	-0.01462	-0.07901
November 3, 2013	1675.05	16.91	-0.01601	0.381536
November 10, 2013	1690.99	13.55	0.009516	-0.1987
November 17, 2013	1611.94	14.25	-0.04675	0.051661
November 24, 2013	1626.46	13.7	0.009008	-0.0386
December 1, 2013	1611.5	11.69	-0.0092	-0.14672
December 8, 2013	1586.89	10.9	-0.01527	-0.06758
December 15, 2013	1589.38	9.31	0.001569	-0.14587
December 22, 2013	1531.1	9.58	-0.03667	0.029001
December 29, 2013	1439.16	11.06	-0.06005	0.154489
January 5, 2014	1483.65	9.73	0.030914	-0.12025
January 12, 2014	1532.34	13.39	0.032818	0.376156
January 19, 2014	1559.24	8.84	0.017555	-0.33981
January 26, 2014	1505.25	8.02	-0.03463	-0.09276
February 2, 2014	1530.93	11.85	0.01706	0.477556
February 9, 2014	1549.73	10.62	0.01228	-0.1038
February 16, 2014	1538.35	12.18	-0.00734	0.146893
February 23, 2014	1567.13	12.22	0.018708	0.003284
March 2, 2014	1605.76	11.92	0.02465	-0.02455
March 9, 2014	1621.69	14.38	0.009921	0.206376
March 16, 2014	1607.94	10.64	-0.00848	-0.26008
March 23, 2014	1617.13	11.88	0.005715	0.116541
March 30, 2014	1653.04	9.88	0.022206	-0.16835
April 6, 2014	1646.78	7.89	-0.00379	-0.20142
April 13, 2014	1673.19	9.34	0.016037	0.183777
April 20, 2014	1667.81	13.08	-0.00322	0.400428
April 27, 2014	1687.8	8.75	0.011986	-0.33104
May 4, 2014	1632.82	9.07	-0.03257	0.036571
May 11, 2014	1667.35	7.67	0.021147	-0.15436
May 18, 2014	1648.54	9.99	-0.01128	0.302477
May 25, 2014	1670.5	11.04	0.013321	0.105105
June 1, 2014	1722.72	9.31	0.03126	-0.1567
June 8, 2014	1722.61	12.99	-6.4E-05	0.395274

June 15, 2014	1732.11	18.26	0.005515	0.405697
June 22, 2014	1749.85	12.8	0.010242	-0.29901
June 29, 2014	1771.75	15.92	0.012515	0.24375
July 6, 2014	1797.65	10.55	0.014618	-0.33731
July 13, 2014	1808.99	6.83	0.006308	-0.35261
July 20, 2014	1822.04	6.9	0.007214	0.010249
July 27, 2014	1768.51	6.52	-0.02938	-0.05507
August 3, 2014	1792.99	12.91	0.013842	0.980061
August 10, 2014	1832.94	12.12	0.022281	-0.06119
August 17, 2014	1840.13	13.59	0.003923	0.121287
August 24, 2014	1846	14.87	0.00319	0.094187
August 31, 2014	1881.79	5.59	0.019388	-0.62408
September 7, 2014	1868.79	9.72	-0.00691	0.738819
September 14, 2014	1879.02	13.2	0.005474	0.358025
September 21, 2014	1892.61	10.24	0.007232	-0.22424
September 28, 2014	1854.31	10.59	-0.02024	0.03418
October 5, 2014	1834.65	11.86	-0.0106	0.119924
October 12, 2014	1803.45	15.4	-0.01701	0.298482
October 19, 2014	1820	10.7	0.009177	-0.30519
October 26, 2014	1871.74	9.33	0.028429	-0.12804
November 2, 2014	1866.8	7.57	-0.00264	-0.18864
November 9, 2014	1866.91	9.04	5.89E-05	0.194188
November 16, 2014	1877.52	12.69	0.005683	0.403761
November 23, 2014	1899.71	14.64	0.011819	0.153664
November 30, 2014	1898.49	16.79	-0.00064	0.146858
December 7, 2014	1797.53	10.25	-0.05318	-0.38952
December 14, 2014	1796.62	13.99	-0.00051	0.364878
December 21, 2014	1783.97	15.27	-0.00704	0.091494
December 28, 2014	1775.01	9.59	-0.00502	-0.37197

Hanoi Stock Exchange Index – HNXi

Date	Price	Volume (thousand share)	R	DV
April 24, 2011	83.58	143.15		1.229750779
May 1, 2011	82.69	64.2	-0.01065	-0.551519385
May 8, 2011	82	113.38	-0.00834	0.766043614
May 15, 2011	76.98	124.91	-0.06122	0.10169342
May 22, 2011	70.83	188.27	-0.07989	0.507245217
May 29, 2011	73.87	181.65	0.04292	-0.035162267
June 5, 2011	79.1	248.18	0.0708	0.366253785
June 12, 2011	76.63	303.13	-0.03123	0.221411878
June 19, 2011	75.78	177.05	-0.01109	-0.41592716
June 26, 2011	72.76	141.26	-0.03985	-0.202146286
July 3, 2011	72.84	107.11	0.0011	-0.241752796
July 10, 2011	71.54	96.94	-0.01785	-0.094949118
July 17, 2011	70.88	97.58	-0.00923	0.006602022
July 24, 2011	69.55	89.92	-0.01876	-0.078499693
July 31, 2011	68.54	136.22	-0.01452	0.514902135
August 7, 2011	66.02	126.74	-0.03677	-0.069593305
August 14, 2011	67.53	166.25	0.022872	0.311740571
August 21, 2011	69.25	191.77	0.02547	0.153503759
August 28, 2011	75.36	239.81	0.088231	0.250508422
September 4, 2011	76.78	314.71	0.018843	0.312330595
September 11, 2011	74.88	340.37	-0.02475	0.081535382
September 18, 2011	74.58	203.28	-0.00401	-0.402767576
September 25, 2011	71.34	205.82	-0.04344	0.012495081
October 2, 2011	71.5	170.19	0.002243	-0.173112428
October 9, 2011	69.19	149.94	-0.03231	-0.118984664
October 16, 2011	69.13	139.18	-0.00087	-0.071762038
October 23, 2011	69.94	144.95	0.011717	0.041457106
October 30, 2011	65.97	187.15	-0.05676	0.291134874
November 6, 2011	63.6	126.8	-0.03593	-0.322468608
November 13, 2011	62.18	161.93	-0.02233	0.277050473
November 20, 2011	61.15	104.1	-0.01656	-0.357129624
November 27, 2011	61.68	128.89	0.008667	0.238136407
December 4, 2011	61.73	158.23	0.000811	0.227635969
December 11, 2011	59.83	153.29	-0.03078	-0.031220375
December 18, 2011	58	141.85	-0.03059	-0.074629787
December 25, 2011	58.74	161.66	0.012759	0.139654565
January 1, 2012	55.43	77.33	-0.05635	-0.521650377
January 8, 2012	56.27	111.32	0.015154	0.439544808
January 15, 2012	58.44	107.35	0.038564	-0.035662954
January 22, 2012	61.85	178.73	0.05835	0.664927806

January 29, 2012	61.8	178.7	-0.00081	-0.000167851
February 5, 2012	62.69	216.22	0.014401	0.209960828
February 12, 2012	61.79	173.61	-0.01436	-0.197067801
February 19, 2012	67.07	367.14	0.085451	1.114739934
February 26, 2012	71.72	433.17	0.069331	0.179849649
March 4, 2012	71.56	507.75	-0.00223	0.172172588
March 11, 2012	72.76	446.21	0.016769	-0.121201379
March 18, 2012	77.57	483.93	0.066108	0.084534188
March 25, 2012	72.2	501.75	-0.06923	0.036823508
April 1, 2012	74.69	316.01	0.034488	-0.370184355
April 8, 2012	78.38	482.69	0.049404	0.527451663
April 15, 2012	77.75	494.01	-0.00804	0.023451905
April 22, 2012	79.86	350.77	0.027138	-0.289953645
April 29, 2012	81.27	284.55	0.017656	-0.188784674
May 6, 2012	81.58	502.26	0.003814	0.765102794
May 13, 2012	73.81	360.57	-0.09524	-0.282104886
May 20, 2012	76.06	263.46	0.030484	-0.269323571
May 27, 2012	74.36	194.77	-0.02235	-0.26072269
June 3, 2012	75.08	263.76	0.009683	0.354212661
June 10, 2012	74.84	231.28	-0.0032	-0.123142251
June 17, 2012	73.31	174.84	-0.02044	-0.244033207
June 24, 2012	71.07	186.28	-0.03056	0.065431251
July 1, 2012	69.67	161.73	-0.0197	-0.131790852
July 8, 2012	70.57	162.96	0.012918	0.007605268
July 15, 2012	72.19	246.69	0.022956	0.513807069
July 22, 2012	69.35	212.71	-0.03934	-0.137743727
July 29, 2012	68.91	134.4	-0.00634	-0.368153824
August 5, 2012	70.34	208.43	0.020752	0.550818452
August 12, 2012	70.35	161.41	0.000142	-0.225591326
August 19, 2012	63.11	258	-0.10291	0.598413977
August 26, 2012	61.43	159.63	-0.02662	-0.38127907
September 2, 2012	60.39	104.98	-0.01693	-0.342354194
September 9, 2012	59.23	144.18	-0.01921	0.373404458
September 16, 2012	56.71	173	-0.04255	0.199889028
September 23, 2012	55.47	97.64	-0.02187	-0.435606936
September 30, 2012	54.34	101.97	-0.02037	0.044346579
October 7, 2012	55.44	168.73	0.020243	0.654702363
October 14, 2012	54.74	169.68	-0.01263	0.005630297
October 21, 2012	53.79	121.27	-0.01735	-0.285301744
October 28, 2012	51.06	152.83	-0.05075	0.260245733
November 4, 2012	51.58	125.3	0.010184	-0.18013479
November 11, 2012	51.81	145.01	0.004459	0.157302474
November 18, 2012	51.23	102.52	-0.01119	-0.293014275

November 25, 2012	51.05	80.59	-0.00351	-0.213909481
December 2, 2012	51.66	134.71	0.011949	0.671547338
December 9, 2012	54.44	257.58	0.053813	0.91210749
December 16, 2012	54.05	297.77	-0.00716	0.156029195
December 23, 2012	57.09	344.87	0.056244	0.158175773
December 30, 2012	59.21	302.5	0.037134	-0.122857888
January 6, 2013	60.55	472.6	0.022631	0.56231405
January 13, 2013	62.05	468.35	0.024773	-0.008992806
January 20, 2013	61.61	323	-0.00709	-0.310344828
January 27, 2013	62.99	365.88	0.022399	0.132755418
February 3, 2013	66.21	303.79	0.051119	-0.169700448
February 10, 2013	64.12	504.48	-0.03157	0.660620824
February 17, 2013	64.1	504.4	-0.00031	-0.000158579
February 24, 2013	62.78	293.27	-0.02059	-0.418576527
March 3, 2013	61	252.79	-0.02835	-0.138029802
March 10, 2013	62.06	263.32	0.017377	0.041655129
March 17, 2013	60.93	180.95	-0.01821	-0.312813307
March 24, 2013	60.25	165.28	-0.01116	-0.086598508
March 31, 2013	61	217.65	0.012448	0.316856244
April 7, 2013	60.32	226.07	-0.01115	0.038685964
April 14, 2013	58.36	127.91	-0.03249	-0.434201796
April 21, 2013	58.3	135.14	-0.00103	0.056524119
April 28, 2013	59.06	37.51	0.013036	-0.722435992
May 5, 2013	60.48	202.81	0.024043	4.406824847
May 12, 2013	60.45	132.4	-0.0005	-0.34717223
May 19, 2013	62.61	244.76	0.035732	0.848640483
May 26, 2013	64.62	367.25	0.032103	0.50044942
June 2, 2013	65.58	231	0.014856	-0.371000681
June 9, 2013	65.63	224.92	0.000762	-0.026320346
June 16, 2013	64.26	211.62	-0.02087	-0.059132136
June 23, 2013	62.76	217.63	-0.02334	0.028399962
June 30, 2013	62.69	115.48	-0.00112	-0.469374627
July 7, 2013	63.12	103.29	0.006859	-0.105559404
July 14, 2013	63.16	101.22	0.000634	-0.020040662
July 21, 2013	61.33	100.87	-0.02897	-0.003457815
July 28, 2013	62.2	61.53	0.014186	-0.39000694
August 4, 2013	61.7	82.3	-0.00804	0.337558914
August 11, 2013	62.25	93.13	0.008914	0.131591738
August 18, 2013	61.42	110.79	-0.01333	0.189627403
August 25, 2013	61.19	80.56	-0.00374	-0.272858561
September 1, 2013	60.45	62.68	-0.01209	-0.221946375
September 8, 2013	60.18	81.76	-0.00447	0.304403318
September 15, 2013	59.17	188.28	-0.01678	1.302837573

September 22, 2013	60.4	128.09	0.020788	-0.31968345
September 29, 2013	60.94	168.5	0.00894	0.315481302
October 6, 2013	60.63	149.42	-0.00509	-0.113234421
October 13, 2013	61.52	130.34	0.014679	-0.127693749
October 20, 2013	61.82	185.94	0.004876	0.426576646
October 27, 2013	62.08	102.19	0.004206	-0.450414112
November 3, 2013	63.29	248.94	0.019491	1.436050494
November 10, 2013	63.93	227.45	0.010112	-0.086326022
November 17, 2013	64.59	277.13	0.010324	0.218421631
November 24, 2013	65.19	201.79	0.009289	-0.271857973
December 1, 2013	66.09	212.36	0.013806	0.052381188
December 8, 2013	66.22	196.46	0.001967	-0.074872857
December 15, 2013	67.5	316.63	0.01933	0.611676677
December 22, 2013	67.93	277.65	0.00637	-0.123108992
December 29, 2013	67.97	173.75	0.000589	-0.374212138
January 5, 2014	70.76	272.95	0.041048	0.570935252
January 12, 2014	72.79	303.14	0.028689	0.110606338
January 19, 2014	73.66	234.92	0.011952	-0.225044534
January 26, 2014	74.22	31.98	0.007602	-0.863868551
February 2, 2014	74.78	120.09	0.007545	2.755159475
February 9, 2014	78.76	425.44	0.053223	2.542676326
February 16, 2014	80.17	526.33	0.017902	0.237142723
February 23, 2014	83.12	447.48	0.036797	-0.149810955
March 2, 2014	82.16	389.23	-0.01155	-0.130173416
March 9, 2014	84.43	505.96	0.027629	0.299899802
March 16, 2014	90.36	662.89	0.070236	0.310162859
March 23, 2014	90.04	592.99	-0.00354	-0.105447359
March 30, 2014	86.76	445.3	-0.03643	-0.249059849
April 6, 2014	87.49	287.18	0.008414	-0.355086459
April 13, 2014	80.58	364.22	-0.07898	0.268263807
April 20, 2014	80.5	274.25	-0.00099	-0.247021031
April 27, 2014	79.88	68.09	-0.0077	-0.751722881
May 4, 2014	74.19	340.87	-0.07123	4.006168307
May 11, 2014	72.31	307.87	-0.02534	-0.096811101
May 18, 2014	74.58	355.84	0.031393	0.155812518
May 25, 2014	75.8	321.18	0.016358	-0.097403327
June 1, 2014	75.85	217.5	0.00066	-0.322809639
June 8, 2014	76.68	272.99	0.010943	0.255126437
June 15, 2014	76.31	250.86	-0.00483	-0.08106524
June 22, 2014	77.58	239.7	0.016643	-0.044486965
June 29, 2014	79.44	362.76	0.023975	0.51339174
July 6, 2014	78.62	329.88	-0.01032	-0.090638439
July 13, 2014	81.14	222.86	0.032053	-0.324421002

July 20, 2014	79.43	205.75	-0.02107	-0.076774657
July 27, 2014	79.01	174.77	-0.00529	-0.150571081
August 3, 2014	80.94	224.17	0.024427	0.282657207
August 10, 2014	82.23	255.55	0.015938	0.139983049
August 17, 2014	83.34	296.67	0.013499	0.160907846
August 24, 2014	87.04	426.19	0.044396	0.436579364
August 31, 2014	88.54	232.08	0.017233	-0.45545414
September 7, 2014	89.49	449.43	0.01073	0.936530507
September 14, 2014	88.89	536.62	-0.0067	0.194001291
September 21, 2014	88.56	330.52	-0.00371	-0.384070665
September 28, 2014	90.32	371.02	0.019874	0.122534189
October 5, 2014	90.45	378.84	0.001439	0.021077031
October 12, 2014	87.64	343.41	-0.03107	-0.093522331
October 19, 2014	87.05	268.22	-0.00673	-0.218951108
October 26, 2014	88.03	230.27	0.011258	-0.14148833
November 2, 2014	89.55	257.98	0.017267	0.120336996
November 9, 2014	90.74	380.4	0.013289	0.47453291
November 16, 2014	89.14	344.81	-0.01763	-0.093559411
November 23, 2014	87.42	298.19	-0.0193	-0.135204895
November 30, 2014	88.63	260.27	0.013841	-0.127167242
December 7, 2014	84.55	290.21	-0.04603	0.115034387
December 14, 2014	81.32	285.36	-0.0382	-0.016712036
December 21, 2014	81.14	209.67	-0.00221	-0.265243902
December 28, 2014	82.98	155.33	0.022677	-0.259169171

Philippines Stock Exchange Index (PSEi)

Date	Price	Volume (thousand share)	R	DV
Apr 24, 2011	4319.51	2800		
May 01, 2011	4219.07	3300	-0.02325	0.178571429
May 08, 2011	4292.11	3370	0.017312	0.021212121
May 15, 2011	4285.16	3480	-0.00162	0.03264095
May 22, 2011	4274.51	2390	-0.00249	-0.313218391
May 29, 2011	4297.62	3110	0.005406	0.30125523
Jun 05, 2011	4219.58	2350	-0.01816	-0.24437299
Jun 12, 2011	4153.11	2890	-0.01575	0.229787234
Jun 19, 2011	4291.44	1620	0.033308	-0.439446367
Jun 26, 2011	4351.63	2120	0.014026	0.308641975
Jul 03, 2011	4391.46	2210	0.009153	0.04245283
Jul 10, 2011	4458.74	3270	0.015321	0.479638009
Jul 17, 2011	4478.36	2890	0.0044	-0.116207951
Jul 24, 2011	4503.63	2360	0.005643	-0.183391003
Jul 31, 2011	4437.55	3270	-0.01467	0.38559322
Aug 07, 2011	4321.73	3950	-0.0261	0.20795107
Aug 14, 2011	4339.9	3480	0.004204	-0.118987342
Aug 21, 2011	4305.56	4460	-0.00791	0.281609195
Aug 28, 2011	4392.91	2140	0.020288	-0.520179372
Sep 04, 2011	4346.07	3440	-0.01066	0.607476636
Sep 11, 2011	4290.17	2310	-0.01286	-0.328488372
Sep 18, 2011	3885.96	2370	-0.09422	0.025974026
Sep 25, 2011	3999.65	2430	0.029257	0.025316456
Oct 02, 2011	4009.26	2090	0.002403	-0.139917695
Oct 09, 2011	4153.4	1068	0.035952	-0.488995215
Oct 16, 2011	4166.6	1520	0.003178	0.423220974
Oct 23, 2011	4333.72	1220	0.040109	-0.197368421
Oct 30, 2011	4271.72	736.5	-0.01431	-0.396311475
Nov 06, 2011	4312.96	626.21	0.009654	-0.149748812
Nov 13, 2011	4302.43	2260	-0.00244	2.609012951
Nov 20, 2011	4261.59	2920	-0.00949	0.292035398
Nov 27, 2011	4290.92	2190.2	0.006882	-0.249928082
Dec 04, 2011	4292.5	670.74	0.000368	-0.693755393
Dec 11, 2011	4304.94	1010	0.002898	0.505799565
Dec 18, 2011	4372.24	1220	0.015633	0.207920792
Dec 25, 2011	4371.96	293.03	-6.4E-05	-0.759811475
Jan 01, 2012	4483.36	322.03	0.025481	0.098965976
Jan 08, 2012	4613.83	764.09	0.029101	1.372729249
Jan 15, 2012	4747.9	446.89	0.029058	-0.415134343
Jan 22, 2012	4679.89	435.41	-0.01432	-0.025688648

Jan 29, 2012	4758.57	895.03	0.016812	1.055602765
Feb 05, 2012	4783.52	679.9	0.005243	-0.240360658
Feb 12, 2012	4880.71	416.45	0.020318	-0.387483453
Feb 19, 2012	4893	709.84	0.002518	0.704502341
Feb 26, 2012	5016.3	688.98	0.025199	-0.029386904
Mar 04, 2012	4980.71	546.46	-0.00709	-0.206856513
Mar 11, 2012	5145.89	774.58	0.033164	0.4174505
Mar 18, 2012	5042.44	948.44	-0.0201	0.224457125
Mar 25, 2012	5107.73	635.85	0.012948	-0.329583316
Apr 01, 2012	5038.92	176.61	-0.01347	-0.722245813
Apr 08, 2012	5097.3	381.37	0.011586	1.159390748
Apr 15, 2012	5156.46	490.38	0.011606	0.2858379
Apr 22, 2012	5169.05	962.96	0.002442	0.963701619
Apr 29, 2012	5297.55	483.11	0.02486	-0.498307302
May 06, 2012	5158.14	611.11	-0.02632	0.264950011
May 13, 2012	4879.42	579.1	-0.05403	-0.052380095
May 20, 2012	4925.97	279.52	0.00954	-0.517319979
May 27, 2012	5062.44	322.48	0.027704	0.153692044
Jun 03, 2012	4994.07	281.37	-0.01351	-0.127480774
Jun 10, 2012	4930.63	341.61	-0.0127	0.214095319
Jun 17, 2012	5120.07	603.22	0.038421	0.765814818
Jun 24, 2012	5246.41	821.53	0.024675	0.361907762
Jul 01, 2012	5362.68	749.09	0.022162	-0.088176938
Jul 08, 2012	5214.52	310.78	-0.02763	-0.585123283
Jul 15, 2012	5210.89	295.51	-0.0007	-0.049134436
Jul 22, 2012	5219.55	341.24	0.001662	0.154749416
Jul 29, 2012	5285.91	290.38	0.012714	-0.149044661
Aug 05, 2012	5263.35	319.72	-0.00427	0.101040017
Aug 12, 2012	5206.81	289.77	-0.01074	-0.093675716
Aug 19, 2012	5143.35	182.32	-0.01219	-0.370811333
Aug 26, 2012	5196.19	207.95	0.010273	0.140577007
Sep 02, 2012	5201.32	262.1	0.000987	0.260399134
Sep 09, 2012	5322.47	368.03	0.023292	0.404158718
Sep 16, 2012	5292.06	422.25	-0.00571	0.147324946
Sep 23, 2012	5346.1	326.27	0.010212	-0.227306098
Sep 30, 2012	5439.84	826.95	0.017534	1.534557269
Oct 07, 2012	5369.72	429.47	-0.01289	-0.480657839
Oct 14, 2012	5432.36	421.69	0.011665	-0.018115351
Oct 21, 2012	5405.16	219.5	-0.00501	-0.479475444
Oct 28, 2012	5424.51	266.52	0.00358	0.214214123
Nov 04, 2012	5468.79	422.29	0.008163	0.584458952
Nov 11, 2012	5439.28	423.61	-0.0054	0.003125814
Nov 18, 2012	5552.34	316.31	0.020786	-0.253299025

Nov 25, 2012	5640.45	377.52	0.015869	0.193512693
Dec 02, 2012	5794.2	782.85	0.027258	1.073664971
Dec 09, 2012	5707.11	470.73	-0.01503	-0.398697068
Dec 16, 2012	5823.94	382.67	0.020471	-0.187071145
Dec 23, 2012	5812.73	131.39	-0.00192	-0.656649332
Dec 30, 2012	5971.45	340.8	0.027306	1.593804704
Jan 06, 2013	6051.75	640.25	0.013447	0.87866784
Jan 13, 2013	6139.21	404.18	0.014452	-0.368715346
Jan 20, 2013	6167.64	448.58	0.004631	0.109852046
Jan 27, 2013	6318.61	792.29	0.024478	0.766217843
Feb 03, 2013	6458.67	608.5	0.022166	-0.231973141
Feb 10, 2013	6521.64	452.07	0.00975	-0.257074774
Feb 17, 2013	6665.06	799.99	0.021991	0.769615325
Feb 24, 2013	6642.27	706.68	-0.00342	-0.116638958
Mar 03, 2013	6833.77	850.06	0.028831	0.202892398
Mar 10, 2013	6654.6	506.69	-0.02622	-0.403936193
Mar 17, 2013	6518.71	592.85	-0.02042	0.170044801
Mar 24, 2013	6847.47	331.12	0.050433	-0.441477608
Mar 31, 2013	6727.14	459.84	-0.01757	0.388741242
Apr 07, 2013	6891.43	292.39	0.024422	-0.364148399
Apr 14, 2013	6957.1	541.15	0.009529	0.85078149
Apr 21, 2013	7025.44	573.6	0.009823	0.05996489
Apr 28, 2013	7215.35	368.39	0.027032	-0.35775802
May 05, 2013	7262.38	362.34	0.006518	-0.016422813
May 12, 2013	7279.87	629.59	0.002408	0.737566926
May 19, 2013	7268.91	491.87	-0.00151	-0.218745533
May 26, 2013	7021.95	569.35	-0.03397	0.157521296
Jun 02, 2013	6701.95	758.21	-0.04557	0.331711601
Jun 09, 2013	6242.26	619.32	-0.06859	-0.18318144
Jun 16, 2013	6182.17	478.43	-0.00963	-0.227491442
Jun 23, 2013	6465.28	912.52	0.045795	0.907321865
Jun 30, 2013	6500.48	468.08	0.005444	-0.487046859
Jul 07, 2013	6574.21	444.02	0.011342	-0.05140147
Jul 14, 2013	6621.02	470.53	0.00712	0.059704518
Jul 21, 2013	6763.62	419.98	0.021537	-0.107432045
Jul 28, 2013	6533.95	373.75	-0.03396	-0.11007667
Aug 04, 2013	6404.23	248.31	-0.01985	-0.335625418
Aug 11, 2013	6525.95	331.91	0.019006	0.336675929
Aug 18, 2013	6161.21	250.66	-0.05589	-0.244795276
Aug 25, 2013	6075.17	473.42	-0.01396	0.888693848
Sep 01, 2013	5974.62	258.67	-0.01655	-0.453614127
Sep 08, 2013	6133.24	492.24	0.026549	0.902965168
Sep 15, 2013	6424.45	730.84	0.047481	0.484722899

Sep 22, 2013	6379.81	376.83	-0.00695	-0.484387828
Sep 29, 2013	6390.48	363.76	0.001672	-0.034684075
Oct 06, 2013	6489.8	425.49	0.015542	0.169699802
Oct 13, 2013	6607.83	330.03	0.018187	-0.224353099
Oct 20, 2013	6539.81	288.5	-0.01029	-0.125837045
Oct 27, 2013	6585.38	269.86	0.006968	-0.064610052
Nov 03, 2013	6355.18	346.22	-0.03496	0.282961536
Nov 10, 2013	6346.4	389.9	-0.00138	0.126162556
Nov 17, 2013	6084.84	436.48	-0.04121	0.11946653
Nov 24, 2013	6208.82	392.13	0.020375	-0.101608321
Dec 01, 2013	6014.94	241.34	-0.03123	-0.384540841
Dec 08, 2013	5767.13	393.78	-0.0412	0.63164001
Dec 15, 2013	5835.13	368.35	0.011791	-0.064579207
Dec 22, 2013	5889.83	151.87	0.009374	-0.587701914
Dec 29, 2013	5947.93	155.27	0.009864	0.022387568
Jan 05, 2014	5842.88	301.83	-0.01766	0.943904167
Jan 12, 2014	5987.09	381.87	0.024681	0.265182387
Jan 19, 2014	6191.5	342.22	0.034142	-0.103831147
Jan 26, 2014	6041.19	373.77	-0.02428	0.092192157
Feb 02, 2014	6011.14	351.46	-0.00497	-0.059689114
Feb 09, 2014	6113.66	385.95	0.017055	0.0981335
Feb 16, 2014	6308.36	421.4	0.031847	0.091851276
Feb 23, 2014	6424.99	519.92	0.018488	0.233792121
Mar 02, 2014	6481.83	422.63	0.008847	-0.187124942
Mar 09, 2014	6391.24	333.56	-0.01398	-0.210751721
Mar 16, 2014	6339.26	390.97	-0.00813	0.172112963
Mar 23, 2014	6359.62	334.81	0.003212	-0.143642735
Mar 30, 2014	6561.2	638.65	0.031697	0.907499776
Apr 06, 2014	6596.96	391.7	0.00545	-0.386675018
Apr 13, 2014	6671.18	177.52	0.011251	-0.546796017
Apr 20, 2014	6685.1	448.7	0.002087	1.527602524
Apr 27, 2014	6742.97	268.43	0.008657	-0.401760642
May 04, 2014	6847.26	295.67	0.015466	0.10147897
May 11, 2014	6817.71	533.7	-0.00432	0.805052931
May 18, 2014	6811.33	462.51	-0.00094	-0.133389545
May 25, 2014	6647.65	395.29	-0.02403	-0.145337398
Jun 01, 2014	6762.62	408.68	0.017295	0.033873865
Jun 08, 2014	6784.95	328.7	0.003302	-0.19570324
Jun 15, 2014	6730.96	363.84	-0.00796	0.106905993
Jun 22, 2014	6842.15	353.24	0.016519	-0.029133685
Jun 29, 2014	6962.28	286.66	0.017557	-0.18848375
Jul 06, 2014	6901.09	359.52	-0.00879	0.254168702
Jul 13, 2014	6853.07	206.75	-0.00696	-0.424927681

Jul 20, 2014	6889.55	309.14	0.005323	0.495235792
Jul 27, 2014	6894.23	308.07	0.000679	-0.003461215
Aug 03, 2014	6880.34	366.71	-0.00201	0.19034635
Aug 10, 2014	7008.51	458.75	0.018628	0.25098852
Aug 17, 2014	7133.09	447.18	0.017776	-0.025220708
Aug 24, 2014	7050.89	349.74	-0.01152	-0.217898833
Aug 31, 2014	7263.58	475.43	0.030165	0.359381255
Sep 07, 2014	7201.88	272.03	-0.00849	-0.427823234
Sep 14, 2014	7287.29	233.09	0.011859	-0.143145977
Sep 21, 2014	7261.3	691.05	-0.00357	1.964734652
Sep 28, 2014	7247.03	437.43	-0.00197	-0.367006729
Oct 05, 2014	7167.35	315.49	-0.01099	-0.278764602
Oct 12, 2014	7003.22	434.63	-0.0229	0.37763479
Oct 19, 2014	7103.55	355.23	0.014326	-0.182684122
Oct 26, 2014	7215.73	266.48	0.015792	-0.249838133
Nov 02, 2014	7205.72	312.66	-0.00139	0.173296307
Nov 09, 2014	7217.34	300.98	0.001613	-0.037356873
Nov 16, 2014	7276.18	365.33	0.008153	0.213801582
Nov 23, 2014	7294.38	355.28	0.002501	-0.027509375
Nov 30, 2014	7230.56	374.28	-0.00875	0.053478946
Dec 07, 2014	7224.21	344.93	-0.00088	-0.078417228
Dec 14, 2014	7125.63	502.3	-0.01365	0.456237497
Dec 21, 2014	7186.32	83.23	0.008517	-0.83430221
Dec 28, 2014	7230.57	54.28	0.006158	-0.347831311

Bursa Malaysia – Kuala Lumpur Composite Index (KLCI)

Date	Price	Volume (million share)	R	DV
Apr 24, 2011	1534.95	468.74		
May 01, 2011	1515.5	394.9	-0.01267	-0.15753
May 08, 2011	1540.74	508	0.016655	0.286402
May 15, 2011	1541.03	450.72	0.000188	-0.11276
May 22, 2011	1548.69	603.75	0.004971	0.339523
May 29, 2011	1559.85	919.69	0.007206	0.523296
Jun 05, 2011	1556.19	496.96	-0.00235	-0.45964
Jun 12, 2011	1563.43	697.31	0.004652	0.403151
Jun 19, 2011	1564.66	636.44	0.000787	-0.08729
Jun 26, 2011	1582.94	626.58	0.011683	-0.01549
Jul 03, 2011	1594.74	679.99	0.007454	0.085241
Jul 10, 2011	1577.25	606.28	-0.01097	-0.1084
Jul 17, 2011	1565.06	639.93	-0.00773	0.055502
Jul 24, 2011	1548.81	657.44	-0.01038	0.027362
Jul 31, 2011	1524.43	777.41	-0.01574	0.182481
Aug 07, 2011	1483.67	1250	-0.02674	0.607903
Aug 14, 2011	1483.98	745.16	0.000209	-0.40387
Aug 21, 2011	1444.81	1010	-0.0264	0.355414
Aug 28, 2011	1474.09	330.2	0.020266	-0.67307
Sep 04, 2011	1469.12	572.6	-0.00337	0.734101
Sep 11, 2011	1430.93	439.92	-0.026	-0.23171
Sep 18, 2011	1365.94	719.64	-0.04542	0.635843
Sep 25, 2011	1387.13	804.58	0.015513	0.118031
Oct 02, 2011	1400.05	569.61	0.009314	-0.29204
Oct 09, 2011	1442.43	520.17	0.03027	-0.0868
Oct 16, 2011	1438.83	478.64	-0.0025	-0.07984
Oct 23, 2011	1481.82	565.88	0.029878	0.182266
Oct 30, 2011	1477.51	489.16	-0.00291	-0.13558
Nov 06, 2011	1468.75	388.67	-0.00593	-0.20543
Nov 13, 2011	1454.4	440.01	-0.00977	0.132091
Nov 20, 2011	1431.55	455.89	-0.01571	0.03609
Nov 27, 2011	1489.02	587.84	0.040145	0.289434
Dec 04, 2011	1460.13	395.44	-0.0194	-0.3273
Dec 11, 2011	1466.22	378.76	0.004171	-0.04218
Dec 18, 2011	1496.15	361.88	0.020413	-0.04457
Dec 25, 2011	1530.73	262.87	0.023113	-0.2736
Jan 01, 2012	1514.13	348.2	-0.01084	0.324609
Jan 08, 2012	1523.07	593.71	0.005904	0.705083

Jan 15, 2012	1522.66	616.68	-0.00027	0.038689
Jan 22, 2012	1520.9	331.65	-0.00116	-0.4622
Jan 29, 2012	1538.77	663.36	0.01175	1.000181
Feb 05, 2012	1561.66	558.68	0.014876	-0.1578
Feb 12, 2012	1557.15	683.06	-0.00289	0.222632
Feb 19, 2012	1558.77	712.99	0.00104	0.043818
Feb 26, 2012	1583.78	938.28	0.016045	0.315979
Mar 04, 2012	1579	715.62	-0.00302	-0.23731
Mar 11, 2012	1571.4	815.6	-0.00481	0.139711
Mar 18, 2012	1585.83	597.68	0.009183	-0.26719
Mar 25, 2012	1596.33	715.17	0.006621	0.196577
Apr 01, 2012	1598.87	520.76	0.001591	-0.27184
Apr 08, 2012	1603.12	517.73	0.002658	-0.00582
Apr 15, 2012	1591.85	576.97	-0.00703	0.114423
Apr 22, 2012	1567.8	598	-0.01511	0.036449
Apr 29, 2012	1591.04	506.37	0.014823	-0.15323
May 06, 2012	1584.32	575.1	-0.00422	0.135731
May 13, 2012	1532.46	778.16	-0.03273	0.353086
May 20, 2012	1551.12	540.51	0.012177	-0.3054
May 27, 2012	1573.59	695.25	0.014486	0.286285
Jun 03, 2012	1570.62	539.28	-0.00189	-0.22434
Jun 10, 2012	1579.23	642.56	0.005482	0.191515
Jun 17, 2012	1603.07	709.14	0.015096	0.103617
Jun 24, 2012	1599.15	670.38	-0.00245	-0.05466
Jul 01, 2012	1620.55	585.66	0.013382	-0.12638
Jul 08, 2012	1626.38	611.53	0.003598	0.044172
Jul 15, 2012	1643	610.67	0.010219	-0.00141
Jul 22, 2012	1624.94	613.03	-0.01099	0.003865
Jul 29, 2012	1635.04	710.58	0.006216	0.159128
Aug 05, 2012	1645.36	848.41	0.006312	0.193968
Aug 12, 2012	1649.79	550.06	0.002692	-0.35166
Aug 19, 2012	1648.22	324.93	-0.00095	-0.40928
Aug 26, 2012	1646.11	429.44	-0.00128	0.321639
Sep 02, 2012	1624.55	796.01	-0.0131	0.8536
Sep 09, 2012	1642.95	987.07	0.011326	0.240022
Sep 16, 2012	1623.7	703.44	-0.01172	-0.28735
Sep 23, 2012	1636.66	762	0.007982	0.083248
Sep 30, 2012	1660.23	662.42	0.014401	-0.13068
Oct 07, 2012	1653.36	600.09	-0.00414	-0.09409
Oct 14, 2012	1666.35	672.67	0.007857	0.120949
Oct 21, 2012	1671.89	446.62	0.003325	-0.33605
Oct 28, 2012	1656.13	595.38	-0.00943	0.33308
Nov 04, 2012	1641.08	730.25	-0.00909	0.226528

Nov 11, 2012	1629.28	514.68	-0.00719	-0.2952
Nov 18, 2012	1614.32	790.7	-0.00918	0.536294
Nov 25, 2012	1610.83	867.83	-0.00216	0.097546
Dec 02, 2012	1617.77	592.31	0.004308	-0.31748
Dec 09, 2012	1651.98	761.21	0.021146	0.285155
Dec 16, 2012	1658.85	659.04	0.004159	-0.13422
Dec 23, 2012	1681.33	361.89	0.013552	-0.45088
Dec 30, 2012	1692.58	557.67	0.006691	0.540993
Jan 06, 2013	1682.7	685.16	-0.00584	0.228612
Jan 13, 2013	1676.44	713.14	-0.00372	0.040837
Jan 20, 2013	1637.13	793.72	-0.02345	0.112993
Jan 27, 2013	1627.55	714.56	-0.00585	-0.09973
Feb 03, 2013	1623.8	816.38	-0.0023	0.142493
Feb 10, 2013	1627.93	376.79	0.002543	-0.53846
Feb 17, 2013	1622.08	676.74	-0.00359	0.796067
Feb 24, 2013	1637.44	755.43	0.009469	0.116278
Mar 03, 2013	1653.96	790.67	0.010089	0.046649
Mar 10, 2013	1627.64	893.07	-0.01591	0.12951
Mar 17, 2013	1626.89	848.84	-0.00046	-0.04953
Mar 24, 2013	1671.63	931.52	0.0275	0.097404
Mar 31, 2013	1688.65	907.49	0.010182	-0.0258
Apr 07, 2013	1698.53	752.15	0.005851	-0.17118
Apr 14, 2013	1706.28	701.09	0.004563	-0.06789
Apr 21, 2013	1711.29	754.12	0.002936	0.075639
Apr 28, 2013	1694.77	735.16	-0.00965	-0.02514
May 05, 2013	1772.38	1400	0.045794	0.904347
May 12, 2013	1769.16	762.69	-0.00182	-0.45522
May 19, 2013	1773.06	652.71	0.002204	-0.1442
May 26, 2013	1769.22	899.39	-0.00217	0.377932
Jun 02, 2013	1775.59	694.85	0.0036	-0.22742
Jun 09, 2013	1762.19	858.28	-0.00755	0.235202
Jun 16, 2013	1755.85	824.99	-0.0036	-0.03879
Jun 23, 2013	1773.54	1060	0.010075	0.284864
Jun 30, 2013	1772.27	693.73	-0.00072	-0.34554
Jul 07, 2013	1785.65	624.45	0.00755	-0.09987
Jul 14, 2013	1797.74	779.98	0.006771	0.249067
Jul 21, 2013	1807.61	683.17	0.00549	-0.12412
Jul 28, 2013	1782.51	886.88	-0.01389	0.298183
Aug 04, 2013	1779.32	328.1	-0.00179	-0.63005
Aug 11, 2013	1788.24	586.78	0.005013	0.788418
Aug 18, 2013	1721.07	1140	-0.03756	0.942807
Aug 25, 2013	1727.58	1100	0.003783	-0.03509
Sep 01, 2013	1723.8	623.44	-0.00219	-0.43324

Sep 08, 2013	1770.8	759.89	0.027265	0.218866
Sep 15, 2013	1801.83	653.81	0.017523	-0.1396
Sep 22, 2013	1776.16	626.57	-0.01425	-0.04166
Sep 29, 2013	1776.56	602.62	0.000225	-0.03822
Oct 06, 2013	1785.75	497.92	0.005173	-0.17374
Oct 13, 2013	1799.59	442.57	0.00775	-0.11116
Oct 20, 2013	1817.57	626.23	0.009991	0.414985
Oct 27, 2013	1810.41	633.39	-0.00394	0.011433
Nov 03, 2013	1804.48	426.2	-0.00328	-0.32711
Nov 10, 2013	1789.87	574.86	-0.0081	0.348803
Nov 17, 2013	1794.52	770.77	0.002598	0.340796
Nov 24, 2013	1812.72	629.81	0.010142	-0.18288
Dec 01, 2013	1826.95	650.17	0.00785	0.032327
Dec 08, 2013	1840.35	603.65	0.007335	-0.07155
Dec 15, 2013	1841.25	537.73	0.000489	-0.1092
Dec 22, 2013	1861.06	210.31	0.010759	-0.60889
Dec 29, 2013	1834.74	326.32	-0.01414	0.551614
Jan 05, 2014	1826.61	536.69	-0.00443	0.644674
Jan 12, 2014	1813.01	427.09	-0.00745	-0.20421
Jan 19, 2014	1802.57	782.64	-0.00576	0.832494
Jan 26, 2014	1804.03	621.45	0.00081	-0.20596
Feb 02, 2014	1808.59	596.57	0.002528	-0.04004
Feb 09, 2014	1819.37	578.36	0.00596	-0.03052
Feb 16, 2014	1830.74	627.45	0.006249	0.084878
Feb 23, 2014	1835.66	639.38	0.002687	0.019013
Mar 02, 2014	1832.26	622.96	-0.00185	-0.02568
Mar 09, 2014	1805.12	708.44	-0.01481	0.137216
Mar 16, 2014	1820.48	730.82	0.008509	0.031591
Mar 23, 2014	1850.73	609.17	0.016616	-0.16646
Mar 30, 2014	1856.61	773.96	0.003177	0.270516
Apr 06, 2014	1852.66	649.26	-0.00213	-0.16112
Apr 13, 2014	1852.69	463.46	1.62E-05	-0.28617
Apr 20, 2014	1860.98	543.13	0.004475	0.171903
Apr 27, 2014	1869.08	529.03	0.004353	-0.02596
May 04, 2014	1866.72	481.69	-0.00126	-0.08948
May 11, 2014	1883.34	575.03	0.008903	0.193776
May 18, 2014	1869.22	687.58	-0.0075	0.195729
May 25, 2014	1873.38	1020	0.002226	0.483464
Jun 01, 2014	1862.7	672.63	-0.0057	-0.34056
Jun 08, 2014	1876.74	540.08	0.007537	-0.19706
Jun 15, 2014	1885.72	575.41	0.004785	0.065416
Jun 22, 2014	1880.93	553.13	-0.00254	-0.03872
Jun 29, 2014	1884.91	532.04	0.002116	-0.03813

Jul 06, 2014	1883.15	578.54	-0.00093	0.087399
Jul 13, 2014	1872.97	441.78	-0.00541	-0.23639
Jul 20, 2014	1877.34	431.73	0.002333	-0.02275
Jul 27, 2014	1863.34	371.56	-0.00746	-0.13937
Aug 03, 2014	1839.87	500.25	-0.0126	0.346351
Aug 10, 2014	1864.31	484.58	0.013284	-0.03132
Aug 17, 2014	1870.99	579.32	0.003583	0.19551
Aug 24, 2014	1866.11	654.78	-0.00261	0.130256
Aug 31, 2014	1868.46	491.73	0.001259	-0.24901
Sep 07, 2014	1855.64	559.34	-0.00686	0.137494
Sep 14, 2014	1849.49	488.8	-0.00331	-0.12611
Sep 21, 2014	1840.5	532.29	-0.00486	0.088973
Sep 28, 2014	1840.82	533.88	0.000174	0.002987
Oct 05, 2014	1808.88	520.99	-0.01735	-0.02414
Oct 12, 2014	1788.31	768.64	-0.01137	0.475345
Oct 19, 2014	1818.86	495.91	0.017083	-0.35482
Oct 26, 2014	1855.15	633.28	0.019952	0.277006
Nov 02, 2014	1824.19	629.04	-0.01669	-0.0067
Nov 09, 2014	1813.79	557.44	-0.0057	-0.11382
Nov 16, 2014	1809.13	522.74	-0.00257	-0.06225
Nov 23, 2014	1820.89	622.56	0.0065	0.190955
Nov 30, 2014	1749.37	820.66	-0.03928	0.318202
Dec 07, 2014	1732.99	658.34	-0.00936	-0.19779
Dec 14, 2014	1715.99	876.59	-0.00981	0.331516
Dec 21, 2014	1764.44	367.43	0.028234	-0.58084
Dec 28, 2014	1752.77	402.02	-0.00661	0.09414

Jakarta Stock Exchange – Jakarta Composite Index (JCI)

Date	Price	Volume (billion share)	R	DV
24-Apr-11	3819618	18.67		
1-May-11	3798554	27.05	-0.005514688	0.448848
8-May-11	3832021	38.5	0.008810458	0.42329
15-May-11	3872953	20.21	0.01068157	-0.47506
22-May-11	3832378	23.25	-0.010476502	0.150421
29-May-11	3844020	19.77	0.003037801	-0.14968
5-Jun-11	3787648	20.39	-0.014664856	0.031361
12-Jun-11	3722303	17.79	-0.017252131	-0.12751
19-Jun-11	3848558	16.78	0.033918518	-0.05677
26-Jun-11	3927098	12.74	0.020407644	-0.24076
3-Jul-11	4003691	16.75	0.019503715	0.314757
10-Jul-11	4023202	18.51	0.004873253	0.105075
17-Jul-11	4106822	29.29	0.02078444	0.582388
24-Jul-11	4130800	31.35	0.005838578	0.070331
31-Jul-11	3921643	31.12	-0.050633533	-0.00734
7-Aug-11	3890526	33.64	-0.007934685	0.080977
14-Aug-11	3842748	21.89	-0.012280602	-0.34929
21-Aug-11	3841731	17.68	-0.000264654	-0.19233
28-Aug-11	3998502	16.86	0.040807386	-0.04638
4-Sep-11	3898502	16.83	-0.025009366	-0.00178
11-Sep-11	3835181	16.82	-0.016242393	-0.00059
18-Sep-11	3426346	18.01	-0.106601227	0.070749
25-Sep-11	3549032	18.98	0.035806658	0.053859
2-Oct-11	3425684	18.89	-0.034755392	-0.00474
9-Oct-11	3664680	26.65	0.069765921	0.410799
16-Oct-11	3620664	23.68	-0.012010871	-0.11144
23-Oct-11	3829960	21.82	0.057805972	-0.07855
30-Oct-11	3783628	19.47	-0.012097254	-0.1077
6-Nov-11	3778885	13.29	-0.001253559	-0.31741
13-Nov-11	3754500	13.01	-0.006452962	-0.02107
20-Nov-11	3637192	11.18	-0.03124464	-0.14066
27-Nov-11	3779836	13.23	0.039218166	0.183363
4-Dec-11	3759609	12.98	-0.00535129	-0.0189
11-Dec-11	3768354	19.44	0.00232604	0.497689
18-Dec-11	3797151	17.78	0.007641798	-0.08539
25-Dec-11	3821992	7.95	0.00654201	-0.55287
1-Jan-12	3869415	16.98	0.012407928	1.135849
8-Jan-12	3935326	20.26	0.017033841	0.193168
15-Jan-12	3986515	19.99	0.013007563	-0.01333

22-Jan-12	3986410	10.78	-2.63388E-05	-0.46073
29-Jan-12	4015949	18.81	0.007409925	0.744898
5-Feb-12	3912393	17.08	-0.025786184	-0.09197
12-Feb-12	3976542	15.01	0.016396359	-0.12119
19-Feb-12	3894562	16.62	-0.020615902	0.107262
26-Feb-12	4004868	13.06	0.028323082	-0.2142
4-Mar-12	3991544	11.05	-0.003326951	-0.15391
11-Mar-12	4028537	13.88	0.009267842	0.256109
18-Mar-12	4041559	9.92	0.003232439	-0.2853
25-Mar-12	4121551	14.9	0.019792362	0.502016
1-Apr-12	4166374	15.65	0.010875275	0.050336
8-Apr-12	4159277	20.19	-0.0017034	0.290096
15-Apr-12	4181368	19.66	0.00531126	-0.02625
22-Apr-12	4163981	22.72	-0.004158209	0.155646
29-Apr-12	4216681	18.66	0.012656158	-0.1787
6-May-12	4114140	13.94	-0.024317941	-0.25295
13-May-12	3980496	8.7	-0.032484067	-0.3759
20-May-12	3902508	13.61	-0.019592533	0.564368
27-May-12	3799766	11.6	-0.026327172	-0.14769
3-Jun-12	3825328	14.1	0.006727256	0.215517
10-Jun-12	3818109	15.29	-0.001887158	0.084397
17-Jun-12	3889523	15.2	0.018704023	-0.00589
24-Jun-12	3955577	11.34	0.016982545	-0.25395
1-Jul-12	4055197	14.36	0.025184695	0.266314
8-Jul-12	4019673	10.34	-0.008760117	-0.27994
15-Jul-12	4081201	11.38	0.015306718	0.10058
22-Jul-12	4084212	10.21	0.000737773	-0.10281
29-Jul-12	4099813	13.56	0.003819831	0.32811
5-Aug-12	4141564	14.16	0.010183635	0.044248
12-Aug-12	4160508	9.78	0.004574117	-0.30932
19-Aug-12	4145399	4.13	-0.003631528	-0.57771
26-Aug-12	4060331	12.43	-0.020521064	2.009685
2-Sep-12	4143679	15.82	0.020527391	0.272727
9-Sep-12	4256998	16.69	0.027347437	0.054994
16-Sep-12	4244621	20.51	-0.002907448	0.22888
23-Sep-12	4262561	19.56	0.004226526	-0.04632
30-Sep-12	4311314	16.55	0.01143749	-0.15389
7-Oct-12	4311391	19.35	1.786E-05	0.169184
14-Oct-12	4331254	20.14	0.004607098	0.040827
21-Oct-12	4339153	14.64	0.001823721	-0.27309
28-Oct-12	4338892	18.89	-6.015E-05	0.290301
4-Nov-12	4333640	14.89	-0.001210447	-0.21175
11-Nov-12	4351284	10.19	0.004071404	-0.31565

18-Nov-12	4348808	17.21	-0.000569027	0.688911
25-Nov-12	4276141	21.08	-0.016709636	0.224869
2-Dec-12	4290796	20.36	0.003427155	-0.03416
9-Dec-12	4308863	21.64	0.004210641	0.062868
16-Dec-12	4250214	16.45	-0.013611247	-0.23983
23-Dec-12	4316687	7.35	0.015639918	-0.55319
30-Dec-12	4410020	11.25	0.021621443	0.530612
6-Jan-13	4305912	19.83	-0.023607149	0.762667
13-Jan-13	4465484	17.84	0.037058816	-0.10035
20-Jan-13	4437598	13.38	-0.006244788	-0.25
27-Jan-13	4481634	20	0.009923386	0.494768
3-Feb-13	4491267	23.24	0.002149439	0.162
10-Feb-13	4609786	26.56	0.026388767	0.142857
17-Feb-13	4651123	40.01	0.008967228	0.506401
24-Feb-13	4811613	30.47	0.034505645	-0.23844
3-Mar-13	4874495	31.47	0.013068798	0.032819
10-Mar-13	4819324	22.44	-0.011318301	-0.28694
17-Mar-13	4723159	31.17	-0.019954043	0.389037
24-Mar-13	4940986	21.67	0.046118922	-0.30478
31-Mar-13	4926068	29.97	-0.003019235	0.383018
7-Apr-13	4937210	21.43	0.002261845	-0.28495
14-Apr-13	4998461	21.25	0.012405994	-0.0084
21-Apr-13	4978507	20.54	-0.003992029	-0.03341
28-Apr-13	4925483	21.98	-0.010650583	0.070107
5-May-13	5105937	17.77	0.036636813	-0.19154
12-May-13	5145683	19.73	0.007784272	0.110298
19-May-13	5155093	26.82	0.001828717	0.359351
26-May-13	5068628	28.28	-0.016772733	0.054437
2-Jun-13	4865324	19.6	-0.040110263	-0.30693
9-Jun-13	4760744	24.59	-0.021494971	0.254592
16-Jun-13	4515372	20.91	-0.051540684	-0.14965
23-Jun-13	4818895	18.35	0.067219932	-0.12243
30-Jun-13	4602807	12.64	-0.044841815	-0.31117
7-Jul-13	4633108	17.95	0.006583157	0.420095
14-Jul-13	4724411	16.73	0.019706642	-0.06797
21-Jul-13	4658874	13.43	-0.013871994	-0.19725
28-Jul-13	4640781	13.22	-0.003883556	-0.01564
4-Aug-13	4568654	15.12	-0.015541996	0.143722
11-Aug-13	4578654	15.1	0.002188828	-0.00132
18-Aug-13	4169827	24.42	-0.089289778	0.617219
25-Aug-13	4195089	21.85	0.006058285	-0.10524
1-Sep-13	4072354	19.33	-0.029256829	-0.11533
8-Sep-13	4375539	24.49	0.074449569	0.266943

15-Sep-13	4583828	28.25	0.04760305	0.153532
22-Sep-13	4423719	17.39	-0.034929103	-0.38442
29-Sep-13	4389347	14.71	-0.007769933	-0.15411
6-Oct-13	4519912	18.02	0.029745882	0.225017
13-Oct-13	4546571	10.89	0.005898124	-0.39567
20-Oct-13	4580846	19.24	0.007538648	0.766758
27-Oct-13	4432589	16.73	-0.032364546	-0.13046
3-Nov-13	4476720	11.79	0.009956032	-0.29528
10-Nov-13	4335448	17.46	-0.031557033	0.480916
17-Nov-13	4317960	14.14	-0.004033724	-0.19015
24-Nov-13	4256436	16.24	-0.014248395	0.148515
1-Dec-13	4180788	16.07	-0.017772615	-0.01047
8-Dec-13	4174830	15.51	-0.00142509	-0.03485
15-Dec-13	4195556	15.54	0.004964514	0.001934
22-Dec-13	4212980	6.07	0.004152966	-0.6094
29-Dec-13	4257663	7.01	0.010606032	0.15486
5-Jan-14	4254971	12.38	-0.000632272	0.766049
12-Jan-14	4412228	15.6	0.036958419	0.260097
19-Jan-14	4437343	14.79	0.005692136	-0.05192
26-Jan-14	4418757	10.81	-0.004188543	-0.2691
2-Feb-14	4466665	14.57	0.010841963	0.347826
9-Feb-14	4508044	17.38	0.009263959	0.192862
16-Feb-14	4646153	20.58	0.030636125	0.18412
23-Feb-14	4620216	17.41	-0.005582468	-0.15403
2-Mar-14	4685890	19.11	0.014214487	0.097645
9-Mar-14	4878643	25.49	0.041134768	0.333857
16-Mar-14	4700215	25.21	-0.036573285	-0.01098
23-Mar-14	4768277	17.47	0.014480614	-0.30702
30-Mar-14	4857944	17.02	0.018804906	-0.02576
6-Apr-14	4816576	18.04	-0.008515537	0.059929
13-Apr-14	4897052	15.07	0.016708135	-0.16463
20-Apr-14	4897643	16.58	0.000120685	0.100199
27-Apr-14	4838760	13.63	-0.012022722	-0.17793
4-May-14	4898138	14.99	0.012271326	0.09978
11-May-14	5031571	15.77	0.027241576	0.052035
18-May-14	4973057	18.56	-0.01162937	0.176918
25-May-14	4893908	9.45	-0.015915563	-0.49084
1-Jun-14	4937176	14.09	0.008841196	0.491005
8-Jun-14	4926663	13.34	-0.002129355	-0.05323
15-Jun-14	4847701	13.39	-0.016027481	0.003748
22-Jun-14	4845134	15.14	-0.000529529	0.130695
29-Jun-14	4905825	16.31	0.012526176	0.077279
6-Jul-14	5032599	22.46	0.025841525	0.377069

13-Jul-14	5087014	19.95	0.010812505	-0.11175
20-Jul-14	5088802	21.72	0.000351483	0.088722
27-Jul-14	5053760	17.66	-0.0068861	-0.18692
3-Aug-14	5023731	17.63	-0.005941913	-0.0017
10-Aug-14	5148962	18.51	0.024927887	0.049915
17-Aug-14	5198896	17.82	0.009697877	-0.03728
24-Aug-14	5136863	17.67	-0.011931956	-0.00842
31-Aug-14	5217335	17.35	0.015665592	-0.01811
7-Sep-14	5143711	19.66	-0.014111419	0.133141
14-Sep-14	5227582	17.21	0.016305543	-0.12462
21-Sep-14	5132563	17.32	-0.018176472	0.006392
28-Sep-14	4949346	18.79	-0.03569698	0.084873
5-Oct-14	4962960	15.19	0.002750666	-0.19159
12-Oct-14	5028946	16.14	0.013295695	0.062541
19-Oct-14	5073068	16.76	0.008773608	0.038414
26-Oct-14	5089547	16.17	0.00324833	-0.0352
2-Nov-14	4987424	16.83	-0.020065244	0.040816
9-Nov-14	5049488	15.29	0.012444099	-0.0915
16-Nov-14	5112045	21.26	0.012388781	0.390451
23-Nov-14	5149888	26.66	0.007402713	0.253998
30-Nov-14	5187994	22.93	0.007399384	-0.13991
7-Dec-14	5160433	24.3	-0.005312458	0.059747
14-Dec-14	5144621	32.01	-0.003064084	0.317284
21-Dec-14	5166983	13.89	0.004346676	-0.56607
28-Dec-14	5242769	11.67	0.01466736	-0.15983

APPENDIX 2: Descriptive Statistics

Thailand

VOLUME		RETURN	
Mean	10.44721	Mean	0.00181
Standard Error	0.231723	Standard Error	0.001841
Median	10.3	Median	0.005495
Mode	10.6	Mode	#N/A
Standard Deviation	3.210851	Standard Deviation	0.025508
Sample Variance	10.30956	Sample Variance	0.000651
Kurtosis	-0.34471	Kurtosis	1.051085
Skewness	0.43644	Skewness	-0.40853
Range	14.6	Range	0.154348
Minimum	4.26	Minimum	-0.08109
Maximum	18.86	Maximum	0.073254
Sum	2005.865	Sum	0.347603
Count	192	Count	192

Vietnam

<i>trading volume</i>		<i>return</i>	
Mean	237.7092	Mean	0.000822
Standard Error	8.939783	Standard Error	0.002215
Median	212.535	Median	0.000787
Mode	504.48	Mode	0
Standard Deviation	123.8733	Standard Deviation	0.030691
Sample Variance	15344.59	Sample Variance	0.000942
Kurtosis	0.339549	Kurtosis	1.234372
Skewness	0.878565	Skewness	-0.21797
Range	630.91	Range	0.191145
Minimum	31.98	Minimum	-0.10291
Maximum	662.89	Maximum	0.088231
Sum	45640.16	Sum	0.157733
Count	192	Count	192

Philippines

<i>trading volume</i>		<i>return</i>	
Mean	774.9305	Mean	0.002904
Standard Error	62.31603	Standard Error	0.001499
Median	427.48	Median	0.004516
Mode	3480	Mode	#N/A
Standard Deviation	863.4762	Standard Deviation	0.020767
Sample Variance	745591.2	Sample Variance	0.000431
Kurtosis	4.394619	Kurtosis	2.611383
Skewness	2.28316	Skewness	-0.93697
Range	4405.72	Range	0.144651
Minimum	54.28	Minimum	-0.09422
Maximum	4460	Maximum	0.050433
Sum	148786.7	Sum	0.557507
Count	192	Count	192

Malaysia

<i>trading volume</i>		<i>return</i>	
Mean	633.2747917	Mean	0.000771221
Standard Error	12.7547295	Standard Error	0.000914021
Median	622.76	Median	0.000637885
Mode	#N/A	Mode	#N/A
Standard Deviation	176.7347162	Standard Deviation	0.012665049
Sample Variance	31235.15993	Sample Variance	0.000160403
Kurtosis	2.10878464	Kurtosis	2.194849751
Skewness	0.819439824	Skewness	0.130339744
Range	1189.69	Range	0.091211839
Minimum	210.31	Minimum	0.045418015
Maximum	1400	Maximum	0.045793825
Sum	121588.76	Sum	0.148074481
Count	192	Count	192

Indonesia

<i>trading volume</i>		<i>return</i>	
Mean	17.96531	Mean	0.001992
Standard Error	0.410065	Standard Error	0.001676
Median	17.365	Median	0.003338
Mode	15.29	Mode	#N/A
Standard Deviation	5.682027	Standard Deviation	0.02323
Sample Variance	32.28543	Sample Variance	0.00054
Kurtosis	1.796163	Kurtosis	3.557708
Skewness	0.912879	Skewness	-0.49776
Range	35.88	Range	0.181051
Minimum	4.13	Minimum	-0.1066
Maximum	40.01	Maximum	0.07445
Sum	3449.34	Sum	0.38251
Count	192	Count	192

APPENDIX 3: Stationary Test

Thailand Stock Market Return

Null Hypothesis: R has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-14.35441	0.0000
Test critical values: 1% level	-3.464643	
5% level	-2.876515	
10% level	-2.574831	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(R)

Method: Least Squares

Date: 11/24/15 Time: 16:22

Sample (adjusted): 5/08/2011 12/28/2014

Included observations: 191 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
R(-1)	-1.035179	0.072116	-14.35441	0.0000
C	0.002110	0.001844	1.144102	0.2540
R-squared	0.521579	Mean dependent var		0.000199
Adjusted R-squared	0.519047	S.D. dependent var		0.036652
S.E. of regression	0.025418	Akaike info criterion		-4.496289
Sum squared resid	0.122110	Schwarz criterion		-4.462234
Log likelihood	431.3956	Hannan-Quinn criter.		-4.482495
F-statistic	206.0492	Durbin-Watson stat		1.967400
Prob(F-statistic)	0.000000			

Vietnam Stock Market Return

Null Hypothesis: R has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-11.29448	0.0000
Test critical values: 1% level	-3.464643	
5% level	-2.876515	
10% level	-2.574831	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(R)

Method: Least Squares

Date: 11/24/15 Time: 16:25

Sample (adjusted): 5/08/2011 12/28/2014

Included observations: 191 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
R(-1)	-0.806902	0.071442	-11.29448	0.0000
C	0.000745	0.002190	0.340159	0.7341
R-squared	0.402967	Mean dependent var		0.000174
Adjusted R-squared	0.399808	S.D. dependent var		0.039062
S.E. of regression	0.030262	Akaike info criterion		-4.147426
Sum squared resid	0.173085	Schwarz criterion		-4.113371
Log likelihood	398.0792	Hannan-Quinn criter.		-4.133633
F-statistic	127.5653	Durbin-Watson stat		1.995120
Prob(F-statistic)	0.000000			

Philippines Stock Market Return

Null Hypothesis: R has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-13.58780	0.0000
Test critical values: 1% level	-3.464643	
5% level	-2.876515	
10% level	-2.574831	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(R)

Method: Least Squares

Date: 11/24/15 Time: 16:32

Sample (adjusted): 5/08/2011 12/28/2014

Included observations: 191 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
R(-1)	-0.984172	0.072431	-13.58780	0.0000
C	0.002995	0.001519	1.972255	0.0500
R-squared	0.494150	Mean dependent var	0.000154	
Adjusted R-squared	0.491473	S.D. dependent var	0.029149	
S.E. of regression	0.020787	Akaike info criterion	-4.898595	
Sum squared resid	0.081664	Schwarz criterion	-4.864539	
Log likelihood	469.8158	Hannan-Quinn criter.	-4.884801	
F-statistic	184.6283	Durbin-Watson stat	1.989479	
Prob(F-statistic)	0.000000			

Malaysia Stock Market Return

Null Hypothesis: R has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-14.06695	0.0000
Test critical values: 1% level	-3.464643	
5% level	-2.876515	
10% level	-2.574831	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(R)

Method: Least Squares

Date: 11/24/15 Time: 17:16

Sample (adjusted): 5/08/2011 12/28/2014

Included observations: 191 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
R(-1)	-1.020873	0.072572	-14.06695	0.0000
C	0.000859	0.000920	0.932966	0.3520
R-squared	0.511475	Mean dependent var	3.17E-05	
Adjusted R-squared	0.508890	S.D. dependent var	0.018110	
S.E. of regression	0.012691	Akaike info criterion	-5.885383	
Sum squared resid	0.030442	Schwarz criterion	-5.851328	
Log likelihood	564.0541	Hannan-Quinn criter.	-5.871589	
F-statistic	197.8790	Durbin-Watson stat	1.977776	
Prob(F-statistic)	0.000000			

Indonesia Stock Market Return

Null Hypothesis: R has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-15.32523	0.0000
Test critical values: 1% level	-3.464643	
5% level	-2.876515	
10% level	-2.574831	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(R)

Method: Least Squares

Date: 11/24/15 Time: 17:18

Sample (adjusted): 5/08/2011 12/28/2014

Included observations: 191 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
R(-1)	-1.108711	0.072345	-15.32523	0.0000
C	0.002241	0.001685	1.329898	0.1852
R-squared	0.554101	Mean dependent var	0.000106	
Adjusted R-squared	0.551742	S.D. dependent var	0.034663	
S.E. of regression	0.023208	Akaike info criterion	-4.678246	
Sum squared resid	0.101795	Schwarz criterion	-4.644190	
Log likelihood	448.7724	Hannan-Quinn criter.	-4.664452	
F-statistic	234.8628	Durbin-Watson stat	1.984230	
Prob(F-statistic)	0.000000			

Thailand Detrended Volume

Null Hypothesis: DV has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-20.06712	0.0000
Test critical values: 1% level	-3.464643	
5% level	-2.876515	
10% level	-2.574831	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(DV)

Method: Least Squares

Date: 11/24/15 Time: 16:22

Sample (adjusted): 5/08/2011 12/28/2014

Included observations: 191 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DV(-1)	-1.362184	0.067881	-20.06712	0.0000
C	0.076237	0.025625	2.975083	0.0033
R-squared	0.680576	Mean dependent var	-0.000367	
Adjusted R-squared	0.678885	S.D. dependent var	0.617987	
S.E. of regression	0.350195	Akaike info criterion	0.749762	
Sum squared resid	23.17828	Schwarz criterion	0.783817	
Log likelihood	-69.60222	Hannan-Quinn criter.	0.763555	
F-statistic	402.6891	Durbin-Watson stat	2.039832	
Prob(F-statistic)	0.000000			

Vietnam Detrended Volume

Null Hypothesis: DV has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-15.45148	0.0000
Test critical values: 1% level	-3.464643	
5% level	-2.876515	
10% level	-2.574831	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(DV)

Method: Least Squares

Date: 11/24/15 Time: 16:26

Sample (adjusted): 5/08/2011 12/28/2014

Included observations: 191 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DV(-1)	-1.114209	0.072110	-15.45148	0.0000
C	0.125615	0.045116	2.784232	0.0059
R-squared	0.558151	Mean dependent var		0.001531
Adjusted R-squared	0.555814	S.D. dependent var		0.920614
S.E. of regression	0.613565	Akaike info criterion		1.871354
Sum squared resid	71.15126	Schwarz criterion		1.905409
Log likelihood	-176.7143	Hannan-Quinn criter.		1.885148
F-statistic	238.7483	Durbin-Watson stat		1.991765
Prob(F-statistic)	0.000000			

Philippines Detrended Volume

Null Hypothesis: DV has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-14.50982	0.0000
Test critical values: 1% level	-3.464827	
5% level	-2.876595	
10% level	-2.574874	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(DV)

Method: Least Squares

Date: 11/24/15 Time: 16:32

Sample (adjusted): 5/15/2011 12/28/2014

Included observations: 190 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DV(-1)	-1.612514	0.111133	-14.50982	0.0000
D(DV(-1))	0.303558	0.070721	4.292351	0.0000
C	0.135050	0.035474	3.806971	0.0002
R-squared	0.650970	Mean dependent var	-0.001942	
Adjusted R-squared	0.647237	S.D. dependent var	0.792364	
S.E. of regression	0.470616	Akaike info criterion	1.346113	
Sum squared resid	41.41657	Schwarz criterion	1.397382	
Log likelihood	-124.8807	Hannan-Quinn criter.	1.366881	
F-statistic	174.3854	Durbin-Watson stat	2.047675	
Prob(F-statistic)	0.000000			

Malaysia Detrended Volume

Null Hypothesis: DV has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-13.05475	0.0000
Test critical values: 1% level	-3.464827	
5% level	-2.876595	
10% level	-2.574874	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(DV)

Method: Least Squares

Date: 11/24/15 Time: 17:16

Sample (adjusted): 5/15/2011 12/28/2014

Included observations: 190 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DV(-1)	-1.537002	0.117735	-13.05475	0.0000
D(DV(-1))	0.167620	0.072805	2.302312	0.0224
C	0.070361	0.021853	3.219752	0.0015
R-squared	0.668271	Mean dependent var	-0.001012	
Adjusted R-squared	0.664723	S.D. dependent var	0.503027	
S.E. of regression	0.291268	Akaike info criterion	0.386518	
Sum squared resid	15.86454	Schwarz criterion	0.437787	
Log likelihood	-33.71925	Hannan-Quinn criter.	0.407287	
F-statistic	188.3566	Durbin-Watson stat	2.021772	
Prob(F-statistic)	0.000000			

Indonesia Detrended Volume

Null Hypothesis: DV has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-12.85666	0.0000
Test critical values: 1% level	-3.464827	
5% level	-2.876595	
10% level	-2.574874	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(DV)

Method: Least Squares

Date: 11/24/15 Time: 17:19

Sample (adjusted): 5/15/2011 12/28/2014

Included observations: 190 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DV(-1)	-1.434069	0.111543	-12.85666	0.0000
D(DV(-1))	0.187802	0.071988	2.608780	0.0098
C	0.054301	0.022766	2.385143	0.0181
R-squared	0.619108	Mean dependent var	-0.003069	
Adjusted R-squared	0.615034	S.D. dependent var	0.494929	
S.E. of regression	0.307082	Akaike info criterion	0.492260	
Sum squared resid	17.63398	Schwarz criterion	0.543528	
Log likelihood	-43.76466	Hannan-Quinn criter.	0.513028	
F-statistic	151.9761	Durbin-Watson stat	1.993299	
Prob(F-statistic)	0.000000			

APPENDIX 4: Determining Optimal Lag

Thailand

VAR Lag Order Selection Criteria

Endogenous variables: R DV

Exogenous variables: C

Date: 11/25/15 Time: 04:41

Sample: 5/01/2011 12/28/2014

Included observations: 184

Lag	LogL	LR	FPE	AIC	SC	HQ
0	335.0780	NA	9.18e-05	-3.620413	-3.585468	-3.606249
1	347.0888	23.62998*	8.41e-05*	-3.707487*	-3.602652*	-3.664996*
2	349.6456	4.974658	8.55e-05	-3.691800	-3.517076	-3.620982
3	351.6082	3.775873	8.74e-05	-3.669655	-3.425040	-3.570509
4	353.2942	3.207103	8.96e-05	-3.644503	-3.329998	-3.517030
5	354.3179	1.924817	9.26e-05	-3.612151	-3.227756	-3.456351
6	354.9005	1.083002	9.61e-05	-3.575006	-3.120721	-3.390878
7	355.8389	1.723797	9.94e-05	-3.541727	-3.017553	-3.329273
8	357.0377	2.175991	0.000102	-3.511279	-2.917215	-3.270497

* 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

Vietnam

VAR Lag Order Selection Criteria

Endogenous variables: R DV

Exogenous variables: C

Date: 11/25/15 Time: 04:39

Sample: 5/01/2011 12/28/2014

Included observations: 184

Lag	LogL	LR	FPE	AIC	SC	HQ
0	214.5963	NA	0.000340	-2.310830	-2.275885*	-2.296666*
1	221.0608	12.71807	0.000331	-2.337617	-2.232782	-2.295126
2	223.3982	4.547779	0.000337	-2.319545	-2.144821	-2.248727
3	229.2603	11.27825*	0.000330*	-2.339786*	-2.095171	-2.240641
4	230.9092	3.136566	0.000339	-2.314231	-1.999726	-2.186758
5	231.2146	0.574242	0.000353	-2.274072	-1.889678	-2.118272
6	233.7803	4.768826	0.000358	-2.258482	-1.804197	-2.074355
7	235.0811	2.389433	0.000369	-2.229142	-1.704968	-2.016688
8	235.7776	1.264383	0.000383	-2.193235	-1.599171	-1.952453

* 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

Philippines

VAR Lag Order Selection Criteria

Endogenous variables: DV R

Exogenous variables: C

Date: 11/25/15 Time: 04:35

Sample: 5/01/2011 12/28/2014

Included observations: 184

Lag	LogL	LR	FPE	AIC	SC	HQ
0	316.0439	NA	0.000113	-3.413520	-3.378575*	-3.399357
1	321.8251	11.37393	0.000111	-3.432881	-3.328046	-3.390390
2	331.6333	19.08345	0.000104*	-3.496015*	-3.321290	-3.425196*
3	334.5878	5.684056	0.000105	-3.484650	-3.240035	-3.385504
4	335.1207	1.013735	0.000109	-3.446964	-3.132459	-3.319491
5	337.9639	5.346463	0.000111	-3.434390	-3.049996	-3.278590
6	342.4157	8.274558	0.000110	-3.439301	-2.985017	-3.255174
7	348.1698	10.57005*	0.000108	-3.458368	-2.934193	-3.245913
8	348.5625	0.712829	0.000112	-3.419158	-2.825094	-3.178376

* 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

Malaysia

VAR Lag Order Selection Criteria

Endogenous variables: R DV

Exogenous variables: C

Date: 11/25/15 Time: 04:37

Sample: 5/01/2011 12/28/2014

Included observations: 184

Lag	LogL	LR	FPE	AIC	SC	HQ
0	499.6651	NA	1.53e-05	-5.409403	-5.374458	-5.395239
1	511.3507	22.99020	1.41e-05	-5.492942	-5.388108*	-5.450452*
2	516.6561	10.32252	1.39e-05	-5.507132	-5.332407	-5.436314
3	518.6122	3.763235	1.42e-05	-5.484915	-5.240300	-5.385769
4	523.3999	9.107070	1.41e-05	-5.493477	-5.178972	-5.366004
5	529.4215	11.32328*	1.38e-05*	-5.515451*	-5.131057	-5.359651
6	530.2855	1.605957	1.43e-05	-5.481365	-5.027080	-5.297237
7	531.3280	1.915033	1.48e-05	-5.449218	-4.925043	-5.236763
8	532.4274	1.995582	1.52e-05	-5.417689	-4.823625	-5.176907

* 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

Indonesia

VAR Lag Order Selection Criteria

Endogenous variables: R DV

Exogenous variables: C

Date: 11/24/15 Time: 17:45

Sample: 5/01/2011 12/28/2014

Included observations: 184

Lag	LogL	LR	FPE	AIC	SC	HQ
0	378.6272	NA	5.72e-05	-4.093774	-4.058829*	-4.079610*
1	383.4237	9.436692	5.67e-05	-4.102432	-3.997597	-4.059941
2	388.3331	9.551872	5.61e-05*	-4.112316*	-3.937591	-4.041498
3	390.5069	4.182306	5.72e-05	-4.092467	-3.847852	-3.993321
4	392.0487	2.932760	5.88e-05	-4.065747	-3.751242	-3.938274
5	397.7050	10.63619*	5.78e-05	-4.083750	-3.699355	-3.927950
6	397.8861	0.336688	6.02e-05	-4.042240	-3.587956	-3.858113
7	400.0930	4.053910	6.14e-05	-4.022750	-3.498575	-3.810295
8	404.3159	7.665479	6.13e-05	-4.025172	-3.431108	-3.784391

* 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 5: Vector Auto Regression (VAR) Model

Thailand

Vector Autoregression Estimates

Date: 11/26/15 Time: 10:35

Sample (adjusted): 5/08/2011 12/28/2014

Included observations: 191 after adjustments

Standard errors in () & t-statistics in []

	R	DV
R(-1)	-0.035189 (0.07215) [-0.48770]	0.458482 (0.99564) [0.46049]
DV(-1)	0.004429 (0.00493) [0.89836]	-0.362189 (0.06802) [-5.32448]
C	0.001861 (0.00187) [0.99735]	0.075391 (0.02574) [2.92843]
R-squared	0.005527	0.131886
Adj. R-squared	-0.005053	0.122651
Sum sq. resids	0.121588	23.15216
S.E. equation	0.025431	0.350927
F-statistic	0.522387	14.28071
Log likelihood	431.8047	-69.49457
Akaike AIC	-4.490101	0.759105
Schwarz SC	-4.439019	0.810188
Mean dependent	0.002045	0.055869
S.D. dependent	0.025367	0.374654
Determinant resid covariance (dof adj.)		7.96E-05
Determinant resid covariance		7.71E-05
Log likelihood		362.3446
Akaike information criterion		-3.731357
Schwarz criterion		-3.629192

VAR Model - Substituted Coefficients:

=====

R = - 0.0351889377328*R(-1) + 0.00442852778782*DV(-1) +
0.00186070800884

DV = 0.458481684602*R(-1) - 0.362189370409*DV(-1) + 0.0753907285298

Vietnam

Vector Autoregression Estimates

Date: 11/24/15 Time: 23:23

Sample (adjusted): 5/22/2011 12/28/2014

Included observations: 189 after adjustments

Standard errors in () & t-statistics in []

	R	DV
R(-1)	0.167057 (0.07283) [2.29383]	3.105734 (1.48662) [2.08913]
R(-2)	-0.057354 (0.07392) [-0.77593]	1.094533 (1.50884) [0.72542]
R(-3)	0.115142 (0.07304) [1.57633]	-2.948696 (1.49102) [-1.97764]
DV(-1)	0.002940 (0.00361) [0.81381]	-0.139682 (0.07375) [-1.89397]
DV(-2)	0.006292 (0.00364) [1.73007]	-0.046075 (0.07424) [-0.62062]
DV(-3)	0.005910 (0.00361) [1.63832]	-0.052418 (0.07364) [-0.71186]
C	-0.000676 (0.00230) [-0.29394]	0.135773 (0.04695) [2.89182]

R-squared	0.082807	0.062497
Adj. R-squared	0.052570	0.031590
Sum sq. resids	0.161249	67.18777
S.E. equation	0.029765	0.607588
F-statistic	2.738598	2.022106
Log likelihood	399.6101	-170.4422
Akaike AIC	-4.154604	1.877695
Schwarz SC	-4.034539	1.997760
Mean dependent	0.001259	0.109499
S.D. dependent	0.030580	0.617419

Determinant resid covariance (dof adj.)	0.000320
Determinant resid covariance	0.000297
Log likelihood	231.2919
Akaike information criterion	-2.299385
Schwarz criterion	-2.059256

VAR Model - Substituted Coefficients:

=====

$$R = 0.167056629601 \cdot R(-1) - 0.0573542589211 \cdot R(-2) + 0.115141892216 \cdot R(-3) \\
+ 0.00294032914591 \cdot DV(-1) + 0.0062922418789 \cdot DV(-2) + \\
0.00591005031881 \cdot DV(-3) - 0.000676081416848$$

$$DV = 3.1057337543 \cdot R(-1) + 1.09453327117 \cdot R(-2) - 2.94869618791 \cdot R(-3) - \\
0.139682361273 \cdot DV(-1) - 0.0460745604597 \cdot DV(-2) - 0.052418115358 \cdot DV(-3) \\
+ 0.135772634266$$

Philippines

Vector Autoregression Estimates

Date: 11/24/15 Time: 23:24

Sample (adjusted): 5/15/2011 12/28/2014

Included observations: 190 after adjustments

Standard errors in () & t-statistics in []

	R	DV
R(-1)	0.016390 (0.07390) [0.22178]	1.358066 (1.66880) [0.81380]
R(-2)	0.055796 (0.07338) [0.76033]	0.167963 (1.65714) [0.10136]
DV(-1)	0.001884 (0.00314) [0.59970]	-0.316512 (0.07096) [-4.46041]
DV(-2)	-0.001206 (0.00318) [-0.37978]	-0.309459 (0.07172) [-4.31499]
C	0.002706 (0.00159) [1.69763]	0.131624 (0.03600) [3.65673]
R-squared	0.006808	0.142914
Adj. R-squared	-0.014667	0.124383
Sum sq. resids	0.080925	41.26636
S.E. equation	0.020915	0.472294
F-statistic	0.317022	7.711941
Log likelihood	467.7207	-124.5356
Akaike AIC	-4.870744	1.363532
Schwarz SC	-4.785296	1.448980
Mean dependent	0.002966	0.082010
S.D. dependent	0.020763	0.504725
Determinant resid covariance (dof adj.)		9.61E-05
Determinant resid covariance		9.11E-05
Log likelihood		344.6422
Akaike information criterion		-3.522550
Schwarz criterion		-3.351654

VAR Model - Substituted Coefficients:

=====

$$R = 0.0163897398351 \cdot R(-1) + 0.0557962636996 \cdot R(-2) + 0.00188448160716 \cdot DV(-1) - 0.00120613645891 \cdot DV(-2) + 0.00270601721426$$

$$DV = 1.35806592676 \cdot R(-1) + 0.167962957996 \cdot R(-2) - 0.316511604908 \cdot DV(-1) - 0.309458949785 \cdot DV(-2) + 0.131624237467$$



Malaysia

Vector Autoregression Estimates

Date: 11/24/15 Time: 23:26

Sample (adjusted): 6/05/2011 12/28/2014

Included observations: 187 after adjustments

Standard errors in () & t-statistics in []

	R	DV
R(-1)	-0.059217 (0.07460) [-0.79375]	-3.439970 (1.70232) [-2.02076]
R(-2)	-0.023506 (0.07487) [-0.31395]	-2.908084 (1.70846) [-1.70216]
R(-3)	-0.016183 (0.07581) [-0.21347]	0.665652 (1.72987) [0.38480]
R(-4)	0.136303 (0.07525) [1.81134]	-2.093770 (1.71706) [-1.21939]
R(-5)	-0.073066 (0.07664) [-0.95335]	2.749984 (1.74883) [1.57247]
DV(-1)	-0.002016 (0.00329) [-0.61330]	-0.436038 (0.07499) [-5.81430]
DV(-2)	0.001653 (0.00358) [0.46113]	-0.285636 (0.08178) [-3.49270]
DV(-3)	0.008311 (0.00367) [2.26213]	-0.175384 (0.08383) [-2.09203]
DV(-4)	0.011899 (0.00362) [3.28321]	-0.146397 (0.08270) [-1.77025]
DV(-5)	0.008819 (0.00334)	-0.077649 (0.07625)

	[2.63934]	[-1.01838]
C	-0.000646 (0.00109) [-0.59113]	0.097404 (0.02493) [3.90701]

R-squared	0.101962	0.207744
Adj. R-squared	0.050937	0.162730
Sum sq. resids	0.027070	14.09472
S.E. equation	0.012402	0.282991
F-statistic	1.998274	4.615053
Log likelihood	561.2383	-23.61520
Akaike AIC	-5.884901	0.370216
Schwarz SC	-5.694836	0.560281
Mean dependent	0.000704	0.041896
S.D. dependent	0.012730	0.309271

Determinant resid covariance (dof adj.)	1.20E-05
Determinant resid covariance	1.06E-05
Log likelihood	540.1743
Akaike information criterion	-5.541971
Schwarz criterion	-5.161841

VAR Model - Substituted Coefficients:

=====

R = - 0.059216633601*R(-1) - 0.023506376236*R(-2) - 0.0161832117802*R(-3) + 0.136302941473*R(-4) - 0.0730662000348*R(-5) - 0.00201567345337*DV(-1) + 0.0016527068184*DV(-2) + 0.00831108305744*DV(-3) + 0.0118991182435*DV(-4) + 0.00881945980907*DV(-5) - 0.000645853529514

DV = - 3.43996975984*R(-1) - 2.90808355923*R(-2) + 0.665652202405*R(-3) - 2.09377007788*R(-4) + 2.74998377521*R(-5) - 0.436038450256*DV(-1) - 0.285636367191*DV(-2) - 0.175383940037*DV(-3) - 0.146397359769*DV(-4) - 0.0776494988396*DV(-5) + 0.0974044343411

Indonesia

Vector Autoregression Estimates

Date: 11/24/15 Time: 23:27

Sample (adjusted): 5/15/2011 12/28/2014

Included observations: 190 after adjustments

Standard errors in () & t-statistics in []

	R	DV
R(-1)	-0.105592 (0.07310) [-1.44445]	0.071432 (0.96854) [0.07375]
R(-2)	0.056578 (0.07305) [0.77448]	0.531907 (0.96790) [0.54955]
DV(-1)	0.002928 (0.00543) [0.53890]	-0.246197 (0.07198) [-3.42059]
DV(-2)	0.007690 (0.00546) [1.40766]	-0.189004 (0.07238) [-2.61130]
C	0.001637 (0.00174) [0.94209]	0.053194 (0.02302) [2.31095]
R-squared	0.025969	0.078457
Adj. R-squared	0.004908	0.058532
Sum sq. resids	0.100291	17.60522
S.E. equation	0.023283	0.308486
F-statistic	1.233069	3.937583
Log likelihood	447.3381	-43.60961
Akaike AIC	-4.656191	0.511680
Schwarz SC	-4.570743	0.597128
Mean dependent	0.001996	0.036236
S.D. dependent	0.023341	0.317930
Determinant resid covariance (dof adj.)		5.15E-05
Determinant resid covariance		4.88E-05
Log likelihood		403.9421
Akaike information criterion		-4.146759
Schwarz criterion		-3.975863

VAR Model - Substituted Coefficients:

=====

$$R = -0.105592400373 \cdot R(-1) + 0.0565782504227 \cdot R(-2) + 0.00292752350049 \cdot DV(-1) + 0.00768989661201 \cdot DV(-2) + 0.00163671776471$$

$$DV = 0.0714324809141 \cdot R(-1) + 0.531906724664 \cdot R(-2) - 0.246196770302 \cdot DV(-1) - 0.189003597562 \cdot DV(-2) + 0.053193865214$$



APPENDIX 6: Granger Causality Tests

Thailand

Pairwise Granger Causality Tests

Date: 11/26/15 Time: 11:50

Sample: 5/01/2011 12/28/2014

Lags: 1

Null Hypothesis:	Obs	F-Statistic	Prob.
DV does not Granger Cause R	191	0.80706	0.3701
R does not Granger Cause DV		0.21205	0.6457

Vietnam

Pairwise Granger Causality Tests

Date: 11/24/15 Time: 23:58

Sample: 5/01/2011 12/28/2014

Lags: 3

Null Hypothesis:	Obs	F-Statistic	Prob.
DV does not Granger Cause R	189	1.72684	0.1631
R does not Granger Cause DV		3.01908	0.0312

Philippines

Pairwise Granger Causality Tests

Date: 11/25/15 Time: 00:06

Sample: 5/01/2011 12/28/2014

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
R does not Granger Cause DV	190	0.33670	0.7146
DV does not Granger Cause R		0.33191	0.7180

Malaysia

Pairwise Granger Causality Tests

Date: 11/25/15 Time: 00:11

Sample: 5/01/2011 12/28/2014

Lags: 5

Null Hypothesis:	Obs	F-Statistic	Prob.
DV does not Granger Cause R	187	3.01661	0.0122
R does not Granger Cause DV		2.11700	0.0655

Indonesia

Pairwise Granger Causality Tests

Date: 11/24/15 Time: 23:59

Sample: 5/01/2011 12/28/2014

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
DV does not Granger Cause R	190	1.02260	0.3617
R does not Granger Cause DV		0.15109	0.8599

APPENDIX 7: Impulse Response

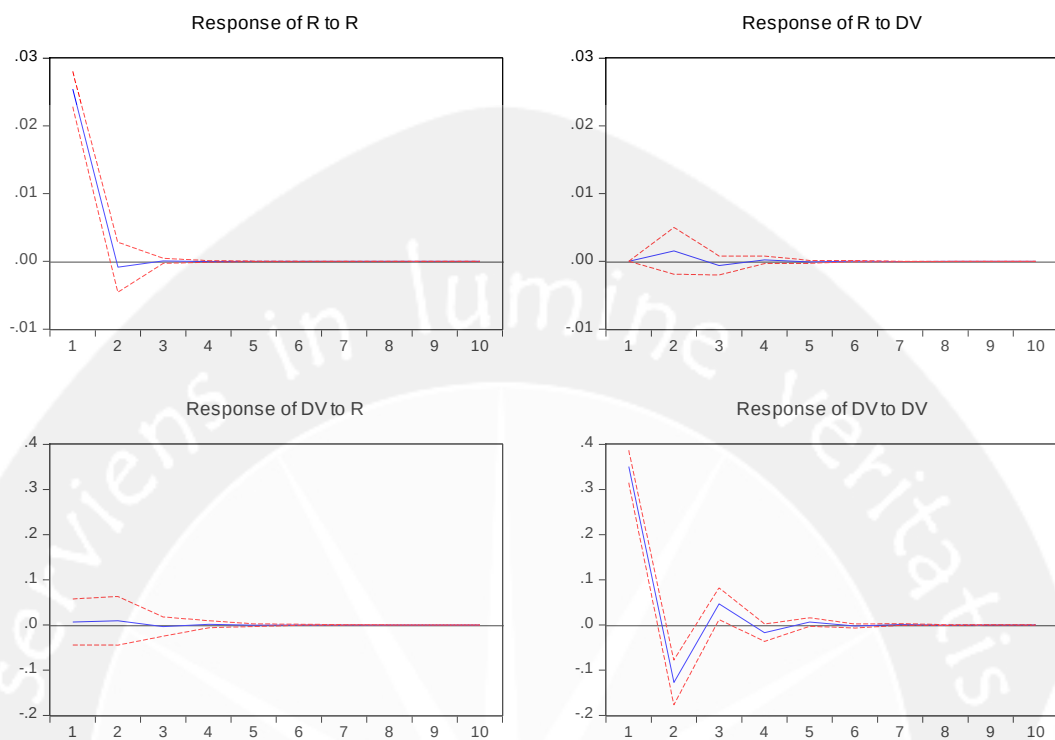
Impulse Responses - Thailand

Period	Response of R:	
	R	DV
1	0.025431	0.000000
2	-0.000865	0.001554
3	7.14E-05	-0.000617
4	-1.91E-05	0.000229
5	6.82E-06	-8.43E-05
6	-2.51E-06	3.10E-05
7	9.23E-07	-1.14E-05
8	-3.40E-07	4.21E-06
9	1.25E-07	-1.55E-06
10	-4.61E-08	5.71E-07

Period	Response of DV:	
	R	DV
1	0.006669	0.350864
2	0.009244	-0.127079
3	-0.003745	0.046739
4	0.001389	-0.017211
5	-0.000512	0.006339
6	0.000189	-0.002334
7	-6.94E-05	0.000860
8	2.56E-05	-0.000317
9	-9.42E-06	0.000117
10	3.47E-06	-4.29E-05

Cholesky Ordering: R DV

Response to Cholesky One S.D. Innovations ± 2 S.E.



Impulse Responses - Vietnam

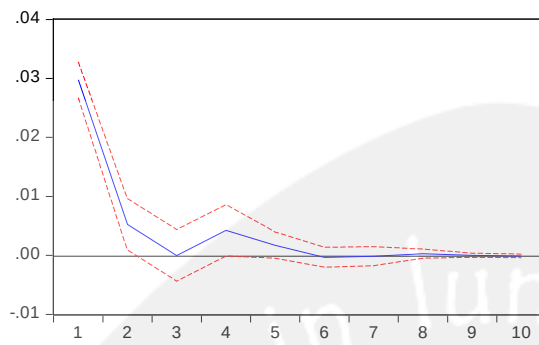
Period	Response of R:	
	R	DV
1	0.029765	0.000000
2	0.005239	0.001767
3	-2.74E-05	0.003829
4	0.004258	0.003530
5	0.001719	-2.46E-05
6	-0.000346	0.000143
7	-0.000160	0.000437
8	0.000272	7.90E-05
9	1.47E-05	-9.58E-05
10	-0.000111	-5.38E-06

Period	Response of DV:	
	R	DV
1	0.090582	0.600798
2	0.079791	-0.083921
3	0.033531	-0.010473
4	-0.095228	-0.012339
5	0.005321	0.016551
6	0.011966	-0.008697
7	-0.008673	-0.008892
8	-0.005562	0.002363
9	0.002239	0.000837
10	0.001214	-0.001261

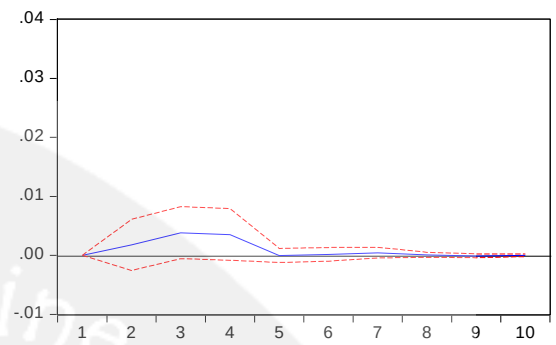
Cholesky Ordering: R DV

Response to Cholesky One S.D. Innovations ± 2 S.E.

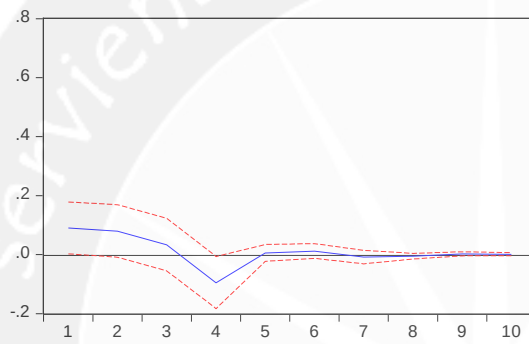
Response of R to R



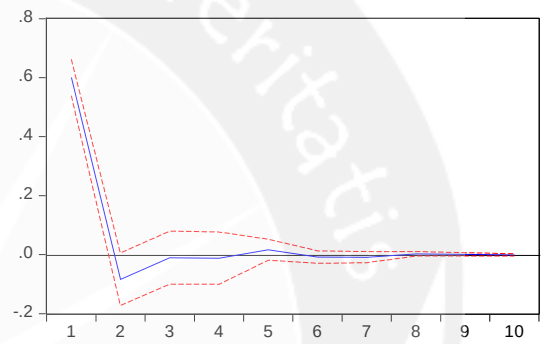
Response of R to DV



Response of DV to R



Response of DV to DV



Impulse Responses - Philippines

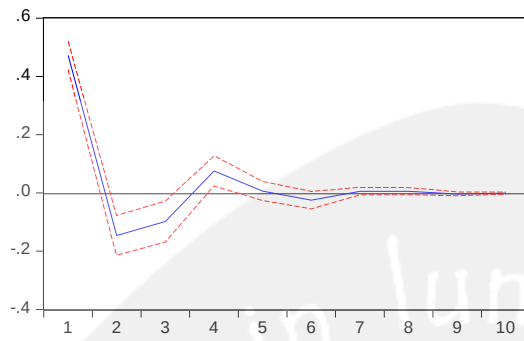
Period	Response of R:	
	R	DV
1	0.020915	0.000000
2	0.000453	0.000883
3	0.001123	-0.000830
4	-5.01E-07	3.20E-05
5	9.06E-05	0.000214
6	4.70E-06	-7.47E-05
7	-4.54E-06	-4.36E-05
8	2.14E-06	3.66E-05
9	2.12E-06	1.79E-06
10	-1.18E-06	-1.17E-05

Period	Response of DV:	
	R	DV
1	0.058268	0.468686
2	0.009961	-0.148344
3	-0.017057	-0.096887
4	0.003917	0.075593
5	0.004227	0.005960
6	-0.002427	-0.024984
7	-0.000518	0.005998
8	0.000910	0.005761
9	-0.000125	-0.003637
10	-0.000239	-0.000623

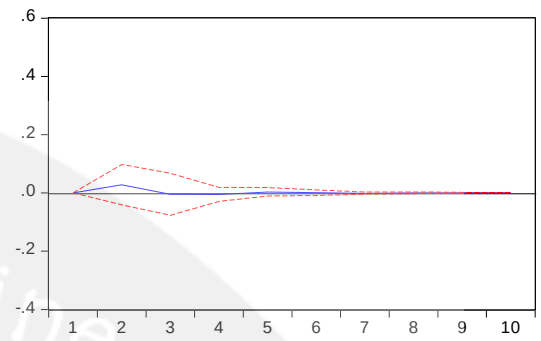
Cholesky Ordering: R DV

Response to Cholesky One S.D. Innovations ± 2 S.E.

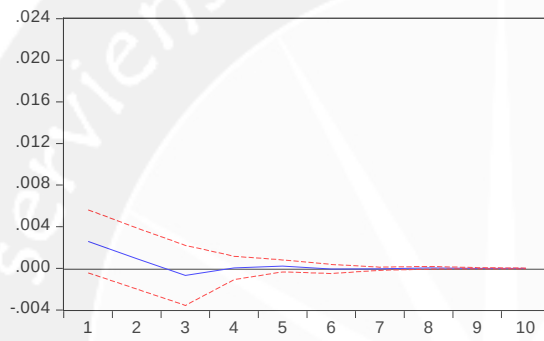
Response of DV to DV



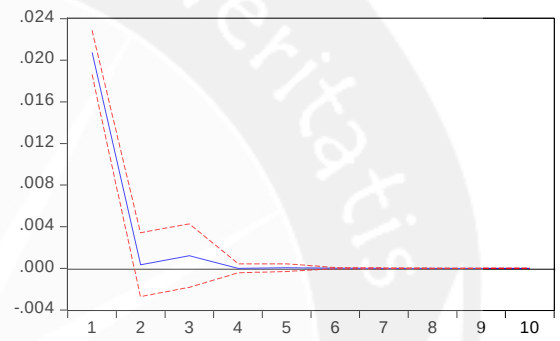
Response of DV to R



Response of R to DV



Response of R to R



Impulse Responses - Malaysia

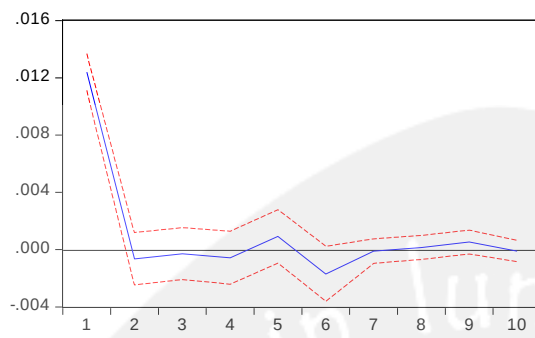
Period	Response of R:	
	R	DV
1	0.012402	0.000000
2	-0.000641	-0.000563
3	-0.000285	0.000740
4	-0.000570	0.002138
5	0.000923	0.002143
6	-0.001700	0.000576
7	-0.000105	-0.001412
8	0.000147	-0.000190
9	0.000526	-0.000113
10	-0.000105	-0.000158

Period	Response of DV:	
	R	DV
1	-0.046429	0.279156
2	-0.022418	-0.121723
3	-0.010825	-0.024726
4	0.030366	-0.004319
5	-0.023024	-0.020456
6	0.043889	-0.001286
7	-0.012944	0.010344
8	-0.000133	0.004162
9	-0.007765	0.005321
10	0.004846	0.001138

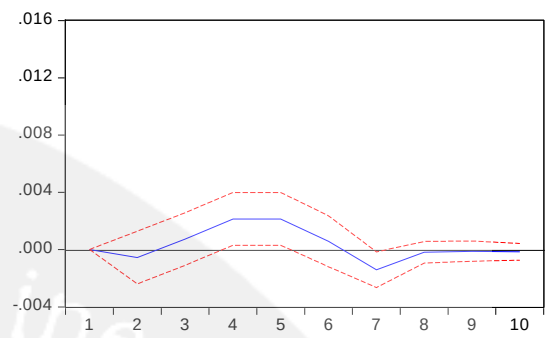
Cholesky Ordering: R DV

Response to Cholesky One S.D. Innovations ± 2 S.E.

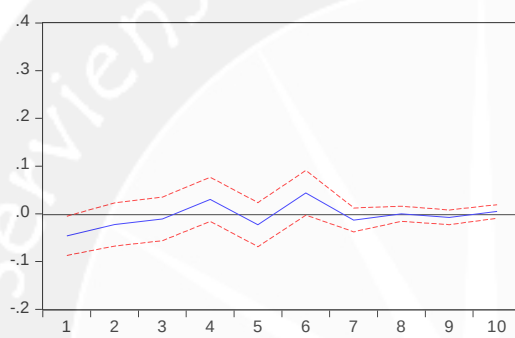
Response of R to R



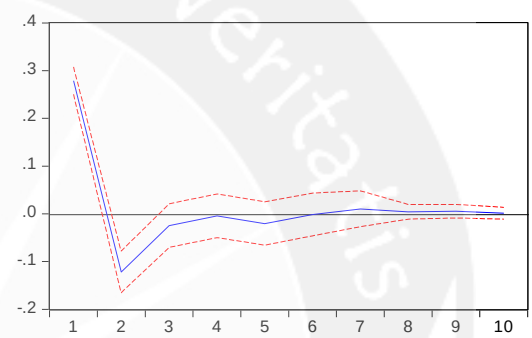
Response of R to DV



Response of DV to R



Response of DV to DV



Impulse Responses - Indonesia

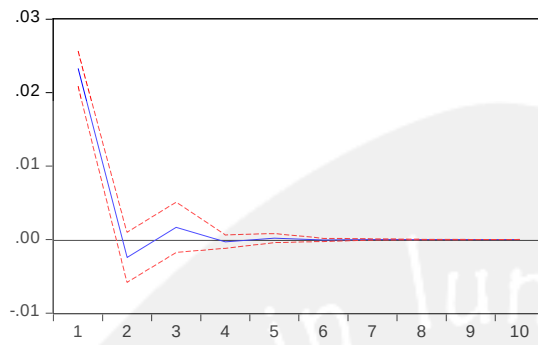
Period	Response of R:	
	R	DV
1	0.023283	0.000000
2	-0.002416	0.000902
3	0.001679	0.002052
4	-0.000300	-0.000865
5	0.000193	-2.40E-05
6	-6.29E-05	0.000151
7	1.75E-05	-1.54E-05
8	-1.40E-06	-3.11E-05
9	8.27E-07	1.24E-05
10	-1.07E-06	2.83E-06

Period	Response of DV:	
	R	DV
1	0.014618	0.308139
2	-0.001936	-0.075863
3	0.009926	-0.039498
4	-0.003243	0.024689
5	-0.000206	0.002417
6	0.000518	-0.005723
7	9.82E-06	0.000950
8	-0.000133	0.000927
9	4.00E-05	-0.000418
10	1.45E-05	-8.78E-05

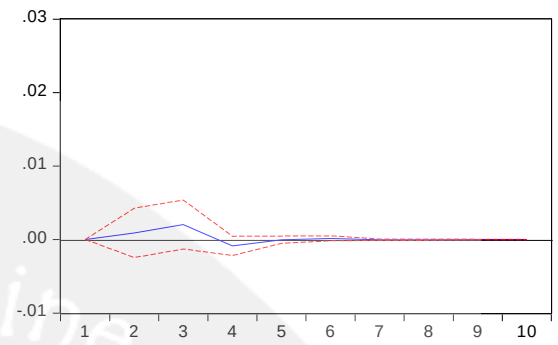
Cholesky Ordering: R DV

Response to Cholesky One S.D. Innovations ± 2 S.E.

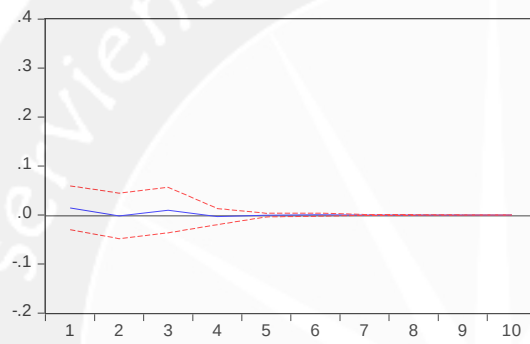
Response of R to R



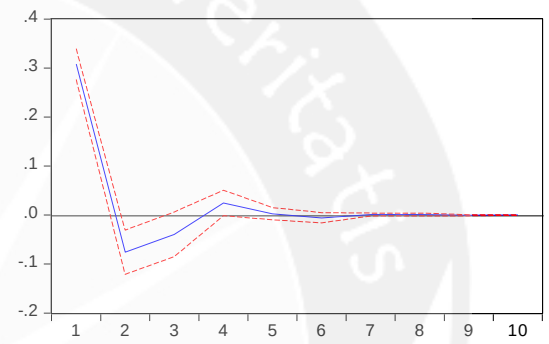
Response of R to DV



Response of DV to R



Response of DV to DV



APPENDIX 8: Variance Decomposition

Thailand

Variance Decomposition of R:			
Period	S.E.	R	DV
1	0.025431	100.0000	0.000000
2	0.025493	99.62851	0.371488
3	0.025501	99.57011	0.429894
4	0.025502	99.56210	0.437902
5	0.025502	99.56101	0.438989
6	0.025502	99.56086	0.439137
7	0.025502	99.56084	0.439157
8	0.025502	99.56084	0.439160
9	0.025502	99.56084	0.439160
10	0.025502	99.56084	0.439160

Variance Decomposition of DV:			
Period	S.E.	R	DV
1	0.350927	0.036110	99.96389
2	0.373342	0.093216	99.90678
3	0.376275	0.101675	99.89833
4	0.376671	0.102821	99.89718
5	0.376725	0.102976	99.89702
6	0.376732	0.102997	99.89700
7	0.376733	0.103000	99.89700
8	0.376733	0.103001	99.89700
9	0.376733	0.103001	99.89700
10	0.376733	0.103001	99.89700

Cholesky Ordering: R DV

Vietnam

Variance Decomposition of R:			
Period	S.E.	R	DV
1	0.029765	100.0000	0.000000
2	0.030275	99.65952	0.340482
3	0.030516	98.09067	1.909329
4	0.031013	96.85568	3.144318
5	0.031061	96.86525	3.134752
6	0.031063	96.86357	3.136428
7	0.031066	96.84445	3.155554
8	0.031068	96.84406	3.155937
9	0.031068	96.84314	3.156857
10	0.031068	96.84318	3.156820

Variance Decomposition of DV:			
Period	S.E.	R	DV
1	0.607588	2.222617	97.77738
2	0.618525	3.808861	96.19114
3	0.619521	4.089554	95.91045
4	0.626919	6.300942	93.69906
5	0.627160	6.303300	93.69670
6	0.627335	6.336178	93.66382
7	0.627457	6.352803	93.64720
8	0.627487	6.360071	93.63993
9	0.627491	6.361252	93.63875
10	0.627494	6.361577	93.63842

Cholesky Ordering: R DV

Philippines

Variance Decomposition of R:			
Period	S.E.	R	DV
1	0.020915	100.0000	0.000000
2	0.020938	99.82207	0.177934
3	0.020985	99.66628	0.333724
4	0.020985	99.66604	0.333956
5	0.020986	99.65573	0.344265
6	0.020986	99.65447	0.345526
7	0.020986	99.65404	0.345956
8	0.020986	99.65374	0.346258
9	0.020986	99.65374	0.346259
10	0.020987	99.65371	0.346290

Variance Decomposition of DV:			
Period	S.E.	R	DV
1	0.472294	1.522055	98.47794
2	0.495143	1.425295	98.57470
3	0.504821	1.485329	98.51467
4	0.510465	1.458557	98.54144
5	0.510517	1.465112	98.53489
6	0.511134	1.463833	98.53617
7	0.511169	1.463733	98.53627
8	0.511203	1.463859	98.53614
9	0.511216	1.463791	98.53621
10	0.511216	1.463810	98.53619

Cholesky Ordering: R DV

Malaysia

Variance Decomposition of R:			
Period	S.E.	R	DV
1	0.012402	100.0000	0.000000
2	0.012431	99.79512	0.204882
3	0.012457	99.44300	0.557001
4	0.012652	96.60381	3.396193
5	0.012865	93.94076	6.059243
6	0.012990	93.85955	6.140446
7	0.013066	92.76393	7.236072
8	0.013069	92.74531	7.254694
9	0.013080	92.75019	7.249815
10	0.013081	92.73718	7.262815

Variance Decomposition of DV:			
Period	S.E.	R	DV
1	0.282991	2.691734	97.30827
2	0.308873	2.786284	97.21372
3	0.310050	2.887062	97.11294
4	0.311564	3.808989	96.19101
5	0.313082	4.312939	95.68706
6	0.316146	6.157007	93.84299
7	0.316580	6.307311	93.69269
8	0.316607	6.306237	93.69376
9	0.316747	6.360762	93.63924
10	0.316786	6.382592	93.61741

Cholesky Ordering: R DV

Indonesia

Variance Decomposition of R:			
Period	S.E.	R	DV
1	0.023283	100.0000	0.000000
2	0.023426	99.85171	0.148289
3	0.023575	99.09583	0.904169
4	0.023593	98.96288	1.037125
5	0.023594	98.96284	1.037158
6	0.023594	98.95882	1.041179
7	0.023594	98.95878	1.041221
8	0.023594	98.95861	1.041393
9	0.023594	98.95858	1.041420
10	0.023594	98.95858	1.041422

Variance Decomposition of DV:			
Period	S.E.	R	DV
1	0.308486	0.224558	99.77544
2	0.317683	0.215457	99.78454
3	0.320282	0.308014	99.69199
4	0.321249	0.316353	99.68365
5	0.321258	0.316376	99.68362
6	0.321310	0.316535	99.68347
7	0.321311	0.316532	99.68347
8	0.321312	0.316546	99.68345
9	0.321313	0.316547	99.68345
10	0.321313	0.316548	99.68345

Cholesky Ordering: R DV

APPENDIX 9: EGARCH Model

Thailand

Dependent Variable: R

Method: ML - ARCH (Marquardt) - Normal distribution

Date: 12/02/15 Time: 01:10

Sample: 5/01/2011 12/28/2014

Included observations: 192

Convergence achieved after 41 iterations

Presample variance: backcast (parameter = 0.7)

LOG(GARCH) = C(3) + C(4)*ABS(RESID(-1)/@SQRT(GARCH(-1))) + C(5)

*RESID(-1)/@SQRT(GARCH(-1)) + C(6)*LOG(GARCH(-1)) + C(7)*DV

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	0.002255	0.001794	1.256827	0.2088
DV	-0.000460	0.005859	-0.078581	0.9374
Variance Equation				
C(3)	-9.399962	1.354515	-6.939727	0.0000
C(4)	0.474787	0.178716	2.656664	0.0079
C(5)	-0.123611	0.089267	-1.384731	0.1661
C(6)	-0.211060	0.184350	-1.144892	0.2523
C(7)	0.524860	0.246483	2.129399	0.0332
R-squared	-0.000342	Mean dependent var	0.001810	
Adjusted R-squared	-0.005607	S.D. dependent var	0.025508	
S.E. of regression	0.025580	Akaike info criterion	-4.534086	
Sum squared resid	0.124320	Schwarz criterion	-4.415323	
Log likelihood	442.2722	Hannan-Quinn criter.	-4.485986	
Durbin-Watson stat	2.051843			

Substituted Coefficients:

=====

R = 0.00225509206311 - 0.000460429234131*D.V

LOG(GARCH) = -9.39996222714 + 0.474787424768*ABS(RESID(-1)/@SQRT(GARCH(-1))) - 0.12361081886*RESID(-1)/@SQRT(GARCH(-1)) - 0.211060365225*LOG(GARCH(-1)) + 0.524859908179*D.V

Vietnam

Dependent Variable: R

Method: ML - ARCH (Marquardt) - Normal distribution

Date: 12/02/15 Time: 01:14

Sample: 5/01/2011 12/28/2014

Included observations: 192

Convergence achieved after 37 iterations

Presample variance: backcast (parameter = 0.7)

LOG(GARCH) = C(3) + C(4)*ABS(RESID(-1)/@SQRT(GARCH(-1))) + C(5)

*RESID(-1)/@SQRT(GARCH(-1)) + C(6)*LOG(GARCH(-1)) + C(7)*DV

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-0.001635	0.002291	-0.713847	0.4753
DV	0.011854	0.006030	1.965911	0.0493
Variance Equation				
C(3)	-3.988035	1.309335	-3.045847	0.0023
C(4)	0.184185	0.156033	1.180422	0.2378
C(5)	0.135850	0.104636	1.298304	0.1942
C(6)	0.471103	0.184267	2.556635	0.0106
C(7)	0.770106	0.210893	3.651651	0.0003
R-squared	0.001738	Mean dependent var	0.000822	
Adjusted R-squared	-0.003516	S.D. dependent var	0.030691	
S.E. of regression	0.030745	Akaike info criterion	-4.195736	
Sum squared resid	0.179595	Schwarz criterion	-4.076973	
Log likelihood	409.7906	Hannan-Quinn criter.	-4.147636	
Durbin-Watson stat	1.705345			

Substituted Coefficients:

=====

R = -0.00163541064728 + 0.0118540255179*DV

LOG(GARCH) = -3.98803503106 + 0.184184551842*ABS(RESID(-1)/@SQRT(GARCH(-1))) + 0.135849803811*RESID(-1)/@SQRT(GARCH(-1)) + 0.471103175313*LOG(GARCH(-1)) + 0.770106372489*DV

Philippines

Dependent Variable: R

Method: ML - ARCH (Marquardt) - Normal distribution

Date: 12/02/15 Time: 01:13

Sample: 5/01/2011 12/28/2014

Included observations: 192

Convergence achieved after 24 iterations

Presample variance: backcast (parameter = 0.7)

LOG(GARCH) = C(3) + C(4)*ABS(RESID(-1)/@SQRT(GARCH(-1))) + C(5)*RESID(-1)/@SQRT(GARCH(-1)) + C(6)*LOG(GARCH(-1)) + C(7)*DV

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	0.002914	0.001465	1.989657	0.0466
DV	0.004864	0.002791	1.742645	0.0814
Variance Equation				
C(3)	-2.838414	1.134361	-2.502215	0.0123
C(4)	0.340583	0.188546	1.806363	0.0709
C(5)	-0.253066	0.093989	-2.692510	0.0071
C(6)	0.674462	0.140744	4.792108	0.0000
C(7)	0.024587	0.344113	0.071451	0.9430
R-squared	0.010663	Mean dependent var	0.002904	
Adjusted R-squared	0.005456	S.D. dependent var	0.020767	
S.E. of regression	0.020710	Akaike info criterion	-4.967617	
Sum squared resid	0.081494	Schwarz criterion	-4.848854	
Log likelihood	483.8912	Hannan-Quinn criter.	-4.919517	
Durbin-Watson stat	1.979041			

Substituted Coefficients:

=====

R = 0.00291443313676 + 0.00486396539003*D.V

LOG(GARCH) = -2.83841449587 + 0.340583146922*ABS(RESID(-1)/@SQRT(GARCH(-1))) - 0.25306595809*RESID(-1)/@SQRT(GARCH(-1)) + 0.674462466537*LOG(GARCH(-1)) + 0.0245872990486*D.V

Malaysia

Dependent Variable: R

Method: ML - ARCH (Marquardt) - Normal distribution

Date: 12/02/15 Time: 01:11

Sample: 5/01/2011 12/28/2014

Included observations: 192

Convergence achieved after 16 iterations

Presample variance: backcast (parameter = 0.7)

LOG(GARCH) = C(3) + C(4)*ABS(RESID(-1)/@SQRT(GARCH(-1))) + C(5)

*RESID(-1)/@SQRT(GARCH(-1)) + C(6)*LOG(GARCH(-1)) + C(7)*DV

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-0.000241	0.000753	-0.319744	0.7492
DV	-0.007039	0.002122	-3.317527	0.0009
Variance Equation				
C(3)	-0.539516	0.242297	-2.226675	0.0260
C(4)	0.016984	0.094131	0.180428	0.8568
C(5)	-0.280522	0.079044	-3.548935	0.0004
C(6)	0.945677	0.022951	41.20339	0.0000
C(7)	1.269540	0.252185	5.034167	0.0000
R-squared	0.010551	Mean dependent var	0.000771	
Adjusted R-squared	0.005343	S.D. dependent var	0.012665	
S.E. of regression	0.012631	Akaike info criterion	-6.165744	
Sum squared resid	0.030314	Schwarz criterion	-6.046981	
Log likelihood	598.9114	Hannan-Quinn criter.	-6.117644	
Durbin-Watson stat	2.072118			

Substituted Coefficients:

=====

R = -0.00024061178938 - 0.00703928346745*DV

LOG(GARCH) = -0.53951604633 + 0.0169838863794*ABS(RESID(-1)/@SQRT(GARCH(-1))) - 0.280522088554*RESID(-1)/@SQRT(GARCH(-1)) + 0.945676615099*LOG(GARCH(-1)) + 1.26954015947*DV

Indonesia

Dependent Variable: R

Method: ML - ARCH (Marquardt) - Normal distribution

Date: 12/02/15 Time: 01:13

Sample: 5/01/2011 12/28/2014

Included observations: 192

Convergence achieved after 29 iterations

Presample variance: backcast (parameter = 0.7)

LOG(GARCH) = C(3) + C(4)*ABS(RESID(-1)/@SQRT(GARCH(-1))) + C(5)

*RESID(-1)/@SQRT(GARCH(-1)) + C(6)*LOG(GARCH(-1)) + C(7)*DV

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	0.001792	0.001199	1.495056	0.1349
DV	0.001012	0.004049	0.250083	0.8025
Variance Equation				
C(3)	-2.124330	0.718425	-2.956928	0.0031
C(4)	0.609380	0.138546	4.398380	0.0000
C(5)	-0.236882	0.084337	-2.808752	0.0050
C(6)	0.793698	0.088904	8.927629	0.0000
C(7)	0.948172	0.294075	3.224257	0.0013
R-squared	0.000453	Mean dependent var	0.001992	
Adjusted R-squared	-0.004808	S.D. dependent var	0.023230	
S.E. of regression	0.023286	Akaike info criterion	-4.934820	
Sum squared resid	0.103021	Schwarz criterion	-4.816058	
Log likelihood	480.7428	Hannan-Quinn criter.	-4.886721	
Durbin-Watson stat	2.215070			

Substituted Coefficients:

=====

R = 0.00179248804105 + 0.00101247604417*D.V.

LOG(GARCH) = -2.12433015976 + 0.60937985798*ABS(RESID(-1)/@SQRT(GARCH(-1))) - 0.236881729905*RESID(-1)/@SQRT(GARCH(-1)) + 0.793697681992*LOG(GARCH(-1)) + 0.948172195742*D.V.

APPENDIX 10: ARCH-LM Test

Thailand

Heteroskedasticity Test: ARCH

F-statistic	0.168997	Prob. F(1,189)	0.6815
Obs*R-squared	0.170633	Prob. Chi-Square(1)	0.6795

Test Equation:

Dependent Variable: WGT_RESID^2

Method: Least Squares

Date: 12/02/15 Time: 01:18

Sample (adjusted): 5/08/2011 12/28/2014

Included observations: 191 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.942421	0.142922	6.593936	0.0000
WGT_RESID^2(-1)	0.029547	0.071874	0.411093	0.6815
R-squared	0.000893	Mean dependent var	0.971843	
Adjusted R-squared	-0.004393	S.D. dependent var	1.705977	
S.E. of regression	1.709720	Akaike info criterion	3.920952	
Sum squared resid	552.4740	Schwarz criterion	3.955008	
Log likelihood	-372.4510	Hannan-Quinn criter.	3.934746	
F-statistic	0.168997	Durbin-Watson stat	1.996139	
Prob(F-statistic)	0.681470			

Vietnam

Heteroskedasticity Test: ARCH

F-statistic	0.134291	Prob. F(1,189)	0.7144
Obs*R-squared	0.135616	Prob. Chi-Square(1)	0.7127

Test Equation:

Dependent Variable: WGT_RESID^2

Method: Least Squares

Date: 12/02/15 Time: 01:18

Sample (adjusted): 5/08/2011 12/28/2014

Included observations: 191 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.978597	0.146244	6.691512	0.0000
WGT_RESID^2(-1)	0.026635	0.072682	0.366457	0.7144
R-squared	0.000710	Mean dependent var	1.005134	
Adjusted R-squared	-0.004577	S.D. dependent var	1.751955	
S.E. of regression	1.755960	Akaike info criterion	3.974324	
Sum squared resid	582.7617	Schwarz criterion	4.008380	
Log likelihood	-377.5480	Hannan-Quinn criter.	3.988118	
F-statistic	0.134291	Durbin-Watson stat	1.999624	
Prob(F-statistic)	0.714434			

Philippines

Heteroskedasticity Test: ARCH

F-statistic	0.096004	Prob. F(1,189)	0.7570
Obs*R-squared	0.096971	Prob. Chi-Square(1)	0.7555

Test Equation:

Dependent Variable: WGT_RESID^2

Method: Least Squares

Date: 12/02/15 Time: 01:19

Sample (adjusted): 5/08/2011 12/28/2014

Included observations: 191 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.018719	0.149583	6.810371	0.0000
WGT_RESID^2(-1)	-0.022526	0.072702	-0.309846	0.7570
R-squared	0.000508	Mean dependent var	0.996044	
Adjusted R-squared	-0.004781	S.D. dependent var	1.798693	
S.E. of regression	1.802988	Akaike info criterion	4.027183	
Sum squared resid	614.3946	Schwarz criterion	4.061239	
Log likelihood	-382.5960	Hannan-Quinn criter.	4.040977	
F-statistic	0.096004	Durbin-Watson stat	1.995875	
Prob(F-statistic)	0.757019			

Malaysia

Heteroskedasticity Test: ARCH

F-statistic	0.076652	Prob. F(1,189)	0.7822
Obs*R-squared	0.077431	Prob. Chi-Square(1)	0.7808

Test Equation:

Dependent Variable: WGT_RESID^2

Method: Least Squares

Date: 12/02/15 Time: 01:19

Sample (adjusted): 5/08/2011 12/28/2014

Included observations: 191 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.953130	0.124855	7.633898	0.0000
WGT_RESID^2(-1)	0.020144	0.072758	0.276860	0.7822
R-squared	0.000405	Mean dependent var	0.972866	
Adjusted R-squared	-0.004883	S.D. dependent var	1.413186	
S.E. of regression	1.416633	Akaike info criterion	3.544859	
Sum squared resid	379.2944	Schwarz criterion	3.578914	
Log likelihood	-336.5340	Hannan-Quinn criter.	3.558653	
F-statistic	0.076652	Durbin-Watson stat	1.996521	
Prob(F-statistic)	0.782190			

Indonesia

Heteroskedasticity Test: ARCH

F-statistic	0.001136	Prob. F(1,189)	0.9731
Obs*R-squared	0.001148	Prob. Chi-Square(1)	0.9730

Test Equation:

Dependent Variable: WGT_RESID^2

Method: Least Squares

Date: 12/02/15 Time: 01:18

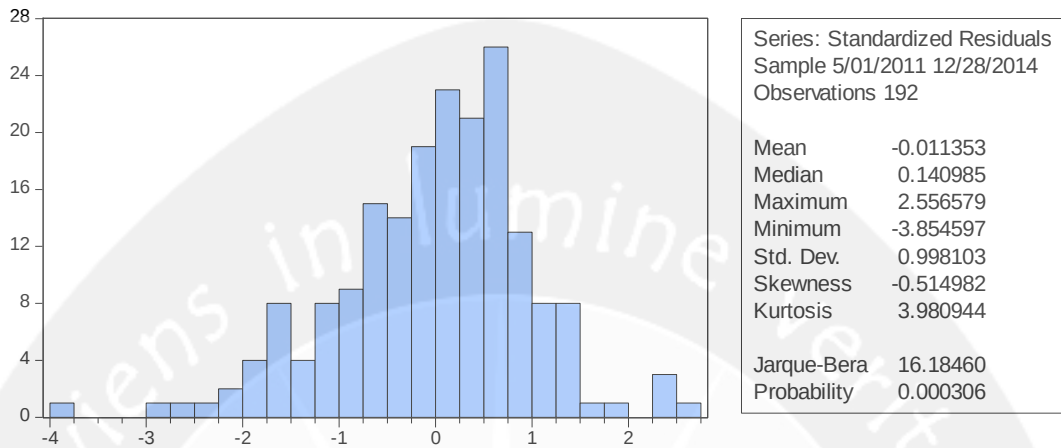
Sample (adjusted): 5/08/2011 12/28/2014

Included observations: 191 after adjustments

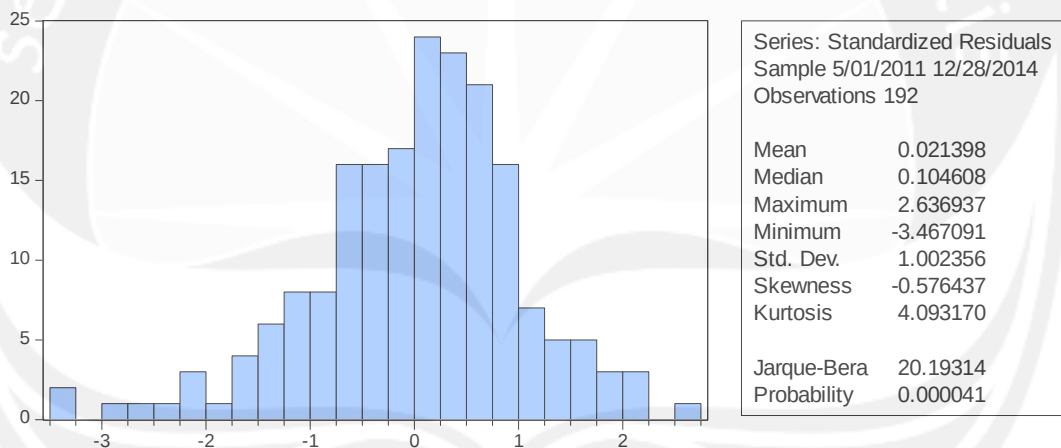
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.997028	0.135139	7.377777	0.0000
WGT_RESID^2(-1)	0.002452	0.072737	0.033704	0.9731
R-squared	0.000006	Mean dependent var	0.999459	
Adjusted R-squared	-0.005285	S.D. dependent var	1.575236	
S.E. of regression	1.579393	Akaike info criterion	3.762375	
Sum squared resid	471.4573	Schwarz criterion	3.796430	
Log likelihood	-357.3068	Hannan-Quinn criter.	3.776169	
F-statistic	0.001136	Durbin-Watson stat	2.000050	
Prob(F-statistic)	0.973148			

APPENDIX 11: Normality Test

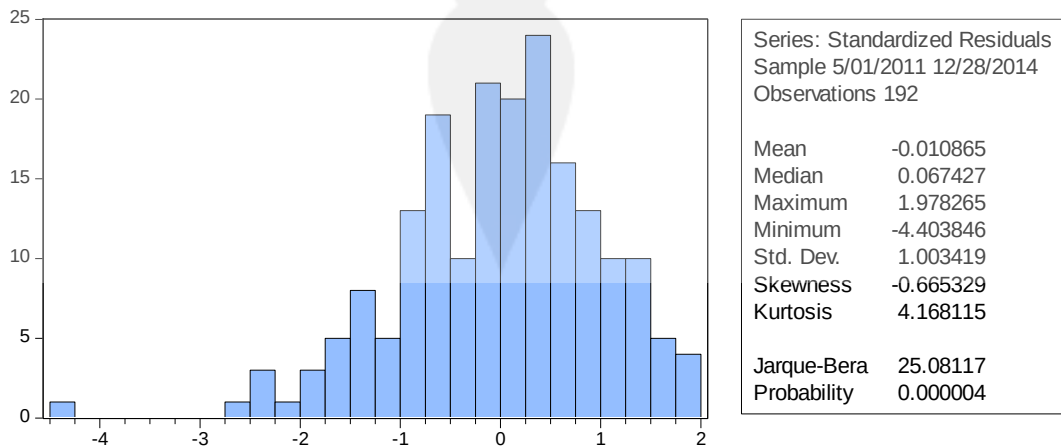
Thailand



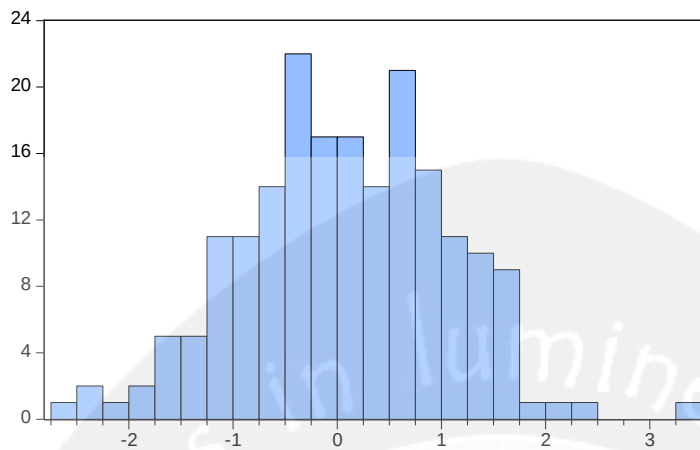
Vietnam



Philippines



Malaysia

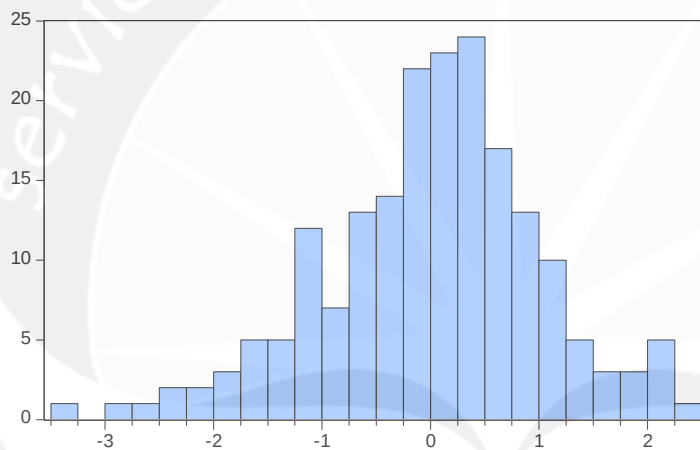


Series: Standardized Residuals
Sample 5/01/2011 12/28/2014
Observations 192

Mean 0.078797
Median 0.036650
Maximum 3.405686
Minimum -2.560509
Std. Dev. 0.987160
Skewness -0.046385
Kurtosis 3.093756

Jarque-Bera 0.139170
Probability 0.932781

Indonesia



Series: Standardized Residuals
Sample 5/01/2011 12/28/2014
Observations 192

Mean 0.004455
Median 0.087803
Maximum 2.322188
Minimum -3.334523
Std. Dev. 1.000346
Skewness -0.330796
Kurtosis 3.486723

Jarque-Bera 5.396828
Probability 0.067312