

VAR Lag Selection

Lags SBC/BIC  
 0 17.8184353  
 1 17.7332480\*  
 2 17.7498193  
 3 17.7814252  
 4 17.8223994  
 5 17.8629219  
 6 17.9000997  
 7 17.9442803  
 8 17.9832345  
 9 18.0205352  
 10 18.0647030

MV-GARCH, BEKK - Estimation by BFGS

Convergence in 259 Iterations. Final criterion was 0.0000058 <= 0.0000100

With Heteroscedasticity/Misspecification Adjusted Standard Errors

Usable Observations 3736  
 Log Likelihood -30233.6036

Variable	Coeff	Std Error	T-Stat	Signif
*****				
Mean Model (RIBOV)				
1. RIBOV{1}	-0.050834813	0.016017048	-3.17379	0.00150460
2. RMOEX{1}	0.030222066	0.016285875	1.85572	0.06349310
3. RSENSEX{1}	0.020751177	0.019258169	1.07753	0.28124537
4. RSHCOMP{1}	0.020709638	0.014682271	1.41052	0.15838617
5. RJALSH{1}	0.013177361	0.028638991	0.46012	0.64543039
6. Constant	0.053220273	0.026911946	1.97757	0.04797717
Mean Model (RMOEX)				
7. RIBOV{1}	0.150314578	0.012843823	11.70326	0.00000000
8. RMOEX{1}	-0.054912239	0.018480708	-2.97133	0.00296515
9. RSENSEX{1}	0.012801772	0.021756852	0.58840	0.55626258
10. RSHCOMP{1}	-0.017608760	0.012616562	-1.39569	0.16280907
11. RJALSH{1}	0.001768272	0.022823056	0.07748	0.93824375
12. Constant	0.090143500	0.021926715	4.11113	0.00003937
Mean Model (RSENSEX)				
13. RIBOV{1}	0.117804355	0.010022617	11.75385	0.00000000
14. RMOEX{1}	0.005083363	0.013808715	0.36813	0.71277840
15. RSENSEX{1}	-0.001293662	0.016273145	-0.07950	0.93663752
16. RSHCOMP{1}	-0.023368915	0.010504528	-2.22465	0.02610463
17. RJALSH{1}	0.055429341	0.015774677	3.51382	0.00044172
18. Constant	0.074425814	0.018158440	4.09869	0.00004155
Mean Model (RSHCOMP)				
19. RIBOV{1}	0.087911026	0.009545879	9.20932	0.00000000
20. RMOEX{1}	0.032804272	0.015760106	2.08148	0.03739041
21. RSENSEX{1}	-0.000186599	0.017357370	-0.01075	0.99142259
22. RSHCOMP{1}	-0.022804828	0.012426434	-1.83519	0.06647802
23. RJALSH{1}	0.042495680	0.020117279	2.11240	0.03465241
24. Constant	0.011847663	0.026622461	0.44503	0.65630164
Mean Model (RJALSH)				
25. RIBOV{1}	0.145613477	0.010083825	14.44030	0.00000000
26. RMOEX{1}	-0.017061558	0.010887361	-1.56710	0.11709186
27. RSENSEX{1}	0.004468033	0.014733991	0.30325	0.76170192
28. RSHCOMP{1}	-0.013192569	0.010616670	-1.24263	0.21400502
29. RJALSH{1}	-0.057455731	0.016108702	-3.56675	0.00036143
30. Constant	0.072253711	0.015936270	4.53392	0.00000579
31. C(1,1)	0.121973929	0.122904225	0.99243	0.32098746
32. C(2,1)	0.080976116	0.164290476	0.49288	0.62209469
33. C(2,2)	0.239141731	0.060264894	3.96818	0.00007242
34. C(3,1)	-0.062814799	0.212267548	-0.29592	0.76728907
35. C(3,2)	0.036352026	0.069600952	0.52229	0.60146698

36.	C(3,3)	-0.101849220	0.134592998	-0.75672	0.44921760
37.	C(4,1)	-0.032209625	0.030554241	-1.05418	0.29180119
38.	C(4,2)	0.020615916	0.034795655	0.59249	0.55352562
39.	C(4,3)	0.026920039	0.073299556	0.36726	0.71342464
40.	C(4,4)	0.019646786	0.080208611	0.24495	0.80649817
41.	C(5,1)	-0.061946712	0.208755532	-0.29674	0.76666284
42.	C(5,2)	0.091516333	0.062957817	1.45361	0.14605349
43.	C(5,3)	-0.044250716	0.257885933	-0.17159	0.86375966
44.	C(5,4)	0.080893660	0.086533692	0.93482	0.34987968
45.	C(5,5)	0.000000785	0.136988233	5.73141e-06	0.99999543
46.	A(1,1)	0.103792091	0.036311128	2.85841	0.00425770
47.	A(1,2)	-0.020804085	0.029558686	-0.70382	0.48154298
48.	A(1,3)	-0.023401598	0.021958670	-1.06571	0.28655425
49.	A(1,4)	-0.028519390	0.013622363	-2.09357	0.03629817
50.	A(1,5)	-0.019158922	0.021195325	-0.90392	0.36603672
51.	A(2,1)	-0.006521309	0.026161455	-0.24927	0.80315066
52.	A(2,2)	0.353546027	0.042851193	8.25055	0.00000000
53.	A(2,3)	0.006469321	0.030407722	0.21275	0.83151997
54.	A(2,4)	-0.020534524	0.012064523	-1.70206	0.08874440
55.	A(2,5)	0.052073426	0.013904813	3.74499	0.00018040
56.	A(3,1)	0.038512158	0.037682145	1.02203	0.30676827
57.	A(3,2)	-0.048614130	0.038874574	-1.25054	0.21110311
58.	A(3,3)	0.209114418	0.041500660	5.03882	0.00000047
59.	A(3,4)	-0.030595144	0.028578444	-1.07057	0.28436408
60.	A(3,5)	-0.004652494	0.029615220	-0.15710	0.87516756
61.	A(4,1)	0.015316210	0.083271754	0.18393	0.85406803
62.	A(4,2)	-0.013012894	0.051529838	-0.25253	0.80063047
63.	A(4,3)	-0.009720888	0.038058206	-0.25542	0.79839749
64.	A(4,4)	0.174260255	0.014389114	12.11056	0.00000000
65.	A(4,5)	-0.016869054	0.035427784	-0.47615	0.63396522
66.	A(5,1)	0.102012844	0.066865773	1.52564	0.12710049
67.	A(5,2)	-0.026555901	0.061581967	-0.43123	0.66630222
68.	A(5,3)	0.076224854	0.028389413	2.68497	0.00725353
69.	A(5,4)	0.072150274	0.025795020	2.79706	0.00515696
70.	A(5,5)	0.199448779	0.030738539	6.48856	0.00000000
71.	B(1,1)	0.993412345	0.012290264	80.82921	0.00000000
72.	B(1,2)	0.005173289	0.017345291	0.29825	0.76550990
73.	B(1,3)	0.015252192	0.016948721	0.89990	0.36817228
74.	B(1,4)	0.005796467	0.005541165	1.04607	0.29552701
75.	B(1,5)	0.022715072	0.012984462	1.74940	0.08022118
76.	B(2,1)	0.016602661	0.008422473	1.97123	0.04869716
77.	B(2,2)	0.931757367	0.017075619	54.56653	0.00000000
78.	B(2,3)	-0.001892073	0.013932553	-0.13580	0.89197755
79.	B(2,4)	0.010088799	0.004874199	2.06984	0.03846758
80.	B(2,5)	-0.014803737	0.006168449	-2.39991	0.01639899
81.	B(3,1)	-0.014013321	0.014845813	-0.94392	0.34520844
82.	B(3,2)	0.018481813	0.012589701	1.46801	0.14210136
83.	B(3,3)	0.972389264	0.012837871	75.74381	0.00000000
84.	B(3,4)	0.003021175	0.008675819	0.34823	0.72766797
85.	B(3,5)	0.000795545	0.008113568	0.09805	0.92189167
86.	B(4,1)	-0.002801299	0.019561926	-0.14320	0.88613096
87.	B(4,2)	-0.000379815	0.011334006	-0.03351	0.97326702
88.	B(4,3)	0.002380258	0.010099011	0.23569	0.81367153
89.	B(4,4)	0.983229650	0.002588865	379.79171	0.00000000
90.	B(4,5)	0.000973309	0.008952816	0.10872	0.91342825
91.	B(5,1)	-0.049095746	0.016998643	-2.88822	0.00387434
92.	B(5,2)	-0.002236706	0.025088599	-0.08915	0.92896090
93.	B(5,3)	-0.028938983	0.013756850	-2.10361	0.03541289
94.	B(5,4)	-0.016010662	0.010444184	-1.53297	0.12528229
95.	B(5,5)	0.961452188	0.007906960	121.59568	0.00000000

Information Criteria

AIC 16.236  
SBC 16.394  
Hannan-Quinn 16.292

(log) FPE 16.236

Independence Tests for Series Z1

Test	Statistic	P-Value
Ljung-Box Q(20)	27.099089	0.1325
McLeod-Li(20)	83.302551	0.0000
Turning Points	-1.099666	0.2715
Difference Sign	-1.615005	0.1063
Rank Test	-1.175040	0.2400

Independence Tests for Series Z2

Test	Statistic	P-Value
Ljung-Box Q(20)	4.2773703	0.9999
McLeod-Li(20)	5.1763381	0.9996
Turning Points	-1.1772897	0.2391
Difference Sign	-1.2183373	0.2231
Rank Test	-2.4679522	0.0136

Independence Tests for Series Z3

Test	Statistic	P-Value
Ljung-Box Q(20)	35.382134	0.0182
McLeod-Li(20)	28.448706	0.0992
Turning Points	-2.225207	0.0261
Difference Sign	-3.315011	0.0009
Rank Test	-2.106193	0.0352

Independence Tests for Series Z4

Test	Statistic	P-Value
Ljung-Box Q(20)	35.747788	0.0165
McLeod-Li(20)	47.256721	0.0005
Turning Points	-1.216101	0.2239
Difference Sign	-3.938346	0.0001
Rank Test	0.000368	0.9997

Independence Tests for Series Z5

Test	Statistic	P-Value
Ljung-Box Q(20)	41.21270	0.0035
McLeod-Li(20)	321.78551	0.0000
Turning Points	-2.14758	0.0317
Difference Sign	-3.20168	0.0014
Rank Test	-1.91096	0.0560

Multivariate Q Test

Test Run Over 3 to 3738  
Lags Tested 5  
Degrees of Freedom 125  
Q Statistic 175.4368  
Signif Level 0.0020

Multivariate ARCH Test

Statistic Degrees Signif  
2132.20 1125 0.00000

Multivariate Q Test

Test Run Over 3 to 3738  
Lags Tested 40  
Degrees of Freedom 1000  
Q Statistic 1085.309

Signif Level 0.031

Multivariate ARCH Test  
Statistic Degrees Signif  
12617.45 9000 0.00000

MV-CC GARCH with VARMA Variances - Estimation by BFGS  
NO CONVERGENCE IN 30 ITERATIONS. FINAL NORMED GRADIENT 5.32541e+06  
SUBITERATIONS LIMIT EXCEEDED.  
ESTIMATION POSSIBLY HAS STALLED OR MACHINE ROUND OFF IS MAKING FURTHER PROGRESS DIFFICULT  
TRY DIFFERENT SETTING FOR EXACTLINE, DERIVES OR ALPHA ON NLPAR  
RESTARTING ESTIMATION FROM LAST ESTIMATES OR DIFFERENT INITIAL GUESSES/PMETHOD OPTION  
MIGHT ALSO WORK

With Heteroscedasticity/Misspecification Adjusted Standard Errors  
Usable Observations 3736  
Log Likelihood -30349.5453

Variable	Coeff	Std Error	T-Stat	Signif
*****				
Mean Model (RIBOV)				
1. RIBOV{1}	-0.017826116	0.012645492	-1.40968	0.15863376
2. RMOEX{1}	0.003394519	0.012277339	0.27649	0.78217443
3. RSENSEX{1}	0.025540485	0.014515076	1.75958	0.07847848
4. RSHCOMP{1}	0.015455752	0.014471112	1.06804	0.28550167
5. RJALSH{1}	0.011563966	0.014770414	0.78291	0.43367755
6. Constant	0.116925604	0.022556332	5.18372	0.00000022
Mean Model (RMOEX)				
7. RIBOV{1}	0.167617134	0.012195536	13.74414	0.00000000
8. RMOEX{1}	-0.071864458	0.009475244	-7.58444	0.00000000
9. RSENSEX{1}	0.025801096	0.012089072	2.13425	0.03282236
10. RSHCOMP{1}	-0.019794689	0.014004651	-1.41344	0.15752733
11. RJALSH{1}	-0.000502309	0.018426921	-0.02726	0.97825273
12. Constant	0.133939686	0.028544888	4.69225	0.00000270
Mean Model (RSENSEX)				
13. RIBOV{1}	0.115579431	0.011272514	10.25321	0.00000000
14. RMOEX{1}	-0.012021708	0.017773699	-0.67638	0.49880178
15. RSENSEX{1}	0.036172761	0.009263051	3.90506	0.00009420
16. RSHCOMP{1}	-0.021368543	0.011664259	-1.83197	0.06695626
17. RJALSH{1}	0.051336239	0.016712381	3.07175	0.00212809
18. Constant	0.094823293	0.021896702	4.33048	0.00001488
Mean Model (RSHCOMP)				
19. RIBOV{1}	0.087122456	0.017109243	5.09213	0.00000035
20. RMOEX{1}	0.007725365	0.019269031	0.40092	0.68847806
21. RSENSEX{1}	0.024354451	0.036006082	0.67640	0.49878782
22. RSHCOMP{1}	-0.005839024	0.012901477	-0.45259	0.65084709
23. RJALSH{1}	0.068604752	0.024731437	2.77399	0.00553734
24. Constant	0.032052803	0.030558687	1.04889	0.29422722
Mean Model (RJALSH)				
25. RIBOV{1}	0.160664352	0.009312720	17.25214	0.00000000
26. RMOEX{1}	-0.041342122	0.008209787	-5.03571	0.00000048
27. RSENSEX{1}	0.009772727	0.009873311	0.98981	0.32226579
28. RSHCOMP{1}	-0.012475298	0.011138260	-1.12004	0.26269663
29. RJALSH{1}	-0.043994009	0.010370187	-4.24235	0.00002212
30. Constant	0.103828201	0.012786252	8.12030	0.00000000
31. C(1)	0.491956708	0.025771825	19.08894	0.00000000
32. C(2)	0.077582128	0.041856075	1.85355	0.06380425
33. C(3)	-0.000483656	0.020173141	-0.02398	0.98087235
34. C(4)	0.078367295	0.009403402	8.33393	0.00000000

35. C(5)	0.029182742	0.011188485	2.60828	0.00909975
36. A(1,1)	0.052754724	0.006305396	8.36660	0.00000000
37. A(1,2)	0.003745877	0.005824242	0.64315	0.52012502
38. A(1,3)	-0.005073375	0.008622846	-0.58836	0.55628777
39. A(1,4)	-0.005091745	0.004829622	-1.05427	0.29175747
40. A(1,5)	0.055555843	0.015459263	3.59369	0.00032602
41. A(2,1)	0.012791295	0.006396079	1.99987	0.04551482
42. A(2,2)	0.235945926	0.004796531	49.19095	0.00000000
43. A(2,3)	0.074870695	0.012298702	6.08769	0.00000000
44. A(2,4)	-0.008045433	0.005797108	-1.38784	0.16518714
45. A(2,5)	-0.084733469	0.016178418	-5.23744	0.00000016
46. A(3,1)	0.012582692	0.004297991	2.92758	0.00341616
47. A(3,2)	0.000233276	0.005960783	0.03914	0.96878263
48. A(3,3)	0.164353051	0.004548107	36.13658	0.00000000
49. A(3,4)	0.000055262	0.004459078	0.01239	0.99011202
50. A(3,5)	-0.023953041	0.009046476	-2.64778	0.00810232
51. A(4,1)	0.003105308	0.004736177	0.65566	0.51204476
52. A(4,2)	-0.008200769	0.000776433	-10.56210	0.00000000
53. A(4,3)	-0.013380730	0.001398324	-9.56912	0.00000000
54. A(4,4)	0.231619614	0.014902206	15.54264	0.00000000
55. A(4,5)	0.042470104	0.000181588	233.88117	0.00000000
56. A(5,1)	0.018822802	0.005732838	3.28333	0.00102588
57. A(5,2)	-0.000819860	0.005206312	-0.15747	0.87487104
58. A(5,3)	-0.008169218	0.001065132	-7.66967	0.00000000
59. A(5,4)	-0.010565713	0.003678564	-2.87224	0.00407575
60. A(5,5)	0.072448935	0.019066580	3.79979	0.00014482
61. B(1,1)	0.476527078	0.004880451	97.63997	0.00000000
62. B(1,2)	0.045696560	0.003811309	11.98973	0.00000000
63. B(1,3)	0.104164017	0.003880378	26.84378	0.00000000
64. B(1,4)	-0.001747078	0.008522234	-0.20500	0.83757027
65. B(1,5)	0.305475490	0.011658790	26.20130	0.00000000
66. B(2,1)	0.011594833	0.004702010	2.46593	0.01366575
67. B(2,2)	0.528296056	0.008223849	64.23951	0.00000000
68. B(2,3)	0.198068314	0.004448297	44.52677	0.00000000
69. B(2,4)	-0.013775649	0.006353212	-2.16830	0.03013612
70. B(2,5)	0.259646643	0.007729190	33.59300	0.00000000
71. B(3,1)	0.016194917	0.001757988	9.21219	0.00000000
72. B(3,2)	0.094819689	0.004926271	19.24776	0.00000000
73. B(3,3)	0.460550928	0.004320186	106.60443	0.00000000
74. B(3,4)	0.037998114	0.004401456	8.63308	0.00000000
75. B(3,5)	0.176811746	0.005306369	33.32066	0.00000000
76. B(4,1)	-0.089901224	0.005995016	-14.99600	0.00000000
77. B(4,2)	0.015549923	0.000956949	16.24948	0.00000000
78. B(4,3)	0.119885310	0.007074141	16.94698	0.00000000
79. B(4,4)	0.716684071	0.023914521	29.96857	0.00000000
80. B(4,5)	0.142470586	0.009804526	14.53110	0.00000000
81. B(5,1)	0.033489612	0.001903841	17.59055	0.00000000
82. B(5,2)	0.021079029	0.003774076	5.58522	0.00000002
83. B(5,3)	0.090063182	0.002589329	34.78244	0.00000000
84. B(5,4)	0.036369842	0.006097209	5.96500	0.00000000
85. B(5,5)	0.560201390	0.006858089	81.68477	0.00000000
86. R(2,1)	0.370352347	0.006987058	53.00548	0.00000000
87. R(3,1)	0.246918202	0.007755511	31.83778	0.00000000
88. R(3,2)	0.306613845	0.007128272	43.01377	0.00000000
89. R(4,1)	0.136831719	0.011314824	12.09314	0.00000000
90. R(4,2)	0.154069651	0.011000368	14.00586	0.00000000
91. R(4,3)	0.170308607	0.011248644	15.14037	0.00000000
92. R(5,1)	0.374607804	0.007416516	50.50995	0.00000000
93. R(5,2)	0.452829817	0.008467955	53.47570	0.00000000
94. R(5,3)	0.363542716	0.004588147	79.23519	0.00000000
95. R(5,4)	0.174293906	0.011469112	15.19681	0.00000000

MV-CC GARCH - Estimation by BFGS

Convergence in 49 Iterations. Final criterion was 0.0000056 <= 0.0000100

Usable Observations 3737  
 Log Likelihood -30247.3530

Variable	Coeff	Std Error	T-Stat	Signif
1. Mean (RIBOV)	0.0819263276	0.0245021305	3.34364	0.00082687
2. Mean (RMOEX)	0.1101282418	0.0204208195	5.39294	0.00000007
3. Mean (RSENSEX)	0.0947501403	0.0173648008	5.45645	0.00000005
4. Mean (RSHCOMP)	0.0308326926	0.0206064393	1.49626	0.13458463
5. Mean (RJALSH)	0.0849540336	0.0145154298	5.85267	0.00000000
6. C(1)	0.0606457413	0.0095553607	6.34678	0.00000000
7. C(2)	0.0747320330	0.0107526287	6.95012	0.00000000
8. C(3)	0.0198696905	0.0030243236	6.56996	0.00000000
9. C(4)	0.0084243430	0.0021622587	3.89608	0.00009776
10. C(5)	0.0254363014	0.0042552973	5.97756	0.00000000
11. A(1)	0.0529985420	0.0054070147	9.80181	0.00000000
12. A(2)	0.0968600564	0.0099553241	9.72947	0.00000000
13. A(3)	0.0740829013	0.0057332165	12.92170	0.00000000
14. A(4)	0.0551011265	0.0051860648	10.62484	0.00000000
15. A(5)	0.0724862478	0.0066508997	10.89871	0.00000000
16. B(1)	0.9232106148	0.0073808157	125.08246	0.00000000
17. B(2)	0.8764419531	0.0117401926	74.65312	0.00000000
18. B(3)	0.9150498656	0.0060727902	150.68030	0.00000000
19. B(4)	0.9440146736	0.0047398391	199.16598	0.00000000
20. B(5)	0.9047240206	0.0086385061	104.73154	0.00000000
21. R(2,1)	0.3520408553	0.0126574502	27.81294	0.00000000
22. R(3,1)	0.2389986419	0.0134119300	17.81985	0.00000000
23. R(3,2)	0.3046812576	0.0138846767	21.94371	0.00000000
24. R(4,1)	0.1244797757	0.0139411371	8.92895	0.00000000
25. R(4,2)	0.1607513155	0.0130975573	12.27338	0.00000000
26. R(4,3)	0.1953018704	0.0140673943	13.88330	0.00000000
27. R(5,1)	0.3426576139	0.0122580230	27.95374	0.00000000
28. R(5,2)	0.4794646207	0.0110467839	43.40310	0.00000000
29. R(5,3)	0.3753250532	0.0124190281	30.22177	0.00000000
30. R(5,4)	0.1908734438	0.0125140098	15.25278	0.00000000

Information Criteria

AIC 16.204  
 SBC 16.254  
 Hannan-Quinn 16.222  
 (log) FPE 16.204

Independence Tests for Series Z1

Test	Statistic	P-Value
Ljung-Box Q(20)	17.697022	0.6074
McLeod-Li(20)	39.890715	0.0052
Turning Points	-0.401055	0.6884
Difference Sign	-1.275004	0.2023
Rank Test	-1.438997	0.1502

Independence Tests for Series Z2

Test	Statistic	P-Value
Ljung-Box Q(20)	6.692858	0.9976
McLeod-Li(20)	12.877455	0.8826
Turning Points	-0.944419	0.3450
Difference Sign	-2.011673	0.0443
Rank Test	-2.841532	0.0045

Independence Tests for Series Z3

Test	Statistic	P-Value
Ljung-Box Q(20)	32.990945	0.0338

McLeod-Li(20)	62.922875	0.0000
Turning Points	-0.827984	0.4077
Difference Sign	-3.201677	0.0014
Rank Test	-2.397550	0.0165

Independence Tests for Series Z4

Test	Statistic	P-Value
Ljung-Box Q(20)	13.260153	0.8659
McLeod-Li(20)	0.119747	1.0000
Turning Points	-1.487784	0.1368
Difference Sign	-2.238341	0.0252
Rank Test	-2.696682	0.0070

Independence Tests for Series Z5

Test	Statistic	P-Value
Ljung-Box Q(20)	32.76057	0.0358
McLeod-Li(20)	169.23791	0.0000
Turning Points	-1.44897	0.1473
Difference Sign	-3.42834	0.0006
Rank Test	-2.15532	0.0311

Multivariate Q Test

Test Run Over 3 to 3738  
Lags Tested 5  
Degrees of Freedom 125  
Q Statistic 151.7343  
Signif Level 0.0521

Multivariate ARCH Test

Statistic Degrees Signif  
1014.35 1125 0.99180

Multivariate Q Test

Test Run Over 3 to 3738  
Lags Tested 40  
Degrees of Freedom 1000  
Q Statistic 1015.215  
Signif Level 0.362

Multivariate ARCH Test

Statistic Degrees Signif  
10722.24 9000 0.00000

MV-CC GARCH - Estimation by BFGS

Convergence in 49 Iterations. Final criterion was 0.0000056 <= 0.0000100

With Heteroscedasticity/Misspecification Adjusted Standard Errors

Usable Observations 3737  
Log Likelihood -30247.3530

Variable	Coeff	Std Error	T-Stat	Signif
1. Mean (RIBOV)	0.0819263276	0.0276801790	2.95975	0.00307892
2. Mean (RMOEX)	0.1101282418	0.0243182073	4.52863	0.00000594
3. Mean (RSENSEX)	0.0947501403	0.0212990893	4.44855	0.00000865
4. Mean (RSHCOMP)	0.0308326926	0.0244964321	1.25866	0.20815297
5. Mean (RJALSH)	0.0849540336	0.0160076359	5.30709	0.00000011
6. C(1)	0.0606457413	0.0139701952	4.34108	0.00001418

7.	C(2)	0.0747320330	0.0331151652	2.25673	0.02402486
8.	C(3)	0.0198696905	0.0043812782	4.53514	0.00000576
9.	C(4)	0.0084243430	0.0029995152	2.80857	0.00497623
10.	C(5)	0.0254363014	0.0047246258	5.38377	0.00000007
11.	A(1)	0.0529985420	0.0072240151	7.33644	0.00000000
12.	A(2)	0.0968600564	0.0196445346	4.93064	0.00000082
13.	A(3)	0.0740829013	0.0083355973	8.88753	0.00000000
14.	A(4)	0.0551011265	0.0085365836	6.45470	0.00000000
15.	A(5)	0.0724862478	0.0071951922	10.07426	0.00000000
16.	B(1)	0.9232106148	0.0108360126	85.19837	0.00000000
17.	B(2)	0.8764419531	0.0273908436	31.99763	0.00000000
18.	B(3)	0.9150498656	0.0086902160	105.29656	0.00000000
19.	B(4)	0.9440146736	0.0076872209	122.80312	0.00000000
20.	B(5)	0.9047240206	0.0093876963	96.37338	0.00000000
21.	R(2,1)	0.3520408553	0.0150974298	23.31793	0.00000000
22.	R(3,1)	0.2389986419	0.0156135434	15.30714	0.00000000
23.	R(3,2)	0.3046812576	0.0158960226	19.16714	0.00000000
24.	R(4,1)	0.1244797757	0.0160182554	7.77112	0.00000000
25.	R(4,2)	0.1607513155	0.0161328270	9.96424	0.00000000
26.	R(4,3)	0.1953018704	0.0143670923	13.59369	0.00000000
27.	R(5,1)	0.3426576139	0.0137512546	24.91828	0.00000000
28.	R(5,2)	0.4794646207	0.0140078467	34.22829	0.00000000
29.	R(5,3)	0.3753250532	0.0138382693	27.12225	0.00000000
30.	R(5,4)	0.1908734438	0.0127592880	14.95957	0.00000000

#### Information Criteria

AIC	16.204
SBC	16.254
Hannan-Quinn	16.222
(log) FPE	16.204

#### Independence Tests for Series Z1

Test	Statistic	P-Value
Ljung-Box Q(20)	15.996191	0.7169
McLeod-Li(20)	17.691885	0.6077
Turning Points	0.038807	0.9690
Difference Sign	-1.699778	0.0892
Rank Test	-1.382646	0.1668

#### Independence Tests for Series Z2

Test	Statistic	P-Value
Ljung-Box Q(20)	5.0246878	0.9997
McLeod-Li(20)	3.7690031	1.0000
Turning Points	-0.9313573	0.3517
Difference Sign	-1.3031632	0.1925
Rank Test	-2.8169428	0.0048

#### Independence Tests for Series Z3

Test	Statistic	P-Value
Ljung-Box Q(20)	51.047065	0.0002
McLeod-Li(20)	16.544884	0.6823
Turning Points	-3.919462	0.0001
Difference Sign	-2.832963	0.0046
Rank Test	-2.653296	0.0080

#### Independence Tests for Series Z4

Test	Statistic	P-Value
Ljung-Box Q(20)	17.40301	0.6267
McLeod-Li(20)	708.17346	0.0000
Turning Points	-1.08658	0.2772
Difference Sign	-1.81310	0.0698

Rank Test            -2.72619        0.0064

Independence Tests for Series Z5

Test	Statistic	P-Value
Ljung-Box Q(20)	52.53415	0.0001
McLeod-Li(20)	341.06943	0.0000
Turning Points	-3.76424	0.0002
Difference Sign	-1.69978	0.0892
Rank Test	-2.13641	0.0326

Multivariate Q Test

Test Run Over 2 to 3738  
Lags Tested            5  
Degrees of Freedom 125  
Q Statistic            523.8785  
Signif Level            0.0000

Multivariate ARCH Test

Statistic Degrees Signif  
1392.06        1125 0.00000

Multivariate Q Test

Test Run Over 2 to 3738  
Lags Tested            40  
Degrees of Freedom 1000  
Q Statistic            1389.931  
Signif Level            0.000

Multivariate ARCH Test

Statistic Degrees Signif  
10950.68        9000 0.00000

MV-CC GARCH with VARMA Variances - Estimation by BFGS

NO CONVERGENCE IN 200 ITERATIONS  
LAST CRITERION WAS 0.0193139  
TRY INCREASING ITERS OPTION

With Heteroscedasticity/Misspecification Adjusted Standard Errors

Usable Observations            3737  
Log Likelihood                -30178.4743

Variable	Coeff	Std Error	T-Stat	Signif
1. Mean (RIBOV)	0.084898504	0.025483768	3.33147	0.00086387
2. Mean (RMOEX)	0.109339255	0.024199250	4.51829	0.00000623
3. Mean (RSENSEX)	0.092858656	0.018152998	5.11533	0.00000031
4. Mean (RSHCOMP)	0.032188880	0.026297989	1.22401	0.22095020
5. Mean (RJALSH)	0.088345866	0.017523657	5.04152	0.00000046
6. C(1)	-0.072961669	0.314657886	-0.23188	0.81663419
7. C(2)	-0.098470639	0.151834726	-0.64854	0.51663683
8. C(3)	0.187921366	0.089280678	2.10484	0.03530541
9. C(4)	0.759935567	0.577384480	1.31617	0.18811732
10. C(5)	-0.582225091	0.384182904	-1.51549	0.12964853
11. A(1,1)	0.030819828	0.007193841	4.28420	0.00001834
12. A(1,2)	0.011126435	0.005264352	2.11354	0.03455431
13. A(1,3)	0.003965411	0.007651862	0.51823	0.60429906
14. A(1,4)	-0.000790507	0.004174698	-0.18936	0.84981321
15. A(1,5)	0.058941973	0.019873853	2.96581	0.00301892
16. A(2,1)	0.002418538	0.009204156	0.26277	0.79273105

17. A(2,2)	0.104815487	0.020481803	5.11749	0.00000031
18. A(2,3)	-0.002678861	0.009316343	-0.28754	0.77369557
19. A(2,4)	-0.000296646	0.004621163	-0.06419	0.94881654
20. A(2,5)	-0.012082617	0.025699371	-0.47015	0.63824623
21. A(3,1)	0.005396545	0.003955715	1.36424	0.17249193
22. A(3,2)	0.007587516	0.006432151	1.17962	0.23815001
23. A(3,3)	0.059900800	0.012623853	4.74505	0.00000208
24. A(3,4)	-0.000110638	0.002724386	-0.04061	0.96760659
25. A(3,5)	0.020004920	0.009094167	2.19975	0.02782444
26. A(4,1)	0.003116790	0.010109612	0.30830	0.75785433
27. A(4,2)	-0.006984111	0.000818555	-8.53224	0.00000000
28. A(4,3)	0.005479517	0.019809666	0.27661	0.78208094
29. A(4,4)	0.054378454	0.011525613	4.71805	0.00000238
30. A(4,5)	0.060303058	0.025417354	2.37252	0.01766744
31. A(5,1)	0.023092313	0.009073169	2.54512	0.01092399
32. A(5,2)	0.007268325	0.003310049	2.19584	0.02810370
33. A(5,3)	0.004220796	0.006586655	0.64081	0.52164601
34. A(5,4)	-0.001973601	0.005092493	-0.38755	0.69834826
35. A(5,5)	0.002642269	0.010444773	0.25298	0.80028733
36. B(1,1)	1.145070847	0.440533736	2.59928	0.00934193
37. B(1,2)	-0.026978580	0.048910397	-0.55159	0.58122797
38. B(1,3)	0.022696757	0.051689291	0.43910	0.66058923
39. B(1,4)	0.013047102	0.017595410	0.74151	0.45838669
40. B(1,5)	-0.405581924	0.657880430	-0.61650	0.53756594
41. B(2,1)	0.251723585	0.240420974	1.04701	0.29509416
42. B(2,2)	0.827625491	0.043853323	18.87258	0.00000000
43. B(2,3)	0.071253828	0.043920174	1.62235	0.10472875
44. B(2,4)	0.002632991	0.014167938	0.18584	0.85256904
45. B(2,5)	-0.391819116	0.414564038	-0.94514	0.34458979
46. B(3,1)	-0.229436453	0.132219286	-1.73527	0.08269260
47. B(3,2)	0.019786174	0.014521596	1.36253	0.17302930
48. B(3,3)	0.900802312	0.014251505	63.20752	0.00000000
49. B(3,4)	0.001416800	0.011190129	0.12661	0.89924782
50. B(3,5)	0.288369186	0.218957890	1.31701	0.18783611
51. B(4,1)	-1.042093334	0.806874437	-1.29152	0.19652391
52. B(4,2)	0.110232563	0.071031593	1.55188	0.12069075
53. B(4,3)	-0.105531326	0.060688121	-1.73891	0.08205017
54. B(4,4)	0.920568637	0.051621948	17.83289	0.00000000
55. B(4,5)	1.483964402	1.233144318	1.20340	0.22882203
56. B(5,1)	0.831920577	0.537933989	1.54651	0.12198132
57. B(5,2)	-0.086903044	0.051538727	-1.68617	0.09176310
58. B(5,3)	0.082988809	0.055807244	1.48706	0.13699854
59. B(5,4)	0.027904160	0.041547800	0.67162	0.50182830
60. B(5,5)	-0.340574219	0.841767913	-0.40459	0.68577599
61. R(2,1)	0.346970652	0.016810436	20.64019	0.00000000
62. R(3,1)	0.233918172	0.015086709	15.50492	0.00000000
63. R(3,2)	0.305134349	0.011852966	25.74329	0.00000000
64. R(4,1)	0.121195959	0.014394215	8.41977	0.00000000
65. R(4,2)	0.162601402	0.014411716	11.28258	0.00000000
66. R(4,3)	0.192346421	0.013742003	13.99697	0.00000000
67. R(5,1)	0.340172346	0.014848086	22.91018	0.00000000
68. R(5,2)	0.479960017	0.010218543	46.96952	0.00000000
69. R(5,3)	0.377289678	0.011115490	33.94269	0.00000000
70. R(5,4)	0.196013719	0.013346933	14.68605	0.00000000

MV-CC GARCH with VARMA Variances - Estimation by BFGS  
NO CONVERGENCE IN 397 ITERATIONS. FINAL NORMED GRADIENT 10.49343  
SUBITERATIONS LIMIT EXCEEDED.  
ESTIMATION POSSIBLY HAS STALLED OR MACHINE ROUND OFF IS MAKING FURTHER PROGRESS DIFFICULT  
TRY DIFFERENT SETTING FOR EXACTLINE, DERIVES OR ALPHA ON NLPAR  
RESTARTING ESTIMATION FROM LAST ESTIMATES OR DIFFERENT INITIAL GUESSES/PMETHOD OPTION  
MIGHT ALSO WORK

With Heteroscedasticity/Misspecification Adjusted Standard Errors  
Usable Observations 3737

Log Likelihood

-30168.6352

Variable	Coeff	Std Error	T-Stat	Signif
1. Mean (RIBOV)	0.089160960	0.024822519	3.59194	0.00032823
2. Mean (RMOEX)	0.115253827	0.022474985	5.12809	0.00000029
3. Mean (RSENSEX)	0.100173267	0.016345306	6.12856	0.00000000
4. Mean (RSHCOMP)	0.038486489	0.024080577	1.59824	0.10999006
5. Mean (RJALSH)	0.092073711	0.015780495	5.83465	0.00000001
6. C (1)	-0.518231281	0.051217145	-10.11832	0.00000000
7. C (2)	-0.695274121	0.067601989	-10.28482	0.00000000
8. C (3)	1.012467412	0.091543026	11.06002	0.00000000
9. C (4)	1.474247424	0.063374777	23.26237	0.00000000
10. C (5)	-0.353344580	0.007633245	-46.29022	0.00000000
11. A (1,1)	0.025771034	0.005262782	4.89685	0.00000097
12. A (1,2)	0.007268484	0.002168462	3.35191	0.00080257
13. A (1,3)	0.015233978	0.005645743	2.69831	0.00696920
14. A (1,4)	-0.007321994	0.003180416	-2.30221	0.02132318
15. A (1,5)	0.055497251	0.011251825	4.93229	0.00000081
16. A (2,1)	-0.005153645	0.007282065	-0.70772	0.47912071
17. A (2,2)	0.105290514	0.017265657	6.09826	0.00000000
18. A (2,3)	0.000432065	0.008076103	0.05350	0.95733421
19. A (2,4)	-0.004771831	0.003967152	-1.20284	0.22903998
20. A (2,5)	-0.011893073	0.025604719	-0.46449	0.64229847
21. A (3,1)	0.013051806	0.003551135	3.67539	0.00023749
22. A (3,2)	0.009727595	0.005986379	1.62495	0.10417220
23. A (3,3)	0.051496493	0.009708974	5.30401	0.00000011
24. A (3,4)	0.006548621	0.003052651	2.14522	0.03193490
25. A (3,5)	0.029227650	0.009978321	2.92912	0.00339928
26. A (4,1)	0.020678850	0.006737847	3.06906	0.00214734
27. A (4,2)	-0.002409263	0.002911700	-0.82744	0.40798649
28. A (4,3)	-0.009704398	0.002331348	-4.16257	0.00003147
29. A (4,4)	0.064182944	0.007223435	8.88538	0.00000000
30. A (4,5)	0.046384168	0.019077856	2.43131	0.01504437
31. A (5,1)	0.015874529	0.003318620	4.78347	0.00000172
32. A (5,2)	0.001325767	0.000992530	1.33574	0.18163275
33. A (5,3)	0.011441661	0.004582729	2.49669	0.01253580
34. A (5,4)	-0.002945479	0.002220334	-1.32659	0.18464345
35. A (5,5)	0.033501453	0.007649434	4.37960	0.00001189
36. B (1,1)	1.787409005	0.073153490	24.43368	0.00000000
37. B (1,2)	-0.043160920	0.000812925	-53.09335	0.00000000
38. B (1,3)	0.010805534	0.009398055	1.14976	0.25024155
39. B (1,4)	0.071926573	0.006076860	11.83614	0.00000000
40. B (1,5)	-1.448962122	0.119097419	-12.16619	0.00000000
41. B (2,1)	1.117608066	0.078615528	14.21612	0.00000000
42. B (2,2)	0.795217983	0.022533461	35.29054	0.00000000
43. B (2,3)	0.077432313	0.022234994	3.48245	0.00049684
44. B (2,4)	0.076371293	0.007118639	10.72836	0.00000000
45. B (2,5)	-1.802430889	0.136334240	-13.22068	0.00000000
46. B (3,1)	-1.420345530	0.130231808	-10.90629	0.00000000
47. B (3,2)	0.066324438	0.012532820	5.29206	0.00000012
48. B (3,3)	0.894702067	0.016429520	54.45698	0.00000000
49. B (3,4)	-0.093785641	0.007223714	-12.98302	0.00000000
50. B (3,5)	2.202620940	0.212460363	10.36721	0.00000000
51. B (4,1)	-2.099045245	0.087656577	-23.94624	0.00000000
52. B (4,2)	0.111990911	0.011219546	9.98177	0.00000000
53. B (4,3)	-0.040563076	0.013077948	-3.10164	0.00192452
54. B (4,4)	0.795626911	0.009723119	81.82836	0.00000000
55. B (4,5)	3.262575501	0.132374878	24.64649	0.00000000
56. B (5,1)	0.531014188	0.006375249	83.29309	0.00000000
57. B (5,2)	-0.024044170	0.002685336	-8.95388	0.00000000
58. B (5,3)	0.003546765	0.007533598	0.47079	0.63778856
59. B (5,4)	0.045988042	0.004228541	10.87563	0.00000000
60. B (5,5)	0.034678817	0.000192313	180.32510	0.00000000
61. R (2,1)	0.347130440	0.013091898	26.51491	0.00000000

62. R(3,1)	0.233703444	0.014210313	16.44604	0.00000000
63. R(3,2)	0.305893798	0.013153565	23.25558	0.00000000
64. R(4,1)	0.121841310	0.015156926	8.03866	0.00000000
65. R(4,2)	0.163172344	0.014643760	11.14279	0.00000000
66. R(4,3)	0.193198579	0.014358182	13.45564	0.00000000
67. R(5,1)	0.339575301	0.012614300	26.91987	0.00000000
68. R(5,2)	0.481402211	0.010620914	45.32587	0.00000000
69. R(5,3)	0.377542086	0.012652883	29.83842	0.00000000
70. R(5,4)	0.196110873	0.013772185	14.23963	0.00000000

MV-CC GARCH with VARMA Variances - Estimation by BFGS  
 Convergence in 361 Iterations. Final criterion was 0.0000000 <= 0.0000100

With Heteroscedasticity/Misspecification Adjusted Standard Errors  
 Usable Observations 3737  
 Log Likelihood -30165.0127

Variable	Coeff	Std Error	T-Stat	Signif
*****				
1. Mean (RIBOV)	0.088111309	0.025433809	3.46434	0.00053154
2. Mean (RMOEX)	0.113136476	0.025336048	4.46543	0.00000799
3. Mean (RSENSEX)	0.098497440	0.018955774	5.19617	0.00000020
4. Mean (RSHCOMP)	0.036918956	0.023681311	1.55899	0.11899846
5. Mean (RJALSH)	0.089705541	0.015829380	5.66703	0.00000001
6. C(1)	0.065841716	0.018973011	3.47028	0.00051991
7. C(2)	-0.105674084	0.041078534	-2.57249	0.01009701
8. C(3)	0.667650402	0.151343938	4.41148	0.00001027
9. C(4)	0.439188976	0.103470259	4.24459	0.00002190
10. C(5)	0.001760742	0.007066947	0.24915	0.80324345
11. A(1,1)	0.028292401	0.004871694	5.80751	0.00000001
12. A(1,2)	0.008738922	0.003982024	2.19459	0.02819281
13. A(1,3)	0.007044880	0.007599520	0.92702	0.35391798
14. A(1,4)	-0.001243541	0.004067081	-0.30576	0.75978913
15. A(1,5)	0.068293200	0.011585920	5.89450	0.00000000
16. A(2,1)	-0.004611714	0.004469277	-1.03187	0.30213297
17. A(2,2)	0.100774312	0.017773601	5.66989	0.00000001
18. A(2,3)	0.000687359	0.008602180	0.07991	0.93631264
19. A(2,4)	-0.002102526	0.004048704	-0.51931	0.60354576
20. A(2,5)	-0.000983354	0.027786172	-0.03539	0.97176873
21. A(3,1)	0.017651292	0.004247775	4.15542	0.00003247
22. A(3,2)	0.012452907	0.005827707	2.13685	0.03261059
23. A(3,3)	0.046477598	0.012011110	3.86955	0.00010904
24. A(3,4)	0.007882696	0.004453894	1.76984	0.07675316
25. A(3,5)	0.016553160	0.013227064	1.25146	0.21076618
26. A(4,1)	0.019021416	0.005944812	3.19967	0.00137587
27. A(4,2)	-0.000048504	0.005677611	-0.00854	0.99318374
28. A(4,3)	-0.009149260	0.001584019	-5.77598	0.00000001
29. A(4,4)	0.058509821	0.008951588	6.53625	0.00000000
30. A(4,5)	0.021605773	0.013520658	1.59798	0.11004690
31. A(5,1)	0.016829593	0.002906593	5.79015	0.00000001
32. A(5,2)	0.000742462	0.002159914	0.34375	0.73103731
33. A(5,3)	0.009351732	0.004602666	2.03181	0.04217316
34. A(5,4)	-0.000526596	0.002299122	-0.22904	0.81883622
35. A(5,5)	0.041683383	0.006868923	6.06840	0.00000000
36. B(1,1)	0.948369476	0.017950321	52.83301	0.00000000
37. B(1,2)	-0.003316323	0.008501521	-0.39009	0.69647308
38. B(1,3)	-0.002191536	0.013400329	-0.16354	0.87009057
39. B(1,4)	0.009301349	0.006089946	1.52733	0.12667930
40. B(1,5)	-0.114735608	0.016777077	-6.83883	0.00000000
41. B(2,1)	0.266022335	0.033570269	7.92434	0.00000000
42. B(2,2)	0.838289862	0.025678274	32.64588	0.00000000
43. B(2,3)	0.059240475	0.027592805	2.14695	0.03179697
44. B(2,4)	0.009288231	0.011588988	0.80147	0.42285937
45. B(2,5)	-0.430779488	0.068116668	-6.32414	0.00000000

46. B(3,1)	-0.934456825	0.212205578	-4.40355	0.00001065
47. B(3,2)	0.060910812	0.027821261	2.18936	0.02857054
48. B(3,3)	0.875016217	0.045941852	19.04617	0.00000000
49. B(3,4)	-0.038697192	0.033631805	-1.15061	0.24989148
50. B(3,5)	1.407631614	0.355701494	3.95734	0.00007579
51. B(4,1)	-0.617867294	0.152092445	-4.06245	0.00004856
52. B(4,2)	0.048975430	0.018480331	2.65014	0.00804589
53. B(4,3)	-0.025205803	0.030435889	-0.82816	0.40757956
54. B(4,4)	0.915940562	0.025090316	36.50574	0.00000000
55. B(4,5)	0.895118887	0.250913280	3.56744	0.00036048
56. B(5,1)	0.020035249	0.004722357	4.24264	0.00002209
57. B(5,2)	0.001421669	0.004892615	0.29057	0.77137679
58. B(5,3)	-0.007144203	0.008182375	-0.87312	0.38259715
59. B(5,4)	0.008220089	0.004051824	2.02874	0.04248500
60. B(5,5)	0.849370000	0.016275676	52.18647	0.00000000
61. R(2,1)	0.347068376	0.012771525	27.17517	0.00000000
62. R(3,1)	0.234848141	0.013948835	16.83640	0.00000000
63. R(3,2)	0.305877789	0.014022542	21.81329	0.00000000
64. R(4,1)	0.121801542	0.016247709	7.49654	0.00000000
65. R(4,2)	0.163050314	0.017428666	9.35530	0.00000000
66. R(4,3)	0.194572474	0.014712497	13.22498	0.00000000
67. R(5,1)	0.339166651	0.012670362	26.76851	0.00000000
68. R(5,2)	0.480136600	0.012131206	39.57864	0.00000000
69. R(5,3)	0.376416478	0.013514494	27.85280	0.00000000
70. R(5,4)	0.195331444	0.014756799	13.23671	0.00000000

MV-CC GARCH with VARMA Variances - Estimation by BFGS

NO CONVERGENCE IN 31 ITERATIONS. FINAL NORMED GRADIENT 665.14474

ESTIMATION POSSIBLY HAS STALLED OR MACHINE ROUNDOFF IS MAKING FURTHER PROGRESS DIFFICULT  
TRY DIFFERENT SETTING FOR EXACTLINE, DERIVES OR ALPHA ON NLPAR

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

With Heteroscedasticity/Misspecification Adjusted Standard Errors

Usable Observations 3737

Log Likelihood -30350.0574

Variable	Coeff	Std Error	T-Stat	Signif
1. Mean(RIBOV)	0.098660286	0.027420142	3.59810	0.00032056
2. Mean(RMOEX)	0.129493649	0.033633151	3.85018	0.00011803
3. Mean(RSENSEX)	0.095184126	0.019519952	4.87625	0.00000108
4. Mean(RSHCOMP)	0.032979160	0.067548580	0.48823	0.62538781
5. Mean(RJALSH)	0.086131067	0.023684083	3.63666	0.00027619
6. C(1)	0.514428907	0.025897029	19.86440	0.00000000
7. C(2)	0.145079418	0.029899303	4.85227	0.00000122
8. C(3)	-0.007921073	0.020999331	-0.37721	0.70602054
9. C(4)	0.087415658	0.037550861	2.32793	0.01991599
10. C(5)	0.056413007	0.023121993	2.43980	0.01469545
11. A(1,1)	0.075651048	0.008513071	8.88646	0.00000000
12. A(1,2)	-0.004859758	0.010459771	-0.46461	0.64220778
13. A(1,3)	0.007265376	0.011251101	0.64575	0.51844257
14. A(1,4)	-0.016480892	0.010227786	-1.61138	0.10709605
15. A(1,5)	0.082970308	0.016293343	5.09228	0.00000035
16. A(2,1)	-0.011122901	0.002079980	-5.34760	0.00000009
17. A(2,2)	0.144677812	0.006841360	21.14752	0.00000000
18. A(2,3)	-0.004161157	0.004286236	-0.97082	0.33163869
19. A(2,4)	-0.008860183	0.006008783	-1.47454	0.14033662
20. A(2,5)	-0.012956763	0.017239305	-0.75158	0.45230207
21. A(3,1)	0.018566036	0.006128108	3.02965	0.00244835
22. A(3,2)	0.000995126	0.005197647	0.19146	0.84816761
23. A(3,3)	0.133432915	0.003969192	33.61714	0.00000000
24. A(3,4)	0.000605142	0.004812313	0.12575	0.89993090
25. A(3,5)	-0.021481151	0.008940564	-2.40266	0.01627624

26. A(4,1)	0.010438254	0.021611193	0.48300	0.62909416
27. A(4,2)	-0.003557450	0.000814901	-4.36550	0.00001268
28. A(4,3)	-0.009143446	0.006565695	-1.39261	0.16373807
29. A(4,4)	0.046458373	0.000673677	68.96236	0.00000000
30. A(4,5)	0.015313058	0.042250148	0.36244	0.71702477
31. A(5,1)	0.028051125	0.001775991	15.79464	0.00000000
32. A(5,2)	0.003773757	0.007747389	0.48710	0.62618713
33. A(5,3)	-0.001382496	0.008359119	-0.16539	0.86863877
34. A(5,4)	-0.014330040	0.000041798	-342.84113	0.00000000
35. A(5,5)	0.073637606	0.008325477	8.84485	0.00000000
36. B(1,1)	0.459096326	0.005060705	90.71785	0.00000000
37. B(1,2)	0.031683262	0.002626996	12.06064	0.00000000
38. B(1,3)	0.135119337	0.007778786	17.37023	0.00000000
39. B(1,4)	0.004640486	0.009162212	0.50648	0.61251904
40. B(1,5)	0.245780105	0.013034237	18.85650	0.00000000
41. B(2,1)	-0.028727240	0.005597095	-5.13253	0.00000029
42. B(2,2)	0.661820611	0.004679506	141.42958	0.00000000
43. B(2,3)	0.292023266	0.009436336	30.94668	0.00000000
44. B(2,4)	-0.007127579	0.006486372	-1.09885	0.27183155
45. B(2,5)	0.099617560	0.007635146	13.04724	0.00000000
46. B(3,1)	-0.015492414	0.003650965	-4.24337	0.00002202
47. B(3,2)	0.100153544	0.001558976	64.24316	0.00000000
48. B(3,3)	0.600055563	0.004555570	131.71909	0.00000000
49. B(3,4)	0.036283071	0.008129880	4.46293	0.00000808
50. B(3,5)	0.072235883	0.008009462	9.01882	0.00000000
51. B(4,1)	-0.102511930	0.008987152	-11.40650	0.00000000
52. B(4,2)	0.001809987	0.013261400	0.13649	0.89143762
53. B(4,3)	0.046362510	0.033270069	1.39352	0.16346257
54. B(4,4)	0.934951074	0.036756864	25.43609	0.00000000
55. B(4,5)	0.102504715	0.020945983	4.89376	0.00000099
56. B(5,1)	0.037136143	0.002591154	14.33189	0.00000000
57. B(5,2)	0.013750326	0.001641109	8.37868	0.00000000
58. B(5,3)	0.062941711	0.002785231	22.59838	0.00000000
59. B(5,4)	0.056454365	0.014490384	3.89599	0.00009780
60. B(5,5)	0.513846790	0.033788358	15.20781	0.00000000
61. R(2,1)	0.345322519	0.009410996	36.69351	0.00000000
62. R(3,1)	0.244739627	0.012212873	20.03948	0.00000000
63. R(3,2)	0.301058358	0.010553345	28.52729	0.00000000
64. R(4,1)	0.135714561	0.013667139	9.92999	0.00000000
65. R(4,2)	0.175661920	0.012851148	13.66897	0.00000000
66. R(4,3)	0.203678241	0.018177869	11.20474	0.00000000
67. R(5,1)	0.350334886	0.007387576	47.42217	0.00000000
68. R(5,2)	0.491377160	0.010258109	47.90134	0.00000000
69. R(5,3)	0.378277127	0.006331279	59.74735	0.00000000
70. R(5,4)	0.213099845	0.011804253	18.05280	0.00000000