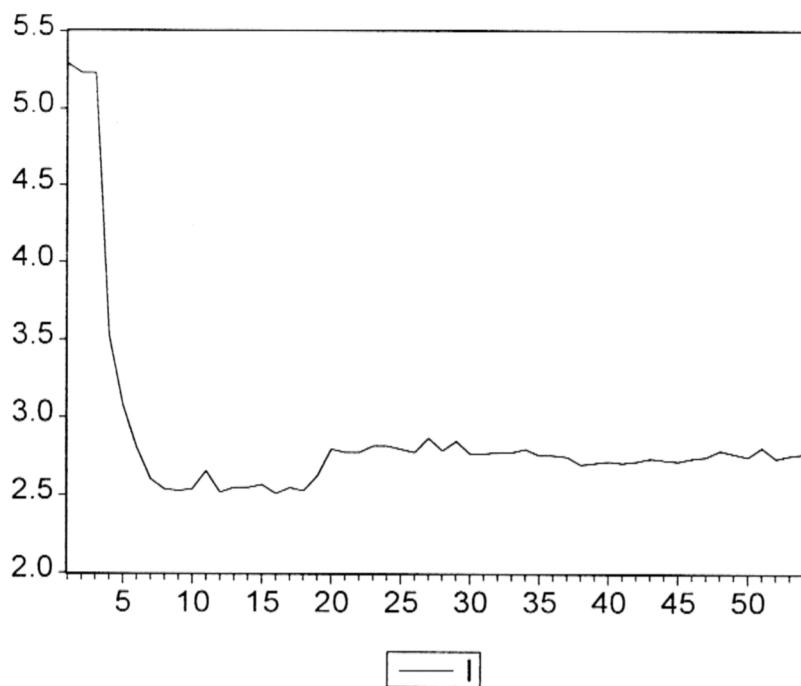
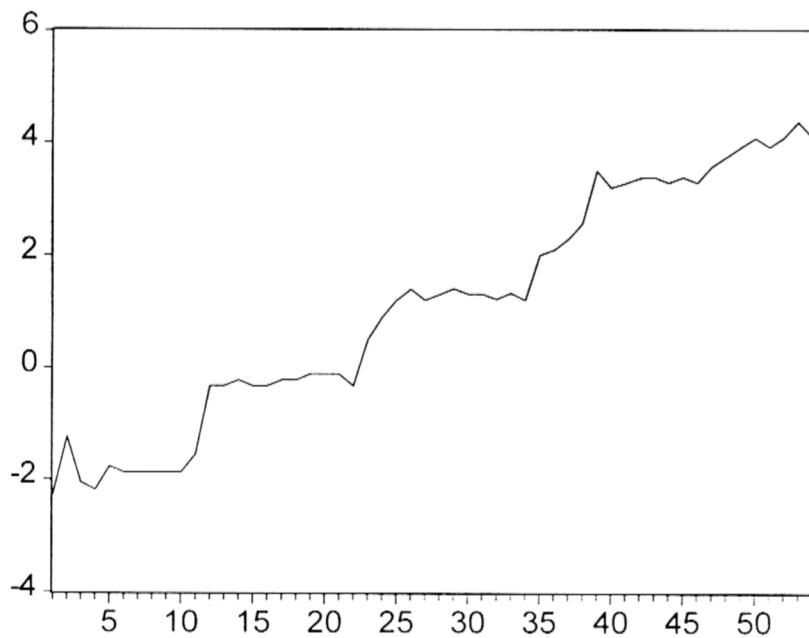


APPENDIX 1

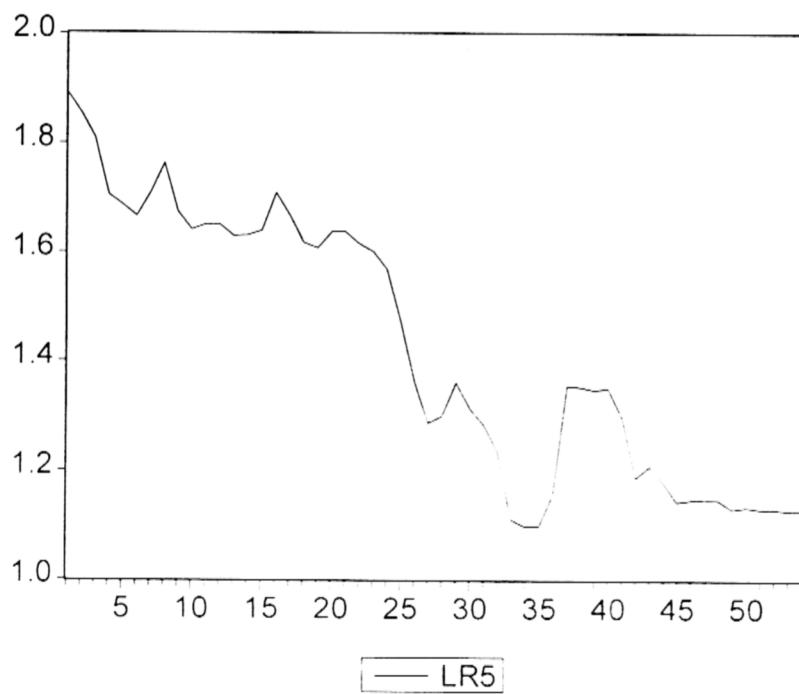
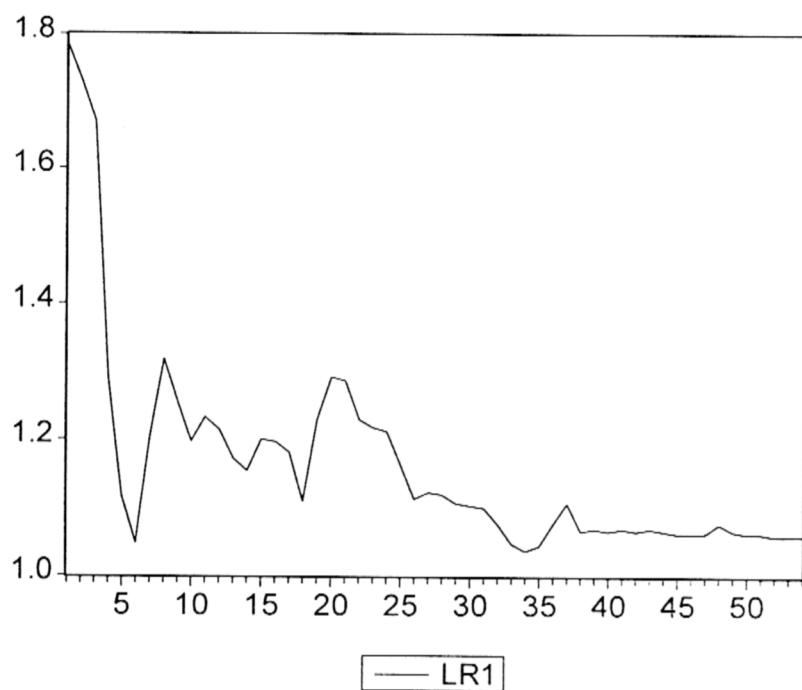
EVIEWS RESULTS

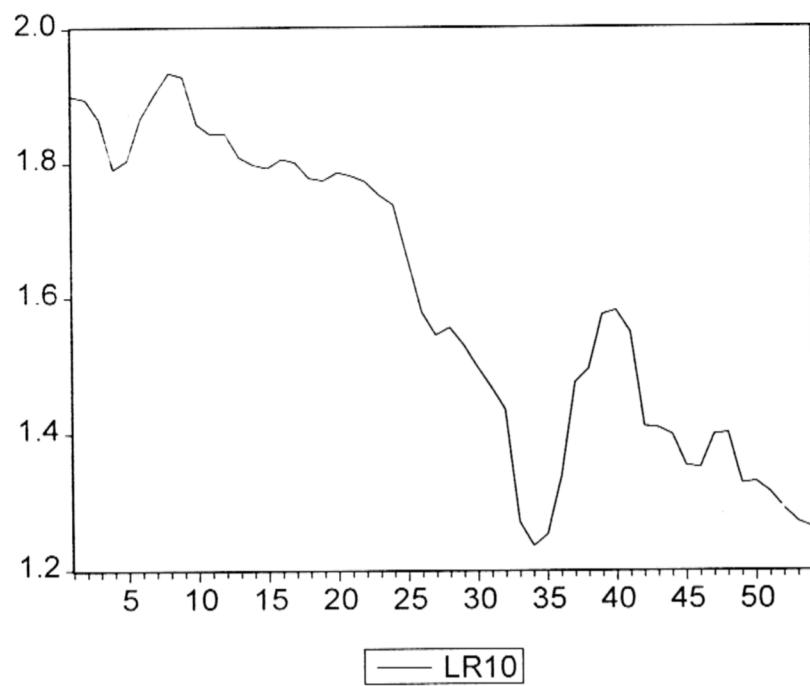


— I



— E





Augmented Dickey-Fuller Unit Root Test on I

ADF Test Statistic	-22.35934	1% Critical Value*	-3.5625
		5% Critical Value	-2.9190
		10% Critical Value	-2.5970

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

LS // Dependent Variable is D(I)

Date: 10/29/04 Time: 10:54

Sample: 4 54

Included observations: 51

Excluded observations: 0 after adjusting endpoints

Variable	Coefficient	Std. Error	T-Statistic	Prob.
I(-1)	-0.632280	0.028278	-22.35934	0.0000
D(I(-1))	-0.029530	0.043868	-0.673158	0.5041
D(I(-2))	0.073299	0.042526	1.723637	0.0913
C	1.715210	0.078848	21.75344	0.0000
R-squared	0.920519	Mean dependent var	-0.048235	
Adjusted R-squared	0.915446	S.D. dependent var	0.253635	
S.E. of regression	0.073752	Akaike info criterion	-5.138899	
Sum squared resid	0.255652	Schwartz criterion	-4.987383	
Log likelihood	62.67607	F-statistic	181.4465	
Durbin-Watson stat	0.837459	Prob(F-statistic)	0.000000	

Augmented Dickey-Fuller Unit Root Test on D(E)

ADF Test Statistic	-4.329955	1% Critical Value*	-3.5653
		5% Critical Value	-2.9202
		10% Critical Value	-2.5977

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

LS // Dependent Variable is D(E,2)

Date: 10/30/04 Time: 10:45

Sample: 5 54

Included observations: 50

Excluded observations: 0 after adjusting endpoints

Variable	Coefficient	Std. Error	T-Statistic	Prob.
D(E(-1))	-1.123016	0.259360	-4.329955	0.0001
D(E(-1),2)	0.054622	0.201521	0.271047	0.7876
D(E(-2),2)	-0.001506	0.127617	-0.011800	0.9906
C	0.140192	0.053289	2.630771	0.0116
R-squared	0.530337	Mean dependent var	-0.003000	
Adjusted R-squared	0.499707	S.D. dependent var	0.431799	
S.E. of regression	0.305417	Akaike info criterion	-2.295535	
Sum squared resid	4.290865	Schwartz criterion	-2.142573	
Log likelihood	-9.558558	F-statistic	17.31419	
Durbin-Watson stat	1.924622	Prob(F-statistic)	0.000000	

Augmented Dickey-Fuller Unit Root Test on LR1

ADF Test Statistic	-6.673356	1% Critical Value*	-3.5625
		5% Critical Value	-2.9190
		10% Critical Value	-2.5970

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

LS // Dependent Variable is D(LR1)

Date: 10/29/04 Time: 10:57

Sample: 4 54

Included observations: 51

Excluded observations: 0 after adjusting endpoints

Variable	Coefficient	Std. Error	T-Statistic	Prob.
LR1(-1)	-0.422143	0.063258	-6.673356	0.0000
D(LR1(-1))	0.369824	0.102036	3.624452	0.0007
D(LR1(-2))	-0.138552	0.102095	-1.357083	0.1812
C	0.473066	0.072635	6.512950	0.0000
R-squared	0.583721	Mean dependent var		-0.012033
Adjusted R-squared	0.557150	S.D. dependent var		0.072524
S.E. of regression	0.048263	Akaike info criterion		-5.987006
Sum squared resid	0.109477	Schwartz criterion		-5.835490
Log likelihood	84.30278	F-statistic		21.96837
Durbin-Watson stat	1.402719	Prob(F-statistic)		0.000000

Augmented Dickey-Fuller Unit Root Test on D(LR5)

ADF Test Statistic	-4.247478	1% Critical Value*	-3.5653
		5% Critical Value	-2.9202
		10% Critical Value	-2.5977

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

LS // Dependent Variable is D(LR5.2)

Date: 10/29/04 Time: 11:00

Sample: 5 54

Included observations: 50

Excluded observations: 0 after adjusting endpoints

Variable	Coefficient	Std. Error	T-Statistic	Prob.
D(LR5(-1))	-0.869297	0.204662	-4.247478	0.0001
D(LR5(-1),2)	0.180861	0.170077	1.063408	0.2931
D(LR5(-2),2)	0.038439	0.142797	0.269185	0.7890
C	-0.009932	0.007777	-1.277067	0.2080
R-squared	0.395783	Mean dependent var		0.002071
Adjusted R-squared	0.356377	S.D. dependent var		0.063432
S.E. of regression	0.050889	Akaike info criterion		-5.879607
Sum squared resid	0.119125	Schwarz criterion		-5.726645
Log likelihood	80.04325	F-statistic		10.04386
Durbin-Watson stat	2.000603	Prob(F-statistic)		0.000033

Augmented Dickey-Fuller Unit Root Test on D(LR10)

ADF Test Statistic	-4.095296	1% Critical Value*	-3.5653
		5% Critical Value	-2.9202
		10% Critical Value	-2.5977

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

" LS " Dependent Variable is D(LR10,2)

Date: 10/29/04 Time: 11:01

Sample: 5 54

Included observations: 50

Excluded observations: 0 after adjusting endpoints

Variable	Coefficient	Std. Error	T-Statistic	Prob.
D(LR10(-1))	-0.775122	0.189271	-4.095296	0.0002
D(LR10(-1),2)	0.173721	0.165951	1.046818	0.3007
D(LR10(-2),2)	0.104149	0.144321	0.721644	0.4742
C	-0.007926	0.006980	-1.135476	0.2621
R-squared	0.340389	Mean dependent var		0.001308
Adjusted R-squared	0.297371	S.D. dependent var		0.055740
S.E. of regression	0.046723	Akaike info criterion		-6.050413
Sum squared resid	0.100420	Schwartz criterion		-5.897451
Log likelihood	84.31340	F-statistic		7.912686
Durbin-Watson stat	1.958200	Prob(F-statistic)		0.000233

Johansen Cointegration Test

Date: 10/29/04 Time: 11:59

Sample: 154

Included observations: 52

Test assumption: Linear deterministic trend in the data

Series: I E LR1 LR5 LR10

Lags interval: 1 to 1

Eigenvalue	Likelihood Ratio	5 Percent Critical Value	1 Percent Critical Value	Hypothesized No. of CE(s)
0.683372	127.6145	68.52	76.07	None **
0.578921	67.81300	47.21	54.46	At most 1 **
0.209520	22.83642	29.68	35.65	At most 2
0.166147	10.61048	15.41	20.04	At most 3
0.022102	1.162177	3.76	6.65	At most 4

*(**) denotes rejection of the hypothesis at 5%(1%) significance level

L.R. test indicates 2 cointegrating equation(s) at 5% significance level

Unnormalized Cointegrating Coefficients:

I	E	LR1	LR5	LR10
0.701651	-0.008002	-3.118718	0.998480	0.096822
0.113232	-0.020897	-1.987043	0.505202	-0.011916
-0.235732	-0.033628	0.251933	3.845750	-4.461236
0.084827	-0.144195	0.292705	-2.506139	1.097629
0.132490	0.074197	-0.453075	0.619279	-0.494483

Normalized Cointegrating Coefficients: 1 Cointegrating Equation(s)

I	E	LR1	LR5	LR10	C
1.000000	-0.011405 (0.02249)	-4.444830 (0.24446)	1.423044 (0.66843)	0.137991 (0.61733)	-0.062200

Log likelihood 173.1533

Normalized Cointegrating Coefficients: 2 Cointegrating Equation(s)

I	E	LR1	LR5	LR10	C
1.000000	0.000000	-3.581719 (2.05874)	1.222896 (1.03168)	0.154012 (0.73236)	0.686904
0.000000	1.000000	75.67914 (78.7314)	-17.54934 (39.4539)	1.404746 (28.0073)	65.68280

Log likelihood 195.6416

Normalized Cointegrating Coefficients: 3 Cointegrating Equation(s)

I	E	LR1	LR5	LR10	C
1.000000	0.000000	0.000000	7.723853 (20.8373)	-7.876493 (21.9239)	1.212888
0.000000	1.000000	0.000000	-154.9098	171.0835	54.56913

Johansen Cointegration Test

0.000000	0.000000	1.000000	(310.215) 1.815038 (5.16561)	(326.393) -2.242081 (5.43500)	0.146852
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Log likelihood 201.7546

Normalized Cointegrating Coefficients: 4 Cointegrating Equation(s)

I	E	LR1	LR5	LR10	C
1.000000	0.000000	0.000000	0.000000	0.162369 (0.30412)	3.092387
0.000000	1.000000	0.000000	0.000000	9.855820 (1.60153)	16.87382
0.000000	0.000000	1.000000	0.000000	-0.353019 (0.06894)	0.588518
0.000000	0.000000	0.000000	1.000000	-1.040784 (0.04959)	-0.243337

Log likelihood 206.4787

Johansen Cointegration Test

Date: 10/29/04 Time: 11:59

Sample: 154

Included observations: 51

Test assumption: Linear deterministic trend in the data

Series: I E LR1 LR5 LR10

Lags interval: 1 to 2

Eigenvalue	Likelihood Ratio	5 Percent Critical Value	1 Percent Critical Value	Hypothesized No. of CE(s)
0.947952	223.7483	68.52	76.07	None **
0.593965	73.01307	47.21	54.46	At most 1 **
0.252526	27.04600	29.68	35.65	At most 2
0.182658	12.20216	15.41	20.04	At most 3
0.036864	1.915590	3.76	6.65	At most 4

*(**) denotes rejection of the hypothesis at 5%(1%) significance level

L.R. test indicates 2 cointegrating equation(s) at 5% significance level

Unnormalized Cointegrating Coefficients:

I	E	LR1	LR5	LR10
0.575731	-0.003982	-0.617016	0.042326	0.290239
-1.129501	-0.003313	6.322517	-2.095008	-0.277873
0.230006	-0.178219	-0.750611	-2.911811	1.920547
-0.152954	-0.047408	-0.213788	4.114512	-4.881050
-0.295203	-0.015891	0.716968	1.472674	-1.302552

Normalized Cointegrating Coefficients: 1 Cointegrating Equation(s)

I	E	LR1	LR5	LR10	C
1.000000	-0.006916 (0.01051)	-1.071709 (0.29443)	0.073517 (0.32178)	0.504123 (0.30022)	2.461344

Log likelihood 247.8472

Normalized Cointegrating Coefficients: 2 Cointegrating Equation(s)

I	E	LR1	LR5	LR10	C
1.000000	0.000000	-4.249703 (6.29389)	1.324300 (2.37386)	0.322885 (0.50968)	0.318853
0.000000	1.000000	-459.5153 (1013.46)	180.8542 (382.245)	-26.20571 (82.0706)	-309.7888

Log likelihood 270.8307

Normalized Cointegrating Coefficients: 3 Cointegrating Equation(s)

I	E	LR1	LR5	LR10	C
1.000000	0.000000	0.000000	-0.185557 (0.39555)	0.469840 (0.41359)	3.272397
0.000000	1.000000	0.000000	17.59524	-10.31559	9.574308

Johansen Cointegration Test

0.000000	0.000000	1.000000	(7.09054) -0.355285 (0.13579)	(7.41376) 0.034580 (0.14198)	0.695000
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Log likelihood 278.2526

Normalized Cointegrating Coefficients: 4 Cointegrating Equation(s)

I	E	LR1	LR5	LR10	C
1.000000	0.000000	0.000000	0.000000	0.267180 (0.06053)	3.211590
0.000000	1.000000	0.000000	0.000000	8.901423 (1.20859)	15.34030
0.000000	0.000000	1.000000	0.000000	-0.353452 (0.02755)	0.578572
0.000000	0.000000	0.000000	1.000000	-1.092171 (0.04894)	-0.327702

Log likelihood 283.3959

Johansen Cointegration Test

Date: 10/29/04 Time: 12:00

Sample: 154

Included observations: 50

Test assumption: Linear deterministic trend in the data

Series: I E LR1 LR5 LR10

Lags interval: 1 to 3

Eigenvalue	Likelihood Ratio	5 Percent Critical Value	1 Percent Critical Value	Hypothesized No. of CE(s)
0.564736	77.02884	68.52	76.07	None **
0.314691	35.43871	47.21	54.46	At most 1
0.167662	16.54441	29.68	35.65	At most 2
0.086587	7.368594	15.41	20.04	At most 3
0.055222	2.840260	3.76	6.65	At most 4

**(*) denotes rejection of the hypothesis at 5%(1%) significance level

L.R. test indicates 1 cointegrating equation(s) at 5% significance level

Unnormalized Cointegrating Coefficients:

I	E	LR1	LR5	LR10
2.288512	0.110732	-7.755962	3.412751	0.437207
-1.446283	0.041179	-1.891016	3.375030	-3.000439
-0.278256	0.028027	-0.495378	-4.736962	5.312333
-1.478730	0.178585	6.272637	0.787413	-1.678020
-0.700138	0.041063	3.164112	-0.569670	-1.038050

Normalized Cointegrating Coefficients: 1 Cointegrating Equation(s)

I	E	LR1	LR5	LR10	C
1.000000	0.048386 (0.01556)	-3.389085 (0.38525)	1.491253 (0.41481)	0.191044 (0.33869)	1.360378
Log likelihood	298.5979				

Normalized Cointegrating Coefficients: 2 Cointegrating Equation(s)

I	E	LR1	LR5	LR10	C
1.000000	0.000000	-0.432369 (1.62172)	-0.916661 (1.10396)	1.376821 (0.74442)	3.146579
0.000000	1.000000	-61.10693 (34.9614)	49.76475 (23.7994)	-24.50663 (16.0484)	-36.91571
Log likelihood	308.0450				

Normalized Cointegrating Coefficients: 3 Cointegrating Equation(s)

I	E	LR1	LR5	LR10	C
1.000000	0.000000	0.000000	-3.433989 (15.9180)	3.892374 (16.8139)	4.094169
0.000000	1.000000	0.000000	-306.0106	331.0177	97.00765

Johansen Cointegration Test

0.000000	0.000000	1.000000	(1617.96) -5.822177 (27.0358)	(1709.02) 5.818070 (28.5574)	2.191623
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Log likelihood 312.6330

Normalized Cointegrating Coefficients: 4 Cointegrating Equation(s)

I	E	LR1	LR5	LR10	C
1.000000	0.000000	0.000000	0.000000	0.274472 (0.09307)	3.172841
0.000000	1.000000	0.000000	0.000000	8.618288 (1.47281)	14.90596
0.000000	0.000000	1.000000	0.000000	-0.315923 (0.04013)	0.629551
0.000000	0.000000	0.000000	1.000000	-1.053557 (0.04448)	-0.268297

Log likelihood 314.8971

Johansen Cointegration Test

Date: 10/29/04 Time: 12:01

Sample: 154

Included observations: 49

Test assumption: Linear deterministic trend in the data

Series: I E LR1 LR5 LR10

Lags interval: 1 to 4

Eigenvalue	Likelihood Ratio	5 Percent Critical Value	1 Percent Critical Value	Hypothesized No. of CE(s)
0.445827	67.83366	68.52	76.07	None
0.358310	38.91000	47.21	54.46	At most 1
0.187920	17.17113	29.68	35.65	At most 2
0.116861	6.971464	15.41	20.04	At most 3
0.017841	0.882118	3.76	6.65	At most 4

*(**) denotes rejection of the hypothesis at 5%(1%) significance level

L.R. rejects any cointegration at 5% significance level

Unnormalized Cointegrating Coefficients:

I	E	LR1	LR5	LR10
3.728652	0.093762	-8.873854	-0.347112	5.149518
1.120583	0.124806	-9.308412	7.262637	-3.434644
1.653653	-0.072496	-0.982547	2.798028	-2.974975
-0.300593	-0.026777	1.158403	-3.006770	1.766282
-1.320885	0.198918	6.988596	1.672826	-2.999824

Normalized Cointegrating Coefficients: 1 Cointegrating Equation(s)

I	E	LR1	LR5	LR10	C
1.000000	0.025146 (0.01182)	-2.379909 (0.35175)	-0.093093 (0.36894)	1.381067 (0.32704)	2.125900
Log likelihood	332.4842				

Normalized Cointegrating Coefficients: 2 Cointegrating Equation(s)

I	E	LR1	LR5	LR10	C
1.000000	0.000000	-0.651513 (1.51657)	-2.010276 (1.48387)	2.677650 (1.15580)	3.415337
0.000000	1.000000	-68.73351 (41.6352)	76.24103 (40.7374)	-51.56152 (31.7308)	-51.27732
Log likelihood	343.3536				

Normalized Cointegrating Coefficients: 3 Cointegrating Equation(s)

I	E	LR1	LR5	LR10	C
1.000000	0.000000	0.000000	-3.562991 (3.58312)	4.162573 (3.95307)	4.330541
0.000000	1.000000	0.000000	-87.56761	105.0952	45.27504

Johansen Cointegration Test

0.000000	0.000000	1.000000	(141.645) -2.383243 (2.51991)	(156.270) 2.279190 (2.78008)	1.404735
Log likelihood	348.4535				

Normalized Cointegrating Coefficients: 4 Cointegrating Equation(s)

I	E	LR1	LR5	LR10	C
1.000000	0.000000	0.000000	0.000000	1.057276 (2.86070)	4.396458
0.000000	1.000000	0.000000	0.000000	28.77630 (72.2127)	46.89507
0.000000	0.000000	1.000000	0.000000	0.202093 (1.89987)	1.448826
0.000000	0.000000	0.000000	1.000000	-0.871542 (0.78986)	0.018500
Log likelihood	351.4981				

Vector Autoregression Estimates

Date: 10/29/04 Time: 12:03

Sample: 3 54

Included observations: 52

Excluded observations: 0 after adjusting endpoints

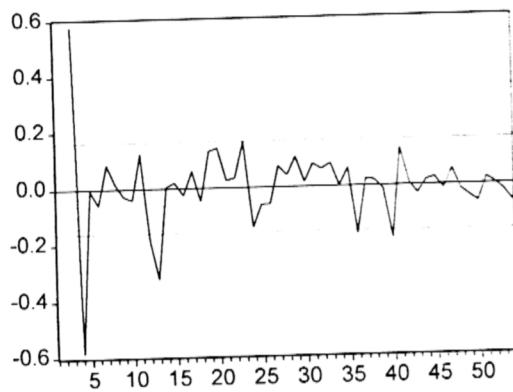
Standard errors & t-statistics in parentheses

	I	E	LR1	LR5	LR10
I(-1)	0.586899 (0.18857) (3.11236)	-0.213897 (0.36517) (-0.58575)	0.029848 (0.05771) (0.51722)	-0.057011 (0.05714) (-0.99776)	-0.044412 (0.05016) (-0.88548)
I(-2)	-0.033415 (0.15050) (-0.22203)	-0.184591 (0.29145) (-0.63336)	0.008065 (0.04606) (0.17510)	0.044939 (0.04560) (0.98543)	0.041384 (0.04003) (1.03380)
E(-1)	0.282837 (0.06966) (4.06000)	0.794604 (0.13491) (5.89007)	0.039656 (0.02132) (1.86010)	-0.004954 (0.02111) (-0.23469)	0.003611 (0.01853) (0.19490)
E(-2)	-0.269927 (0.07052) (-3.82780)	0.137407 (0.13656) (1.00621)	-0.047183 (0.02158) (-2.18635)	-0.013675 (0.02137) (-0.63997)	-0.017063 (0.01876) (-0.90971)
LR1(-1)	0.681707 (0.68316) (0.99788)	-1.018730 (1.32294) (-0.77005)	0.845750 (0.20907) (4.04534)	0.160757 (0.20700) (0.77659)	0.005835 (0.18171) (0.03211)
LR1(-2)	0.039957 (0.63093) (0.06333)	1.884494 (1.22181) (1.54238)	-0.490805 (0.19309) (-2.54191)	-0.172711 (0.19118) (-0.90340)	-0.147299 (0.16782) (-0.87774)
LR5(-1)	-0.512653 (0.85063) (-0.60267)	0.965739 (1.64727) (0.58627)	-0.057162 (0.26032) (-0.21958)	0.898350 (0.25775) (3.48534)	0.290620 (0.22625) (1.28449)
LR5(-2)	0.319714 (0.89463) (0.35737)	-1.417950 (1.73246) (-0.81846)	0.126231 (0.27378) (0.46106)	-0.023558 (0.27108) (-0.08690)	0.056079 (0.23795) (0.23567)
LR10(-1)	-0.099076 (0.89080) (-0.11122)	-0.388026 (1.72505) (-0.22494)	0.082296 (0.27261) (0.30188)	0.278896 (0.26992) (1.03324)	0.947923 (0.23694) (4.00074)
LR10(-2)	0.046713 (0.86485) (0.05401)	0.024091 (1.67479) (0.01438)	-0.008514 (0.26467) (-0.03217)	-0.344193 (0.26206) (-1.31342)	-0.399295 (0.23003) (-1.73581)
C	0.690367 (0.45775) (1.50818)	1.553702 (0.88644) (1.75275)	0.414397 (0.14009) (2.95817)	0.340129 (0.13870) (2.45221)	0.405490 (0.12175) (3.33043)
R-squared	0.853699	0.980917	0.833955	0.964512	0.969727
Adj. R-squared	0.818016	0.976263	0.793457	0.955856	0.962344
Sum sq. resids	1.076906	4.038498	0.100858	0.098877	0.076187

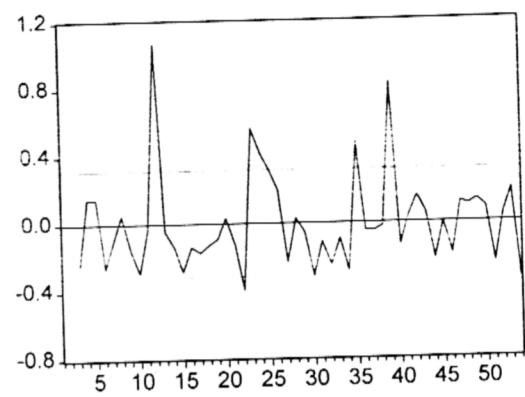
Vector Autoregression Estimates

S.E. equation	0.162068	0.313847	0.049598	0.049108	0.043107
Log likelihood	27.02133	-7.344979	88.59273	89.10865	95.88636
Akaike AIC	-3.454075	-2.132294	-5.822206	-5.842049	-6.102730
Schwartz SC	-3.041312	-1.719531	-5.409443	-5.429286	-5.689967
Mean dependent	2.785192	1.201154	1.140633	1.408594	1.588386
S.D. dependent	0.379910	2.037070	0.109134	0.233732	0.222141

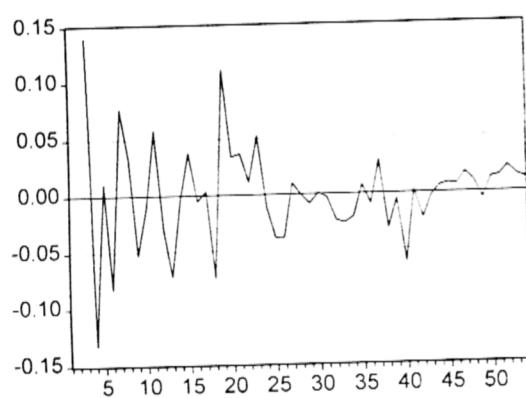
I Residuals



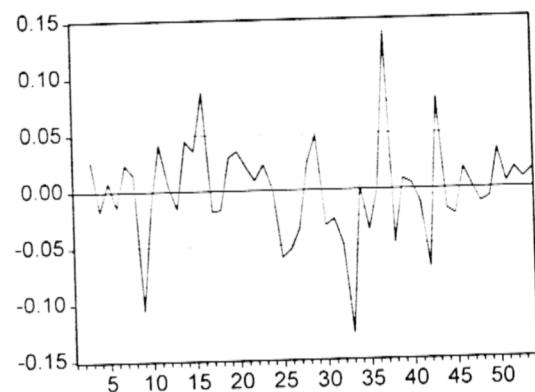
E Residuals



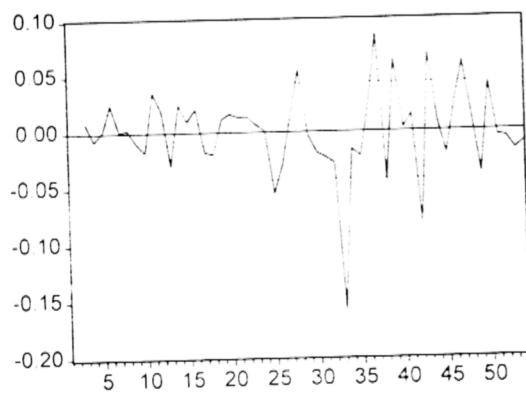
LR1 Residuals



LR5 Residuals



LR10 Residuals



Impulse Response to One S.D. Innovations

Response of I:					
Period	I	E	LR1	LR5	LR10
1	0.143909	0.000000	0.000000	0.000000	0.000000
2	0.089237	0.078836	0.005266	-0.021227	-0.002419
3	0.055901	0.041735	0.007856	-0.016319	-0.007374
4	0.037194	0.026146	0.011245	-0.020754	-0.003492
5	0.025196	0.016044	0.006954	-0.019732	-0.000566
6	0.011117	0.011142	-0.000645	-0.014992	0.002053
7	-4.52E-05	0.006470	-0.005330	-0.009157	0.003576
8	-0.004833	0.003288	-0.005385	-0.004891	0.003925
9	-0.004742	0.002175	-0.003157	-0.002448	0.003376
10	-0.003264	0.002398	-0.001177	-0.001105	0.002481
Response of E:					
Period	I	E	LR1	LR5	LR10
1	-0.056205	0.272955	0.000000	0.000000	0.000000
2	-0.106174	0.212350	-0.010792	0.025336	-0.009476
3	-0.107840	0.179617	0.006081	-0.001427	-0.010876
4	-0.081764	0.160170	0.011117	-0.030204	-0.016855
5	-0.074130	0.157165	-0.003217	-0.049687	-0.018586
6	-0.082232	0.151948	-0.022250	-0.058271	-0.016468
7	-0.089724	0.145149	-0.032960	-0.062339	-0.012607
8	-0.089456	0.140669	-0.034673	-0.065007	-0.009027
9	-0.085160	0.139593	-0.032783	-0.066328	-0.006239
10	-0.081909	0.139776	-0.031208	-0.065790	-0.004083
Response of LR1:					
Period	I	E	LR1	LR5	LR10
1	0.034382	0.003210	0.027334	0.000000	0.000000
2	0.030986	0.013853	0.022947	1.29E-05	0.002010
3	0.011795	0.008412	0.008547	0.005351	0.002560
4	-0.002315	-0.000638	0.000662	0.008316	0.002523
5	-0.004429	-0.006767	0.000244	0.007888	0.001493
6	-0.000632	-0.007961	0.002009	0.005819	0.000228
7	0.002623	-0.006843	0.002563	0.004054	-0.000619
8	0.003532	-0.005783	0.001913	0.003089	-0.000881
9	0.003288	-0.005422	0.001185	0.002585	-0.000779
10	0.003100	-0.005364	0.000912	0.002208	-0.000569
Response of LR5:					
Period	I	E	LR1	LR5	LR10
1	0.005086	0.000302	0.023342	0.036478	0.000000
2	0.002614	0.000559	0.029308	0.039881	0.006811
3	0.002448	-0.007128	0.025308	0.036976	0.004677
4	0.001232	-0.013049	0.017741	0.031250	0.000609
5	0.001421	-0.017719	0.011340	0.024837	-0.002711
6	0.003853	-0.019892	0.007664	0.018322	-0.004506
7	0.007269	-0.019842	0.005792	0.012639	-0.004982
8	0.009887	-0.018548	0.004549	0.008437	-0.004509
9	0.011021	-0.017051	0.003497	0.005832	-0.003505
10	0.011024	-0.015855	0.002718	0.004506	-0.002347

Impulse Response to One S.D. Innovations

Response of LR10:					
Period	I	E	LR1	LR5	LR10
1	0.001590	0.004028	0.014145	0.025494	0.024420
2	-0.003408	0.004910	0.020352	0.034768	0.023149
3	-0.005137	-0.004558	0.019305	0.037448	0.014257
4	-0.004513	-0.011879	0.015917	0.034035	0.006081
5	-0.001276	-0.016795	0.012462	0.027888	0.000123
6	0.002937	-0.018800	0.009607	0.020990	-0.003327
7	0.006659	-0.018903	0.007261	0.014838	-0.004740
8	0.009117	-0.018056	0.005349	0.010107	-0.004741
9	0.010320	-0.016943	0.003908	0.006905	-0.003949
10	0.010628	-0.015883	0.002956	0.005013	-0.002853

Ordering: I E LR1 LR5 LR10

Response to One S.D. Innovations \pm 2 S.E.

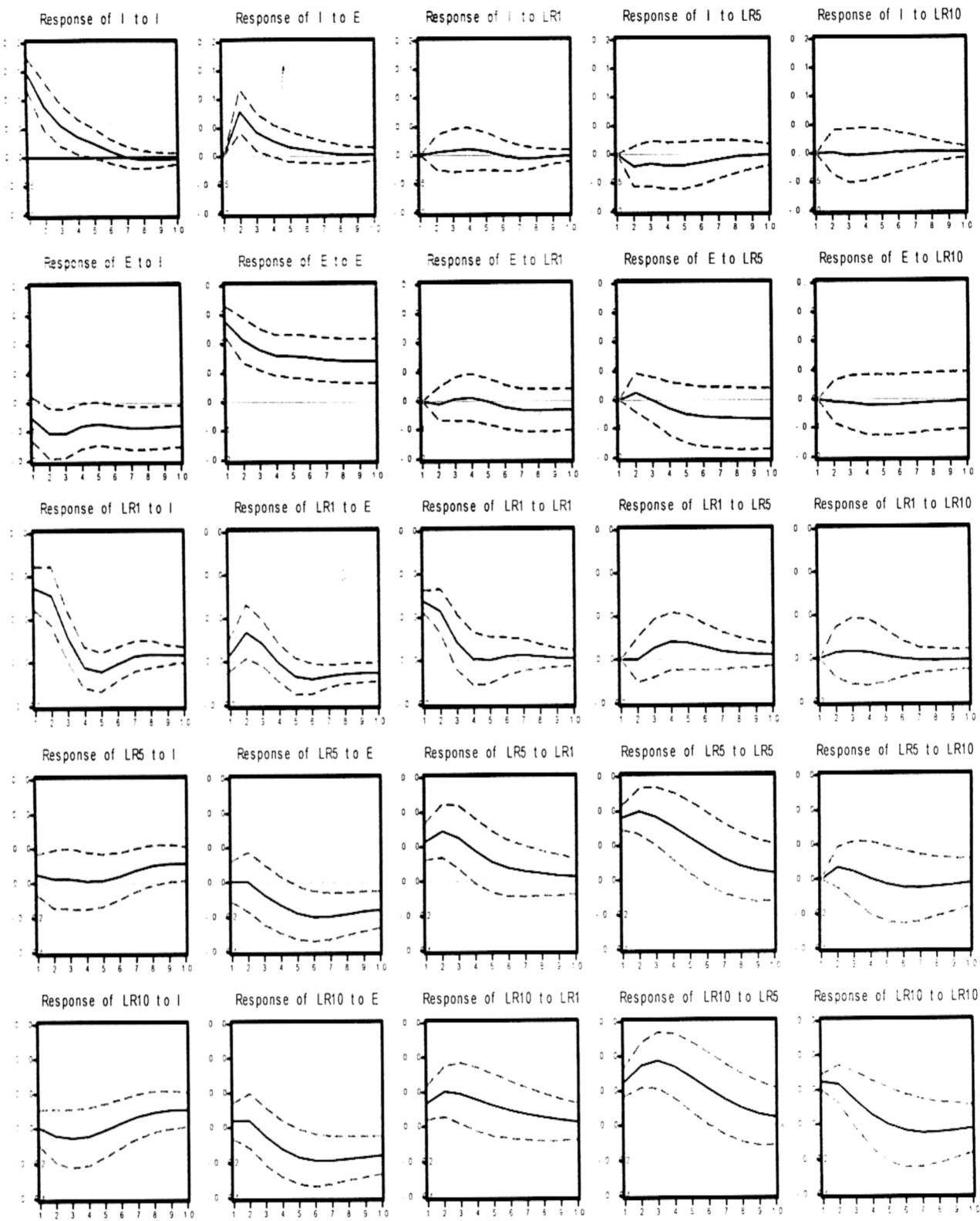
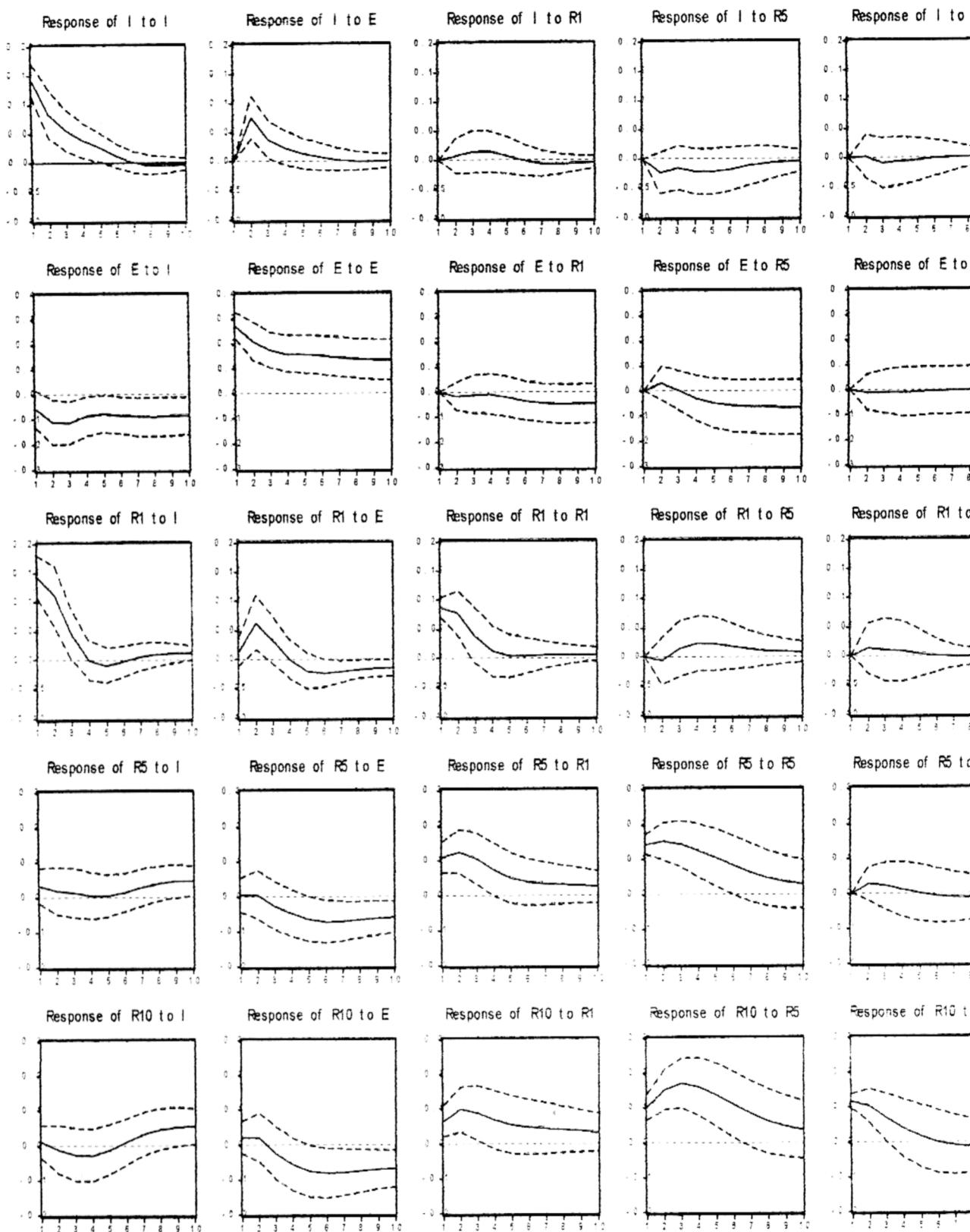


Figure 4c

Response to One S.D. Innovations \pm 2 S.E.



APPENDIX 2

DEFINITION OF VARIABLES

Definition of Variables

Following M. Kahn et al(2002), the variables were collected from the financial market to get three types of variables. The three types of variables are:

1. Non-Policy variables observed by the BNM when setting its monetary policy.

This paper is using coupon bond, which is prices of MGS*(Malaysia Government Securities) and CPI** to derive inflation expectation. M.Kahn et al used prices of indexed bonds and nominal bonds to calculate the annual expectation inflation. M.Kahn also pointed out that it is as the difference between the nominal and real interest rates. Indexed bond is expectation value and nominal bonds as actual value. Therefore, in Malaysia we should taken expectation and actual value of it by using price index and prices of MGS.

So, as stated above, we define the difference between the nominal rate of interest rate and the real rate of interest rate as inflation expectations. This definition implicitly assumes that there is no risk premium that is included in the nominal yield. We are using E as symbol for this variable

2. The BNM's Monetary Policy

in the basic model, we measure the BNM monetary policy control by the monthly average inter-bank overnight interest rates. this variable is the one of the important variables in Malaysia because it demonstrates the response policy especially in the financial market. The type of this variable is symbolized as I

3. Real forward interest rate of different maturities

We use the 1 year real yield to maturity (R_1) and the real forward rates calculated from the yield to maturity of coupon bonds maturity in five(R_5) and ten (R_{10}) years MGS.

Time series of data are taken on a monthly basis from 1999 to 2003 July, totaling 54 observations. Domac, in his research for Malaysia case, believed that interest rate is the good variable to show the shock of the monetary policy.

For real interest rates we are using log form. This is because we need to defined whether the long run relationship among the variables is exists. So if we changed it into log form then we can proceed to VAR with Johansen cointegration with lag interval 1 to 4. In linear form the Johansen Cointegration shown the cointegration among the variablea, meaning that we have to proceed to Vector Error Correction model not VAR model. But we ran the test for linear form as well, but the coefficients estimation and impulse response especially the pattern are the same with the result of log form. We also provide the impulse response result for linear form as evidence of the pattern for comparison.