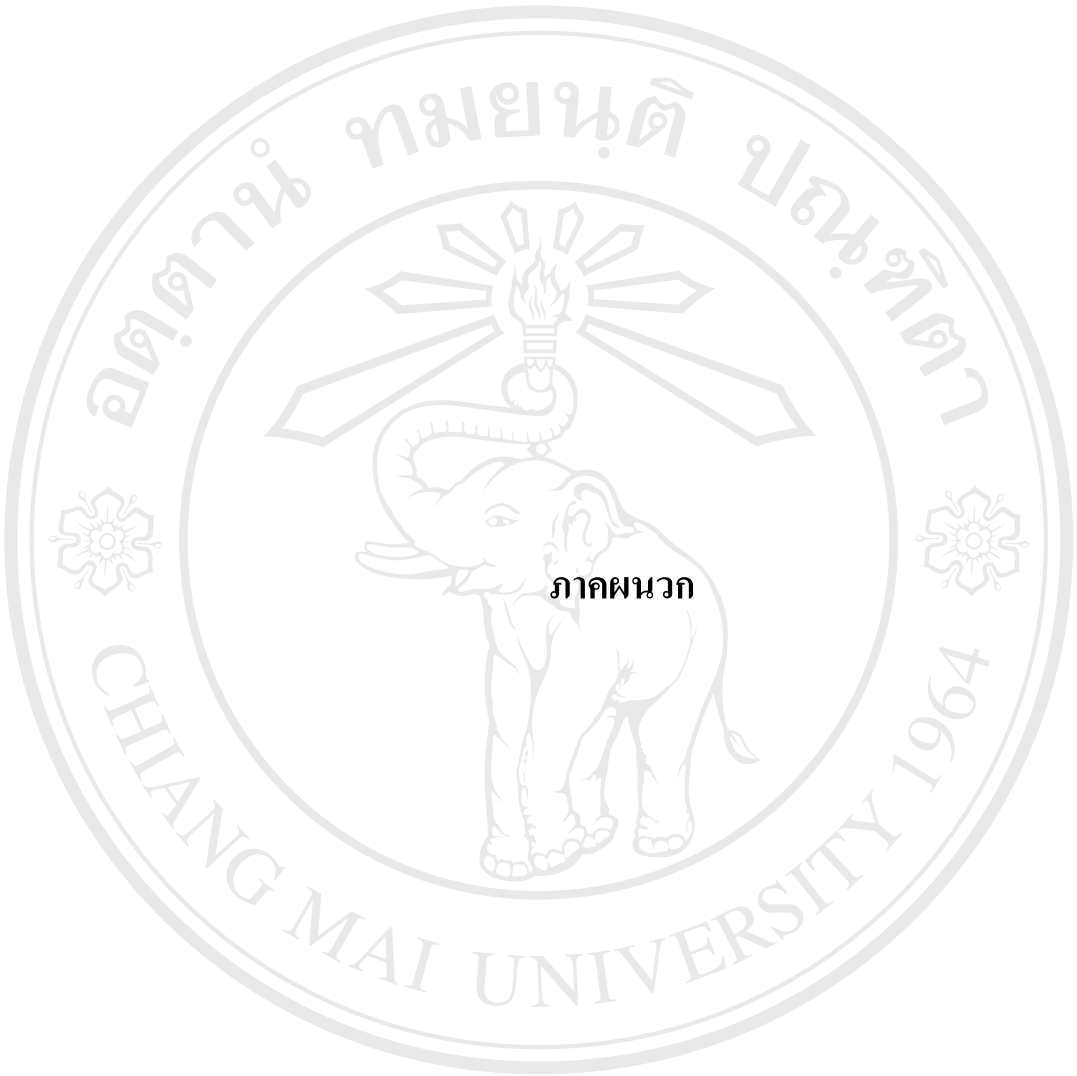

ภาคผนวก

ภาคผนวก ก

ผลการประมาณค่าและการทดสอบโดยวิธี Johansen

APURE

Cointegration LR Test Based on Maximal Eigenvalue of the Stochastic Matrix

Null	Alternative	Statistic	95% Critical Value	90% Critical Value
r = 0	r = 1	93.7979	52.0600	49.0400
r<= 1	r = 2	84.5952	46.4700	43.4400
r<= 2	r = 3	57.0278	40.5300	37.6500
r<= 3	r = 4	45.7142	34.4000	31.7300
r<= 4	r = 5	35.0924	28.2700	25.8000
r<= 5	r = 6	19.4159	22.0400	19.8600
r<= 6	r = 7	16.3620	15.8700	13.8100
r<= 7	r = 8	3.9754	9.1600	7.5300

Estimated Cointegrated Vectors in Johansen Estimation (Normalized in Brackets)
Cointegration with restricted intercepts and no trends in the VAR

	Vector 1	Vector 2	Vector 3	Vector 4	Vector 5
APURE	-.0020348	.011204	.015072	.0099336	-.0067723
	(-1.0000)	(-1.0000)	(-1.0000)	(-1.0000)	(-1.0000)
RM	.027128	.046075	.011960	-.0064830	-.019941
	(13.3323)	(-4.1124)	(-.79355)	(.65263)	(-2.9445)
SMB	-.013912	.035383	.048691	.060450	-.062858
	(-6.8373)	(-3.1582)	(-3.2306)	(-6.0854)	(-9.2817)
CPI	-.61840	.51135	1.6644	-.19490	-.056659
	(-303.9196)	(-45.6404)	(-110.4313)	(19.6203)	(-8.3663)
REPO	.0087599	.016355	-.062549	.011599	-.042957
	(4.3051)	(-1.4598)	(4.1501)	(-1.1676)	(-6.3430)
OILBREN	.014051	.013943	-.019064	.0039002	-.0045793
	(6.9053)	(-1.2445)	(1.2649)	(-.39263)	(-.67618)
THUSDSP	.0072153	-.038393	-.027686	-.076397	-.0088305
	(3.5460)	(3.4268)	(1.8370)	(7.6907	(-1.3039)
APUREPE	-.4825E-3	-.9152E-3	-.2773E-3	.1250E-3	-.5047E-4
	(-.23715)	(.081685)	(.018401)	(-.012586)	(-.0074520)
Intercept	-.62430	1.1101	1.4964	3.0762	.70467
	(-306.8181)	(-99.0794)	(-99.2869)	(-309.6796)	(104.0526)

ECM for variable APURE estimated by OLS based on cointegrating VAR(8)

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
ecm1(-1)	-.23628	.15904	-1.4857[.146]
ecm2(-1)	.19258	.87569	.21992[.827]
ecm3(-1)	-3.4293	1.1780	-2.9112[.006]
ecm4(-1)	.43230	.77641	.55679[.581]
ecm5(-1)	.39009	.52933	.73694[.466]

F&D

Cointegration LR Test Based on Maximal Eigenvalue of the Stochastic Matrix

Null	Alternative	Statistic	95% Critical Value	90% Critical Value
r = 0	r = 1	163.9735	52.0600	49.0400
r<= 1	r = 2	53.9640	46.4700	43.4400
r<= 2	r = 3	51.8568	40.5300	37.6500
r<= 3	r = 4	36.8863	34.4000	31.7300
r<= 4	r = 5	28.4046	28.2700	25.8000
r<= 5	r = 6	21.4620	22.0400	19.8600
r<= 6	r = 7	8.6747	15.8700	13.8100
r<= 7	r = 8	1.7862	9.1600	7.5300

Estimated Cointegrated Vectors in Johansen Estimation (Normalized in Brackets)
Cointegration with restricted intercepts and no trends in the VAR

	Vector 1	Vector 2	Vector 3	Vector 4	Vector 5
FND	-.011262	.0037040	-.011434	-.031620	-.8311E-3
	(-1.0000)	(-1.0000)	(-1.0000)	(-1.0000)	(-1.0000)
RM	-.013973	-.014600	-.0073193	-.023990	.5611E-3
	(-1.2407)	(3.9416)	(-.64014)	(-.75871)	(.67518)
SMB	.0011935	-.024740	-.011643	.0095773	-.0034940
	(.10598)	(6.6793)	(-1.0182)	(.30289)	(-4.2041)
CPI	.036205	-.37719	-1.5216	.54549	.69649
	(3.2148)	(101.8334)	(-133.0747)	(17.2515)	(838.0591)
REPO	-.036259	-.042453	.055129	.0079949	-.048713
	(-3.2195)	(11.4613)	(4.8215)	(.25284)	(-58.6149)
OILBREN	-.0037634	.0052751	.027752	-.019641	-.029925
	(-.33416)	(-1.4242)	(2.4271)	(-.62115)	(-36.0082)
THUSDSP	-.014673	.0075236	-.013385	.023897	-.034102
	(-1.3029)	(-2.0312)	(-1.1706)	(.75575)	(-41.0340)
FNDPE	.013800	-.0058718	-.0067866	.0016171	.0084421
	(1.2254)	(1.5853)	(-.59355)	(.051143)	(10.1580)
Intercept	.76666	-.27164	.061053	-.43250	2.2057
	(68.0731)	(73.3368)	(5.3396)	(-13.6780)	(2654.1)

ECM for variable FND estimated by OLS based on cointegrating VAR(8)

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
ecm1(-1)	-.12141	.13090	-.92747[.360]
ecm2(-1)	-.057505	.043052	-1.3357[.190]
ecm3(-1)	-.036965	.13290	-.27813[.782]
ecm4(-1)	-.91521	.36752	-2.4902[.017]
ecm5(-1)	-.014460	.0096596	-1.4969[.143]

HATT

Cointegration LR Test Based on Maximal Eigenvalue of the Stochastic Matrix

Null	Alternative	Statistic	95% Critical Value	90% Critical Value
r = 0	r = 1	103.6812	52.0600	49.0400
r<= 1	r = 2	71.7331	46.4700	43.4400
r<= 2	r = 3	49.3682	40.5300	37.6500
r<= 3	r = 4	33.1228	34.4000	31.7300
r<= 4	r = 5	23.7351	28.2700	25.8000
r<= 5	r = 6	21.5851	22.0400	19.8600
r<= 6	r = 7	11.3302	15.8700	13.8100
r<= 7	r = 8	3.0070	9.1600	7.5300

Estimated Cointegrated Vectors in Johansen Estimation (Normalized in Brackets)

Cointegration with restricted intercepts and no trends in the VAR

	Vector 1	Vector 2	Vector 3
HATT	-.015593	.0099785	-.030618
	(-1.0000)	(-1.0000)	(-1.0000)
RM	-.0021807	.010272	.0020725
	(-.13986)	(-1.0294)	(.067689)
SMB	.2848E-3	-.013169	-.025628
	(.018266)	(1.3198)	(-.83702)
CPI	.49561	-1.3057	-.43971
	(31.7850)	(130.8466)	(-14.3609)
REPO	-.034547	.012125	.0071575
	(-2.2156)	(-1.2151)	(.23377)
OILBREN	-.0039772	.011924	.5047E-3
	(-.25507)	(-1.1950)	(.016485)
THUSDSP	.015061	.057819	.0087698
	(.96593)	(-5.7943)	(.28642)
HATTPE	.0069085	.098603	-.0073607
	(.44306)	(-9.8815)	(-.24040)
Intercept	-.59050	-3.6608	-.16504
	(-37.8706)	(366.8714)	(-5.3904)

ECM for variable HATT estimated by OLS based on cointegrating VAR(8)

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
ecm1(-1)	-.034692	.17064	-.20330[.840]
ecm2(-1)	-.054759	.10920	-.50145[.619]
ecm3(-1)	-.64495	.33508	-1.9248[.061]

LST

Cointegration LR Test Based on Maximal Eigenvalue of the Stochastic Matrix

Null	Alternative	Statistic	95% Critical Value	90% Critical Value
r = 0	r = 1	126.7893	52.0600	49.0400
r<= 1	r = 2	72.7589	46.4700	43.4400
r<= 2	r = 3	47.9171	40.5300	37.6500
r<= 3	r = 4	38.8822	34.4000	31.7300
r<= 4	r = 5	28.8775	28.2700	25.8000
r<= 5	r = 6	22.1140	22.0400	19.8600
r<= 6	r = 7	6.6148	15.8700	13.8100
r<= 7	r = 8	4.8304	9.1600	7.5300

Estimated Cointegrated Vectors in Johansen Estimation (Normalized in Brackets)

Cointegration with restricted intercepts and no trends in the VAR

	Vector 1	Vector 2	Vector 3	Vector 4	Vector 5	Vector 6
LST	.022232	-.023058	-.0072781	-.0097035	.0036865	.013142
	(-1.0000)	(-1.0000)	(-1.0000)	(-1.0000)	(-1.0000)	(-1.0000)
RM	-.012501	.024687	-.021373	-.029871	.017448	-.042763
	(.56230)	(1.0706)	(-2.9366)	(-3.0783)	(-4.7328)	(3.2540)
SMB	.022003	-.013625	.013443	-.030674	-.022158	.1321E-4
	(-.98970)	(-.59090)	(1.8470)	(-3.1611)	(6.0106)	(-.0010053)
CPI	.069736	-.45933	1.1522	.36918	-.18482	-.98696
	(-3.1367)	(-19.9204)	(158.3046)	(38.0465)	(50.1330)	(75.1012)
REPO	.043270	.011338	-.036411	-.038238	.0062026	.028745
	(-1.9463)	(.49170)	(-5.0028)	(-3.9406)	(-1.6825)	(-2.1873)
OILBREN	.0085363	.0033864	-.027951	-.010724	-.0098611	.0077587
	(-.38396)	(.14686)	(-3.8404)	(-1.1052)	(2.6749)	(-.59039)
THUSDSP	.010771	-.033034	-.039066	.4146E-3	.046686	-.014369
	(-.48446)	(-1.4327)	(-5.3676)	(.042723)	(-12.6638)	(1.0934)
LSTPE	-.024343	-.0019299	-.015721	.045557	.8928E-3	-.0053209
	(1.0949)	(-.083698)	(-2.1600)	(4.6949)	(-.24218)	(.40489)
Intercept	-.59992	1.4296	2.4598	.027977	-1.7341	.54122
	(26.9842)	(61.9988)	(337.9684)	(2.8832)	(470.3794)	(-41.1835)

ECM for variable LST estimated by OLS based on cointegrating VAR(8)

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
ecm1(-1)	-.78901	.28467	-2.7717[.009]
ecm2(-1)	-.17294	.29530	-.58563[.562]
ecm3(-1)	.071120	.093193	.76315[.450]
ecm4(-1)	.059042	.12425	.47518[.637]
ecm5(-1)	.018627	.047205	.39459[.695]
ecm6(-1)	-.099167	.16828	-.58931[.559]

MALEE

Cointegration LR Test Based on Maximal Eigenvalue of the Stochastic Matrix

Null	Alternative	Statistic	95% Critical Value	90% Critical Value
r = 0	r = 1	124.6797	52.0600	49.0400
r<= 1	r = 2	88.1478	46.4700	43.4400
r<= 2	r = 3	65.6483	40.5300	37.6500
r<= 3	r = 4	51.8981	34.4000	31.7300
r<= 4	r = 5	25.7991	28.2700	25.8000
r<= 5	r = 6	22.3487	22.0400	19.8600
r<= 6	r = 7	16.4231	15.8700	13.8100
r<= 7	r = 8	2.2063	9.1600	7.5300

Estimated Cointegrated Vectors in Johansen Estimation (Normalized in Brackets)

Cointegration with restricted intercepts and no trends in the VAR

	Vector 1	Vector 2	Vector 3	Vector 4
MALEE	.019894	.024663	.0064931	.012681
	(-1.0000)	(-1.0000)	(-1.0000)	(-1.0000)
RM	.021219	-.043708	.031074	-.027366
	(-1.0666)	(1.7722)	(-4.7858)	(2.1580)
SMB	.011110	.032415	-.0052365	.0017149
	(-.55843)	(-1.3143)	(.80647)	(-.13523)
CPI	-1.2612	.48605	-.27461	-1.2637
	(63.3946)	(-19.7078)	(42.2930)	(99.6546)
REPO	.067535	-.0099165	-.0040220	.0081598
	(-3.3947)	(.40208)	(.61942)	(-.64346)
OILBREN	.026293	.0036624	.0032015	.019928
	(-1.3216)	(-.14850)	(-.49306)	(-1.5715)
THUSDSP	.019554	.028585	.046041	-.030757
	(-.98287)	(-1.1590)	(-7.0908)	(2.4254)
MALEEPE	-.012135	.013504	-.3985E-5	-.025578
	(.60999)	(-.54755)	(.6137E-3)	(2.0170)
Intercept	-1.4996	-1.4056	-2.0784	1.0892
	(75.3770)	(56.9939)	(320.0929)	(-85.8878)

ECM for variable MALEE estimated by OLS based on cointegrating VAR(8)

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
ecm1(-1)	-.46921	.34001	-1.3800[.175]
ecm2(-1)	-1.0035	.42150	-2.3808[.022]
ecm3(-1)	.16079	.11097	1.4490[.155]
ecm4(-1)	.31721	.21673	1.4636[.151]

MINT

Cointegration LR Test Based on Maximal Eigenvalue of the Stochastic Matrix

Null	Alternative	Statistic	95% Critical Value	90% Critical Value
r = 0	r = 1	126.3597	52.0600	49.0400
r<= 1	r = 2	75.4173	46.4700	43.4400
r<= 2	r = 3	47.7683	40.5300	37.6500
r<= 3	r = 4	40.6564	34.4000	31.7300
r<= 4	r = 5	38.5564	28.2700	25.8000
r<= 5	r = 6	26.1226	22.0400	19.8600
r<= 6	r = 7	12.3725	15.8700	13.8100
r<= 7	r = 8	9.3896	9.1600	7.5300

Estimated Cointegrated Vectors in Johansen Estimation (Normalized in Brackets)

Cointegration with restricted intercepts and no trends in the VAR

	Vector 1	Vector 2	Vector 3	Vector 4	Vector 5	Vector 6
MINT	-.056231	-.047896	-.023790	.045214	.064614	.017601
	(-1.0000)	(-1.0000)	(-1.0000)	(-1.0000)	(-1.0000)	(-1.0000)
RM	.046345	.019325	.0053158	-.013321	-.049248	.013133
	(.82420)	(.40349)	(.22345)	(.29463)	(.76219)	(-.74614)
SMB	.0075512	.0087770	.019021	.038614	-.0080150	.022457
	(.13429)	(.18325)	(.79954)	(-.85404)	(.12404)	(-1.2759)
CPI	1.0742	.087517	.19888	-.68937	1.3705	-.15440
	(19.1027)	(1.8272)	(8.3600)	(15.2469)	(-21.2103)	(8.7722)
REPO	.027138	.0018130	.0093255	.079648	-.080851	.015284
	(.48261)	(.037853)	(.39199)	(-1.7616)	(1.2513)	(-.86839)
OILBREN	-.0050047	-.0057593	-.3960E-3	.014603	-.015342	.015221
	(-.089002)	(-.12025)	(-.016647)	(-.32298)	(.23744)	(-.86482)
THUSDSP	.029545	-.0022954	-.058524	.024800	.021988	-.0012192
	(.52543)	(-.047925)	(-2.4600)	(-.54850)	(-.34029)	(.069268)
MINTPE	-.12715	.0025187	-.0098988	-.012152	.019620	-.071452
	(-2.2612)	(.052587)	(-.41609)	(.26878)	(-.30365)	(4.0596)
Intercept	-.58041	.15976	2.4768	-1.5791	-.61214	.011381
	(-10.3219)	(3.3355)	(104.1132)	(34.9245)	(9.4738)	(-.64661)

ECM for variable MINT estimated by OLS based on cointegrating VAR(8)

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
ecm1(-1)	-1.2126	.59174	-2.0491[.048]
ecm2(-1)	.096866	.50402	.19219[.849]
ecm3(-1)	.30388	.25035	1.2138[.233]
ecm4(-1)	-.54464	.47580	-1.1447[.260]
ecm5(-1)	-.31851	.67996	-.46843[.642]
ecm6(-1)	.20988	.18522	1.1331[.264]

PR

Cointegration LR Test Based on Maximal Eigenvalue of the Stochastic Matrix

Null	Alternative	Statistic	95% Critical Value	90% Critical Value
r = 0	r = 1	109.4233	52.0600	49.0400
r<= 1	r = 2	64.5726	46.4700	43.4400
r<= 2	r = 3	54.8110	40.5300	37.6500
r<= 3	r = 4	45.0910	34.4000	31.7300
r<= 4	r = 5	21.1760	28.2700	25.8000
r<= 5	r = 6	19.2988	22.0400	19.8600
r<= 6	r = 7	9.1584	15.8700	13.8100
r<= 7	r = 8	4.9484	9.1600	7.5300

Estimated Cointegrated Vectors in Johansen Estimation (Normalized in Brackets)

Cointegration with restricted intercepts and no trends in the VAR

	Vector 1	Vector 2	Vector 3	Vector 4
PR	.091510	.0039290	.011793	.0014668
	(-1.0000)	(-1.0000)	(-1.0000)	(-1.0000)
RM	.0034620	.017567	.0052856	-.023632
	(-.037832)	(-4.4711)	(-.44821)	(16.1112)
SMB	.019987	.031388	.018579	.0073682
	(-.21841)	(-7.9888)	(-1.5755)	(-5.0234)
CPI	.71708	-.69986	-1.5585	.50068
	(-7.8361)	(178.1294)	(132.1609)	(-341.3431)
REPO	-.031875	.028284	.091197	-.013824
	(.34832)	(-7.1989)	(-7.7334)	(9.4245)
OILBREN	-.3062E-3	.022936	.0062877	-.0064032
	(.0033461)	(-5.8376)	(-.53320)	(4.3654)
THUSDSP	-.1621E-3	-.033139	-.016399	-.044197
	(.0017711)	(8.4345)	(1.3906)	(30.1318)
PRPE	-.012687	-.038431	.099106	.012674
	(.13864)	(9.7815)	(-8.4041)	(-8.6409)
Intercept	-.16500	.96490	-.0093297	1.9834
	(1.8031)	(-245.5869)	(.79115)	(-1352.2)

ECM for variable PR estimated by OLS based on cointegrating VAR(8)

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
ecm1(-1)	-2.3191	.46712	-4.9646[.000]
ecm2(-1)	-.0098273	.020056	-.49000[.627]
ecm3(-1)	-.19160	.060193	-3.1830[.003]
ecm4(-1)	-.0036593	.0074867	-.48877[.628]

S&P

Cointegration LR Test Based on Maximal Eigenvalue of the Stochastic Matrix

Null	Alternative	Statistic	95% Critical Value	90% Critical Value
r = 0	r = 1	129.3420	52.0600	49.0400
r<= 1	r = 2	73.9832	46.4700	43.4400
r<= 2	r = 3	44.5588	40.5300	37.6500
r<= 3	r = 4	34.2355	34.4000	31.7300
r<= 4	r = 5	31.6738	28.2700	25.8000
r<= 5	r = 6	18.2452	22.0400	19.8600
r<= 6	r = 7	10.5338	15.8700	13.8100
r<= 7	r = 8	4.4769	9.1600	7.5300

Estimated Cointegrated Vectors in Johansen Estimation (Normalized in Brackets)

Cointegration with restricted intercepts and no trends in the VAR

	Vector 1	Vector 2	Vector 3
SNP	.060157	-.011381	-.0027186
	(-1.0000)	(-1.0000)	(-1.0000)
RM	.033238	.030721	.020578
	(-.55252)	(2.6994)	(7.5693)
SMB	.037092	-.0094299	.012629
	(-.61658)	(-.82858)	(4.6455)
CPI	.14507	.62836	.55857
	(-2.4115)	(55.2126)	(205.4595)
REPO	.080825	-.045741	-.0097777
	(-1.3436)	(-4.0191)	(-3.5966)
OILBREN	.012864	-.0071946	.0054150
	(-.21384)	(-.63217)	(1.9918)
THUSDSP	.051068	.018178	-.068139
	(-.84891)	(1.5972)	(-25.0639)
SNPPE	.013919	-.033792	-.084353
	(-.23137)	(-2.9692)	(-31.0278)
Intercept	-3.0218	-.40904	3.1698
	(50.2323)	(-35.9411)	(1166.0)

ECM for variable SNP estimated by OLS based on cointegrating VAR(8)

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
ecm1(-1)	-.14247	.70969	-.20074[.842]
ecm2(-1)	-.28008	.13426	-2.0860[.043]
ecm3(-1)	.012049	.032073	.37569[.709]

SFP

Cointegration LR Test Based on Maximal Eigenvalue of the Stochastic Matrix

Null	Alternative	Statistic	95% Critical Value	90% Critical Value
r = 0	r = 1	109.5769	52.0600	49.0400
r<= 1	r = 2	80.1820	46.4700	43.4400
r<= 2	r = 3	48.7511	40.5300	37.6500
r<= 3	r = 4	40.0942	34.4000	31.7300
r<= 4	r = 5	38.2970	28.2700	25.8000
r<= 5	r = 6	24.6349	22.0400	19.8600
r<= 6	r = 7	13.2520	15.8700	13.8100
r<= 7	r = 8	6.9614	9.1600	7.5300

Estimated Cointegrated Vectors in Johansen Estimation (Normalized in Brackets)

Cointegration with restricted intercepts and no trends in the VAR

	Vector 1	Vector 2	Vector 3	Vector 4	Vector 5	Vector 6
SFP	.0033526	.019688	.017901	.037012	-.026118	-.012117
	(-1.0000)	(-1.0000)	(-1.0000)	(-1.0000)	(-1.0000)	(-1.0000)
RM	.3265E-3	-.0039094	-.037465	-.0020665	-.030150	-.013404
	(-.097401)	(.19857)	(2.0928)	(.055833)	(-1.1544)	(-1.1062)
SMB	-.023168	-.028237	.0012748	.024655	-.049167	.0089409
	(6.9106)	(1.4342)	(-.071212)	(-.66613)	(-1.8825)	(.73786)
CPI	-.84150	-.27736	1.3578	-.46744	-1.4209	.48802
	(251.0038)	(14.0878)	(-75.8500)	(12.6292)	(-54.4025)	(40.2747)
REPO	-.0020659	.031560	-.073624	.031492	034655	-.030367
	(.61621)	(-1.6030)	(4.1127)	(-.85086)	(1.3269)	(-2.5061)
OILBREN	.014315	.036934	-.027679	.024075	.012435	-.0090235
	(-4.2698)	(-1.8760)	(1.5462)	(-.65046)	(.47610)	(-.74468)
THUSDSP	.0034542	.042067	-.011408	-.048813	.0012496	-.031638
	(-1.0303)	(-2.1367)	(.63728)	(1.3188)	(.047847)	(-2.6109)
SFPPE	.011379	-.059953	.051681	-.017940	.068584	-.061269
	(-3.3941)	(3.0452)	(-2.8870)	(.48469)	(2.6260)	(-5.0563)
Intercept	-.46172	-2.4293	.92078	1.4664	-.46088	1.9183
	(137.7218)	(123.3917)	(-51.4357)	(-39.6183)	(-17.6463)	(158.3081)

ECM for variable SFP estimated by OLS based on cointegrating VAR(8)

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
ecm1(-1)	.080296	.038798	2.0696[.046]
ecm2(-1)	-.49397	.22785	-2.1680[.037]
ecm3(-1)	.21168	.20717	1.0217[.314]
ecm4(-1)	-1.2096	.42832	-2.8240[.008]
ecm5(-1)	-.32134	.30225	-1.0632[.295]
ecm6(-1)	.030272	.14024	.21586[.830]

SORKON

Cointegration LR Test Based on Maximal Eigenvalue of the Stochastic Matrix

Null	Alternative	Statistic	95% Critical Value	90% Critical Value
r = 0	r = 1	86.2433	52.0600	49.0400
r<= 1	r = 2	68.6242	46.4700	43.4400
r<= 2	r = 3	60.6089	40.5300	37.6500
r<= 3	r = 4	40.6410	34.4000	31.7300
r<= 4	r = 5	25.2774	28.2700	25.8000
r<= 5	r = 6	21.7256	22.0400	19.8600
r<= 6	r = 7	13.1613	15.8700	13.8100
r<= 7	r = 8	4.6616	9.1600	7.5300

Estimated Cointegrated Vectors in Johansen Estimation (Normalized in Brackets)

Cointegration with restricted intercepts and no trends in the VAR

	Vector 1	Vector 2	Vector 3	Vector 4
SORKON	-.042943	-.020516	.035369	.014037
	(-1.0000)	(-1.0000)	(-1.0000)	(-1.0000)
RM	-.0069807	-.019779	.0030881	-.023092
	(-.16256)	(-.96407)	(-.087312)	(1.6451)
SMB	.0011814	-.044572	.020369	-.0098048
	(.027512)	(-2.1725)	(-.57589)	(.69852)
CPI	-.29614	-.86268	.10153	-.28383
	(-6.8961)	(-42.0481)	(-2.8707)	(20.2208)
REPO	.026443	.0040714	.035044	-.027503
	(.61578)	(.19845)	(-.99082)	(1.9594)
OILBREN	.0093498	.0055399	.0029377	.0024032
	(.21773)	(.27002)	(-.083059)	(-.17121)
THUSDSP	.0049513	.035861	-.028604	-.066302
	(.11530)	(1.7479)	(.80874)	(4.7235)
SORKPE	.0033331	.025715	-.013531	.0097444
	(.077618)	(1.2534)	(.38256)	(-.69422)
Intercept	-.34813	-1.7445	1.0849	2.7483
	(-8.1068)	(-85.0271)	(-30.6734)	(-195.7945)

ECM for variable SORKON estimated by OLS based on cointegrating VAR(8)

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
ecm1(-1)	-.59390	.81254	-.73092[.469]
ecm2(-1)	.36373	.38821	.93693[.355]
ecm3(-1)	-1.8602	.66924	-2.7795[.008]
ecm4(-1)	-.33010	.26560	-1.2429[.221]

SSC

Cointegration LR Test Based on Maximal Eigenvalue of the Stochastic Matrix

Null	Alternative	Statistic	95% Critical Value	90% Critical Value
r = 0	r = 1	96.9125	52.0600	49.0400
r<= 1	r = 2	94.1677	46.4700	43.4400
r<= 2	r = 3	60.0082	40.5300	37.6500
r<= 3	r = 4	37.5971	34.4000	31.7300
r<= 4	r = 5	23.4981	28.2700	25.8000
r<= 5	r = 6	21.1222	22.0400	19.8600
r<= 6	r = 7	13.5605	15.8700	13.8100
r<= 7	r = 8	2.5643	9.1600	7.5300

Estimated Cointegrated Vectors in Johansen Estimation (Normalized in Brackets)

Cointegration with restricted intercepts and no trends in the VAR

	Vector 1	Vector 2	Vector 3	Vector 4
SSC	-.0071570	-.0036276	.040374	.033681
	(-1.0000)	(-1.0000)	(-1.0000)	(-1.0000)
RM	-.018229	.014363	-.034120	.018399
	(-2.5470)	(3.9594)	(.84510)	(-.54627)
SMB	.012154	-.0018969	.013638	.010789
	(1.6981)	(-.52291)	(-.33779)	(-.32033)
CPI	.27983	-.61855	1.2316	-.60892
	(39.0984)	(-170.5098)	(-30.5042)	(18.0789)
REPO	.021315	.060124	-.046528	.015031
	(2.9782)	(16.5738)	(1.1524)	(-.44628)
OILBREN	.0011370	.0046528	-.010030	.0026556
	(.15887)	(1.2826)	(.24842)	(-.078846)
THUSDSP	-.3896E-3	-.0022016	-.037388	-.060817
	(-.054431)	(-.60689)	(.92604)	(1.8057)
SSCPE	.0036781	-.012798	.9899E-3	-.0018653
	(.51392)	(-3.5279)	(-.024517)	(.055381)
Intercept	-.070093	.035869	1.6899	2.4416
	(-9.7936)	(9.8878)	(-41.8567)	(-72.4907)

ECM for variable SSC estimated by OLS based on cointegrating VAR(8)

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
ecm1(-1)	.19321	.070630	2.7356[.009]
ecm2(-1)	.020870	.035800	.58297[.563]
ecm3(-1)	-.48660	.39845	-1.2213[.229]
ecm4(-1)	-.83683	.33240	-2.5175[.016]

TC

Cointegration LR Test Based on Maximal Eigenvalue of the Stochastic Matrix

Null	Alternative	Statistic	95% Critical Value	90% Critical Value
r = 0	r = 1	128.3783	52.0600	49.0400
r<= 1	r = 2	59.3698	46.4700	43.4400
r<= 2	r = 3	39.8367	40.5300	37.6500
r<= 3	r = 4	30.0583	34.4000	31.7300
r<= 4	r = 5	24.7091	28.2700	25.8000
r<= 5	r = 6	16.9755	22.0400	19.8600
r<= 6	r = 7	12.2457	15.8700	13.8100
r<= 7	r = 8	4.8440	9.1600	7.5300

Estimated Cointegrated Vectors in Johansen Estimation (Normalized in Brackets)

Cointegration with restricted intercepts and no trends in the VAR

	Vector 1	Vector 2
TC	.039776	.020545
	(-1.0000)	(-1.0000)
RM	-.020358	-.033053
	(.51182)	(1.6088)
SMB	.017333	-.0025185
	(-.43576)	(.12258)
CPI	-.14555	1.0699
	(3.6592)	(-52.0736)
REPO	.0052612	-.065396
	(-.13227)	(3.1830)
OILBREN	.011691	-.014766
	(-.29391)	(.71868)
THUSDSP	-.013766	.014054
	(.34609)	(-.68404)
TCPE	-.015014	-.010470
	(.37745)	(.50960)
Intercept	.38721	-.11716
	(-9.7346)	(5.7026)

ECM for variable TC estimated by OLS based on cointegrating VAR(8)

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
ecm1(-1)	-2.7596	.43723	-6.3115[.000]
ecm2(-1)	-.51457	.22584	-2.2785[.028]

TFC

Cointegration LR Test Based on Maximal Eigenvalue of the Stochastic Matrix

Null	Alternative	Statistic	95% Critical Value	90% Critical Value
r = 0	r = 1	86.8067	52.0600	49.0400
r<= 1	r = 2	76.5383	46.4700	43.4400
r<= 2	r = 3	55.3990	40.5300	37.6500
r<= 3	r = 4	38.0647	34.4000	31.7300
r<= 4	r = 5	27.6520	28.2700	25.8000
r<= 5	r = 6	18.4244	22.0400	19.8600
r<= 6	r = 7	9.4656	15.8700	13.8100
r<= 7	r = 8	5.5468	9.1600	7.5300

Estimated Cointegrated Vectors in Johansen Estimation (Normalized in Brackets)

Cointegration with restricted intercepts and no trends in the VAR

	Vector 1	Vector 2	Vector 3	Vector 4
TFC	.051337	.0017630	-.020898	-.018697
	(-1.0000)	(-1.0000)	(-1.0000)	(-1.0000)
RM	.0014499	-.047337	.024630	.028838
	(-.028244)	(26.8506)	(1.1786)	(1.5424)
SMB	.031918	-.017126	-.015179	.0045314
	(-.62174)	(9.7141)	(-.72634)	(.24236)
CPI	.59680	.54805	.50566	-1.5813
	(-11.6251)	(-310.8668)	(24.1969)	(-84.5782)
REPO	.037863	-.038910	-.013566	.085532
	(-.73755)	(22.0704)	(-.64919)	(4.5747)
OILBREN	.010852	-.017486	-.0062738	.026166
	(-.21140)	(9.9182)	(-.30022)	(1.3995)
THUSDSP	.023179	-.016959	-.0042027	-.0070716
	(-.45152)	(9.6196)	(-.20111)	(-.37823)
TFCPE	-.0055449	.051399	-.085213	-.040856
	(.10801)	(-29.1548)	(-4.0776)	(-2.1852)
Intercept	-1.4849	.97964	.84400	-.095898
	(28.9254)	(-555.6706)	(40.3872)	(-5.1292)

ECM for variable TFC estimated by OLS based on cointegrating VAR(8)

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
ecm1(-1)	-.97000	.30633	-3.1665[.003]
ecm2(-1)	.014738	.010520	1.4009[.169]
ecm3(-1)	-.23927	.12470	-1.9187[.062]
ecm4(-1)	-.080826	.11157	-.72443[.473]

TIPCO

Cointegration LR Test Based on Maximal Eigenvalue of the Stochastic Matrix

Null	Alternative	Statistic	95% Critical Value	90% Critical Value
r = 0	r = 1	114.2767	52.0600	49.0400
r<= 1	r = 2	84.0320	46.4700	43.4400
r<= 2	r = 3	65.0707	40.5300	37.6500
r<= 3	r = 4	40.4283	34.4000	31.7300
r<= 4	r = 5	31.2829	28.2700	25.8000
r<= 5	r = 6	20.3065	22.0400	19.8600
r<= 6	r = 7	10.3609	15.8700	13.8100
r<= 7	r = 8	5.7175	9.1600	7.5300

Estimated Cointegrated Vectors in Johansen Estimation (Normalized in Brackets)

Cointegration with restricted intercepts and no trends in the VAR

	Vector 1	Vector 2	Vector 3	Vector 4	Vector 5
TIPCO	-.012936	-.018714	-.041802	-.0069097	..7455E-3
	(-1.0000)	(-1.0000)	(-1.0000)	(-1.0000)	(-1.0000)
RM	.028630	.035201	.047985	-.0042878	-.012445
	(2.2132)	(1.8810)	(1.1479)	(-.62055)	(16.6938)
SMB	.0096579	-.016802	.027962	.021138	.016506
	(.74659)	(-.89784)	(.66891)	(3.0591)	(-22.1410)
CPI	-.19790	-.32535	.013398	.88970	-1.4476
	(-15.2981)	(-17.3852)	(.32050)	(128.7611)	(1941.7)
REPO	.036518	-.024339	.030581	-.034886	.054132
	(2.8230)	(-1.3005)	(.73156)	(-5.0489)	(-72.6115)
OILBREN	.0055564	-.0045835	-.0024115	-.0034312	.019863
	(.42953)	(-.24492)	(-.057689)	(-.49658)	(-26.6438)
THUSDSP	-.0069313	.0087099	.065988	-.046153	-.019230
	(-.53582)	(.46541)	(1.5786)	(-6.6795)	(25.7945)
TIPCOPE	-.019367	-.0099633	-.018648	-.020823	.034120
	(-1.4972)	(-.53239)	(-.44610)	(-3.0136)	(-45.7682)
Intercept	.20022	-.029771	-2.7392	2.1043	.18353
	(15.4781)	(-1.5908)	(-65.5293)	(304.5484)	(-246.1803)

ECM for variable TIPCO estimated by OLS based on cointegrating VAR(8)

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
ecm1(-1)	-.43515	.15648	-2.7809[.008]
ecm2(-1)	-1.0910	.22637	-4.8196[.000]
ecm3(-1)	-1.4519	.50568	-2.8711[.007]
ecm4(-1)	-.032075	.083582	-.38376[.703]
ecm5(-1)	-.0057947	.0090179	-.64258[.524]

TUF

Cointegration LR Test Based on Maximal Eigenvalue of the Stochastic Matrix

Null	Alternative	Statistic	95% Critical Value	90% Critical Value
r = 0	r = 1	91.8719	52.0600	49.0400
r<= 1	r = 2	72.6018	46.4700	43.4400
r<= 2	r = 3	55.6001	40.5300	37.6500
r<= 3	r = 4	40.5169	34.4000	31.7300
r<= 4	r = 5	23.6056	28.2700	25.8000
r<= 5	r = 6	15.4571	22.0400	19.8600
r<= 6	r = 7	10.1346	15.8700	13.8100
r<= 7	r = 8	4.4125	9.1600	7.5300

Estimated Cointegrated Vectors in Johansen Estimation (Normalized in Brackets)

Cointegration with restricted intercepts and no trends in the VAR

	Vector 1	Vector 2	Vector 3	Vector 4
TUF	.040272	-.047084	-.0072719	-.060609
	(-1.0000)	(-1.0000)	(-1.0000)	(-1.0000)
RM	-.0034429	.062768	-.011772	.071194
	(.085491)	(1.3331)	(-1.6188)	(1.1746)
SMB	.017241	.010114	-.0090429	-.022829
	(-.42812)	(.21480)	(-1.2435)	(-.37667)
CPI	.11644	1.3530	1.0789	.069253
	(-2.8914)	(28.7353)	(148.3607)	(1.1426)
REPO	.017035	.060508	-.095469	.074719
	(-.42300)	(1.2851)	(-13.1284)	(1.2328)
OILBREN	.0061579	.0012356	-.021082	-.1337E-3
	(-.15291)	(.026242)	(-2.8991)	(-.0022065)
THUSDSP	.055142	.062684	-.031495	.10420
	(-1.3692)	(1.3313)	(-4.3310)	(1.7192)
TUFPE	-.052962	-.098908	.036426	-.051120
	(1.3151)	(-2.1007)	(5.0091)	(-.84344)
Intercept	-2.2232	-2.2106	1.6521	-4.1105
	(55.2050)	(-46.9496)	(227.1825)	(-67.8207)

ECM for variable TUF estimated by OLS based on cointegrating VAR(8)

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
ecm1(-1)	-1.1342	.40197	-2.8217[.007]
ecm2(-1)	.20290	.47002	.43169[.668]
ecm3(-1)	.047872	.072592	.65946[.513]
ecm4(-1)	.68870	.60505	1.1383[.262]

TVO

Cointegration LR Test Based on Maximal Eigenvalue of the Stochastic Matrix

Null	Alternative	Statistic	95% Critical Value	90% Critical Value
r = 0	r = 1	92.2928	52.0600	49.0400
r<= 1	r = 2	52.4342	46.4700	43.4400
r<= 2	r = 3	48.2502	40.5300	37.6500
r<= 3	r = 4	35.0758	34.4000	31.7300
r<= 4	r = 5	27.1870	28.2700	25.8000
r<= 5	r = 6	16.2490	22.0400	19.8600
r<= 6	r = 7	10.7318	15.8700	13.8100
r<= 7	r = 8	7.1066	9.1600	7.5300

Estimated Cointegrated Vectors in Johansen Estimation (Normalized in Brackets)

Cointegration with restricted intercepts and no trends in the VAR

	Vector 1	Vector 2	Vector 3	Vector 4
TVO	.016417	-.0065221	.0095048	.0043983
	(-1.0000)	(-1.0000)	(-1.0000)	(-1.0000)
RM	-.037662	-.012723	.045038	-.016153
	(2.2941)	(-1.9507)	(-4.7384)	(3.6726)
SMB	.023715	.0013399	.026216	.0060266
	(-1.4446)	(.20544)	(-2.7582)	(-1.3702)
CPI	.25204	-.58857	-.22862	-1.7108
	(-15.3524)	(-90.2419)	(24.0531)	(388.9601)
REPO	.024540	.018491	.077572	.061910
	(-1.4948)	(2.8351)	(-8.1613)	(-14.0758)
OILBREN	-.9528E-3	.0071895	.023515	.011049
	(.058036)	(1.1023)	(-2.4740)	(-2.5120)
THUSDSP	.0053571	-.055570	.0038024	.022016
	(-.32632)	(-8.5202)	(-.40005)	(-5.0056)
TVOPE	.018970	.0069097	-.044506	.040982
	(-1.1555)	(1.0594)	(4.6825)	(-9.3177)
Intercept	-.43240	2.2439	-.75593	-1.3856
	(26.3391)	(344.0378)	(79.5314)	(315.0415)

ECM for variable TVO estimated by OLS based on cointegrating VAR(8)

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
ecm1(-1)	-.14138	.16775	-.84280[.404]
ecm2(-1)	-.025251	.066646	-.37888[.707]
ecm3(-1)	.12715	.097122	1.3092[.198]
ecm4(-1)	.052679	.044942	1.1722[.248]

TWF

Cointegration LR Test Based on Maximal Eigenvalue of the Stochastic Matrix

Null	Alternative	Statistic	95% Critical Value	90% Critical Value
r = 0	r = 1	107.8734	52.0600	49.0400
r<= 1	r = 2	58.9577	46.4700	43.4400
r<= 2	r = 3	42.4516	40.5300	37.6500
r<= 3	r = 4	37.8448	34.4000	31.7300
r<= 4	r = 5	26.8009	28.2700	25.8000
r<= 5	r = 6	20.2617	22.0400	19.8600
r<= 6	r = 7	12.5862	15.8700	13.8100
r<= 7	r = 8	6.7468	9.1600	7.5300

Estimated Cointegrated Vectors in Johansen Estimation (Normalized in Brackets)

Cointegration with restricted intercepts and no trends in the VAR

	Vector 1	Vector 2	Vector 3	Vector 4
TWF	-.031174	.023168	-.023246	-.0042862
	(-1.0000)	(-1.0000)	(-1.0000)	(-1.0000)
RM	.0063423	-.012524	.021504	-.018985
	(.20345)	(.54057)	(.92507)	(-4.4295)
SMB	-.017583	-.014953	.0088157	-.0056174
	(-.56401)	(.64541)	(.37923)	(-1.3106)
CPI	-.19282	.24204	-.16401	1.4867
	(-6.1850)	(-10.4471)	(-7.0552)	(346.8541)
REPO	-.045097	-.051373	.0050454	-.061636
	(-1.4466)	(2.2174)	(.21704)	(-14.3802)
OILBREN	-.023853	-.0022701	.0064447	-.017439
	(-.76515)	(.097985)	(.27724)	(-4.0686)
THUSDSP	.036649	-.037102	-.029699	.0023654
	(1.1756)	(1.6014)	(-1.2776)	(.55186)
TWFPE	.040563	.014332	-.029198	-.011133
	(1.3012)	(-.61859)	(-1.2560)	(-2.5974)
Intercept	-.91331	1.6050	1.3606	.40694
	(-29.2967)	(-69.2755)	(58.5295)	(94.9433)

ECM for variable TWF estimated by OLS based on cointegrating VAR(8)

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
ecm1(-1)	-.29481	.40069	-.73577[.466]
ecm2(-1)	-.40242	.29777	-1.3515[.184]
ecm3(-1)	-.67057	.29879	-2.2443[.031]
ecm4(-1)	-.013557	.055089	-.24609[.807]

UFM

Cointegration LR Test Based on Maximal Eigenvalue of the Stochastic Matrix

Null	Alternative	Statistic	95% Critical Value	90% Critical Value
r = 0	r = 1	94.2842	52.0600	49.0400
r<= 1	r = 2	62.6329	46.4700	43.4400
r<= 2	r = 3	48.1105	40.5300	37.6500
r<= 3	r = 4	29.0053	34.4000	31.7300
r<= 4	r = 5	25.1256	28.2700	25.8000
r<= 5	r = 6	19.1840	22.0400	19.8600
r<= 6	r = 7	15.7424	15.8700	13.8100
r<= 7	r = 8	2.6392	9.1600	7.5300

Estimated Cointegrated Vectors in Johansen Estimation (Normalized in Brackets)

Cointegration with restricted intercepts and no trends in the VAR

	Vector 1	Vector 2	Vector 3
UFM	-.022765	.0077949	-.021277
	(-1.0000)	(-1.0000)	(-1.0000)
RM	-.026456	-.022925	.066564
	(-1.1621)	(2.9411)	(3.1284)
SMB	.010087	-.024476	.018605
	(.44307)	(3.1400)	(.87441)
CPI	.30582	.39819	-2.6910
	(13.4335)	(-51.0835)	(-126.4766)
REPO	.0059554	-.072330	.13385
	(.26160)	(9.2792)	(6.2910)
OILBREN	-.0020399	-.021857	.040775
	(-.089604)	(2.8040)	(1.9164)
THUSDSP	-.038509	-.052832	.032189
	(-1.6916)	(6.7778)	(1.5129)
UFMPE	.0088026	-.017212	.0011317
	(.38667)	(2.2081)	(.053190)
Intercept	1.6719	3.1333	-2.4939
	(73.4418)	(-401.9659)	(-117.2114)

ECM for variable UFM estimated by OLS based on cointegrating VAR(8)

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
ecm1(-1)	-.76850	.40370	-1.9037[.064]
ecm2(-1)	-.20365	.13822	-1.4734[.148]
ecm3(-1)	-.61249	.37726	-1.6235[.112]

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