

A Work Project, presented as part of the requirements for the Award of a
Master's Degree in Finance from the NOVA – School of Business and
Economics



Interconnectedness of the Insurance Sector with the Banking and Non-financial Sectors - Appendix

Ana Silva 2328

A Project carried out on the Master in Finance Program, under the supervision of:

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1. Indices' composition

Name	Ticker	Average weight	Average Price	Average market cap
Allianz SE	ALV GY Equity	0.1348	94.0313	51161.0197
AXA SA	CS FP Equity	0.1110	13.8005	41618.6699
Zurich Insurance Group AG	ZURN VX Equity	0.1000	173.6427	36613.8977
Swiss Re AG	SREN VX Equity	0.0798	56.1558	29696.3122
Assicurazioni Generali SpA	G IM Equity	0.0809	15.9089	29338.6716
Munich Re	MUV2 GY Equity	0.0743	103.0989	27840.6927
Prudential PLC	PRU LN Equity	0.0507	634.6092	18941.0494
Ageas	AGS BB Equity	0.0490	67.8323	18355.9167
Aegon NV	AGN NA Equity	0.0456	7.5565	17831.9798
Aviva PLC	AV/ LN Equity	0.0389	346.3168	14470.2341
Topdanmark A/S	TOP DC Equity	0.0362	84.2631	13004.2405
Sampo Oyj	SAMPO FH Equity	0.0305	15.2717	11149.2781
Legal & General Group PLC	LGEN LN Equity	0.0228	101.5467	8462.7218
CNP Assurances	CNP FP Equity	0.0236	9.3890	8341.3135
Old Mutual PLC	OML LN Equity	0.0185	108.9637	6763.7898
Swiss Life Holding AG	SLHN VX Equity	0.0167	181.0792	6548.2370
Mapfre SA	MAP SQ Equity	0.0155	1.6546	5402.8080
Baloise Holding AG	BALN VX Equity	0.0136	70.1911	5118.2075
Hannover Rueck SE	HNR1 GY Equity	0.0136	32.7036	4934.0500
RSA Insurance Group PLC	RSA LN Equity	0.0114	428.6655	4153.3081
UnipolSai SpA	US IM Equity	0.0084	12.9132	3221.5573
SCOR SE	SCR FP Equity	0.0081	22.2483	2942.7734
Helvetia Holding AG	HELN SE Equity	0.0077	255.2276	2844.8616
St James's Place PLC	STJ LN Equity	0.0050	344.1587	1930.9373
Hiscox Ltd	HSX LN Equity	0.0035	345.8445	1225.7327

Table 1: Insurers' index composition

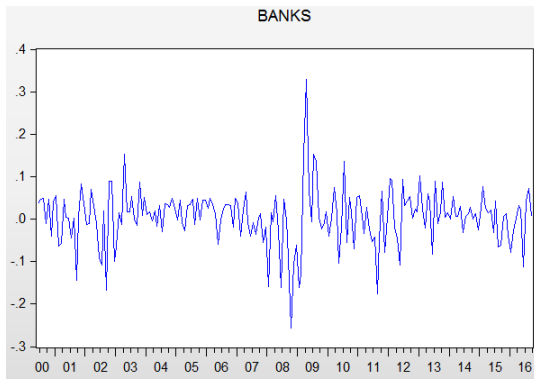
Name	Ticker	Average weight	Average Price	Average market cap
Nordea Bank AB	NDA SS Equity	0.1398	48.6099	249713.1551
Svenska Handelsbanken AB	SHBA SS Equity	0.0766	52.3577	135643.4341
Komercni banka as	KOMB CK Equity	0.0714	474.3187	126896.6208
Danske Bank A/S	DANSKE DC Equity	0.0650	119.8040	115840.5510
Skandinaviska Enskilda Banken AB	SEBA SS Equity	0.0621	50.2469	114293.2239
Swedbank AB	SWEDA SS Equity	0.0609	95.4108	112751.0389
HSBC Holdings PLC	HSBA LN Equity	0.0586	446.1491	100189.4688
DNB ASA	DNB NO Equity	0.0531	55.3795	99918.4611
UBS Group AG	UBSG VX Equity	0.0499	24.5765	84232.5531
Banco Santander SA	SAN SQ Equity	0.0358	4.5647	62930.2347
Credit Suisse Group AG	CSGN VX Equity	0.0336	32.4532	56317.9854
BNP Paribas SA	BNP FP Equity	0.0312	38.8773	54401.9774
ING Groep NV	INGA NA Equity	0.0254	11.5071	43709.9262
Banco Bilbao Vizcaya Argentaria SA	BBVA SQ Equity	0.0251	6.8645	43424.2479
Royal Bank of Scotland Group PLC	RBS LN Equity	0.0239	2038.6077	40396.5150
Deutsche Bank AG	DBK GY Equity	0.0218	38.9196	36752.8604
Lloyds Banking Group PLC	LLOY LN Equity	0.0195	118.8159	34317.4916
UniCredit SpA	UCG IM Equity	0.0192	13.0470	33871.8198
Barclays PLC	BARC LN Equity	0.0196	269.3831	33865.8788
Societe Generale SA	GLE FP Equity	0.0184	42.5521	32054.5944
Intesa Sanpaolo SpA	ISP IM Equity	0.0179	2.0728	32047.8175
Standard Chartered PLC	STAN LN Equity	0.0123	830.1033	21646.1396
KBC Group NV	KBC BB Equity	0.0092	40.1382	16754.5774
Jyske Bank A/S	JYSK DC Equity	0.0086	212.8231	16006.1548
Commerzbank AG	CBK GY Equity	0.0064	67.8922	11270.5418
Natixis SA	KN FP Equity	0.0051	3.6240	9623.7914
Sydbank A/S	SYDB DC Equity	0.0052	119.2633	9595.5126
Erste Group Bank AG	EBS AV Equity	0.0050	24.8444	9091.1869
Banco Popular Espanol SA	POP SQ Equity	0.0053	11.0577	9032.4136
Bank of Ireland	BKIR ID Equity	0.0049	3.2876	8325.9345
Mediobanca SpA	MB IM Equity	0.0045	7.5254	7697.6660
Bankinter SA	BKT SQ Equity	0.0019	3.7275	3452.8579
Banca Popolare dell'Emilia Romagna SC	BPE IM Equity	0.0015	7.9394	2647.9945
Banca Popolare di Milano Scarl	PMI IM Equity	0.0013	1.0812	2328.1995

Table 2: Banks' index composition

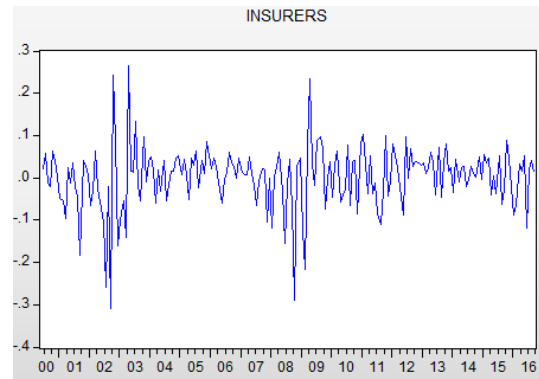
Name	Ticker	Average weight	Average Price	Average market cap
Novo Nordisk A/S	NOVOB DC Equity	0.0682	104.6781	321909.8369
CEZ AS	CEZ CK Equity	0.0733	375.0545	321743.7704
Telefonaktiebolaget LM Ericsson	ERICB SS Equity	0.0780	84.3801	320530.8711
Hennes & Mauritz AB	HMB SS Equity	0.0696	147.9602	303449.2874
AP Moller - Maersk A/S	MAERSKB DC Equity	0.0433	7170.9571	185909.9451
Nestle SA	NESN VX Equity	0.0415	39.7065	173212.6963
Novartis AG	NOVN VX Equity	0.0417	49.9303	170454.5151
Roche Holding AG	ROG VX Equity	0.0368	144.6452	155983.6407
Volvo AB	VOLVB SS Equity	0.0357	57.5968	154811.6762
Royal Dutch Shell PLC	RDSA NA Equity	0.0343	16.2467	144056.8439
Atlas Copco AB	ATCOA SS Equity	0.0296	91.3195	135000.2567
TOTAL SA	FP FP Equity	0.0267	28.7537	107170.8132
BP PLC	BP/ LN Equity	0.0258	333.3865	100598.2094
Norsk Hydro ASA	NHY NO Equity	0.0246	27.9097	98564.5729
Svenska Cellulosa AB SCA	SCAB SS Equity	0.0201	99.1674	85163.1069
Vodafone Group PLC	VOD LN Equity	0.0213	117.3735	83609.3338
Sanofi	SAN FP Equity	0.0178	48.2535	75649.1208
GlaxoSmithKline PLC	GSK LN Equity	0.0191	941.6688	75028.3774
Assa Abloy AB	ASSAB SS Equity	0.0159	58.2617	71807.0520
BHP Billiton PLC	BLT LN Equity	0.0164	901.0348	71446.6894
Unilever NV	UNA NA Equity	0.0171	18.6539	71358.9451
Eni SpA	ENI IM Equity	0.0171	10.9197	68771.5817
Siemens AG	SIE GY Equity	0.0160	59.1716	67055.5275
Telefonica SA	TEF SQ Equity	0.0162	8.7217	65039.8916
Deutsche Telekom AG	DTE GY Equity	0.0146	8.9716	58265.5237
Nokia OYJ	NOKIA FH Equity	0.0153	8.7739	57058.0952
L'Oreal SA	OR FP Equity	0.0133	80.0955	55615.2506
Unilever PLC	ULVR LN Equity	0.0128	1430.5176	54013.7138
SAP SE	SAP GY Equity	0.0123	37.9976	52543.0503
Orkla ASA	ORK NO Equity	0.0123	34.8246	52340.6080
Carlsberg A/S	CARLB DC Equity	0.0117	370.7068	52235.4500
SKF AB	SKFB SS Equity	0.0120	90.2762	51976.8665
Electrolux AB	ELUXB SS Equity	0.0126	105.1666	50550.1751
Daimler AG	DAI GY Equity	0.0117	36.5060	49290.0135
TDC A/S	TDC DC Equity	0.0119	26.0238	46788.1748
Orange SA	ORA FP Equity	0.0116	11.7909	46409.0973
Rio Tinto PLC	RIO LN Equity	0.0107	1902.8185	46406.0067
Skanska AB	SKAB SS Equity	0.0107	78.7687	46231.3704
Volkswagen AG	VOW3 GY Equity	0.0102	77.6705	45674.3076
LVMH Moet Hennessy Louis Vuitton SE	MC FP Equity	0.0104	73.7191	45412.8160

Table 3: Non-financial companies' index composition

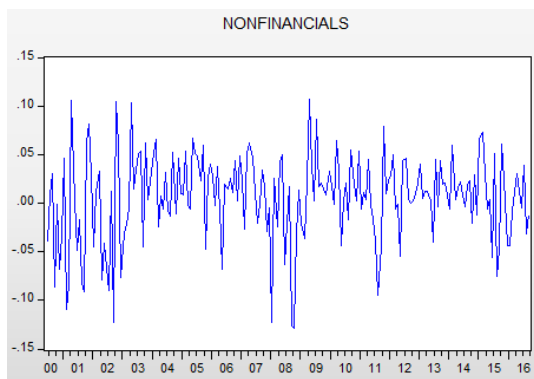
2. Graphs



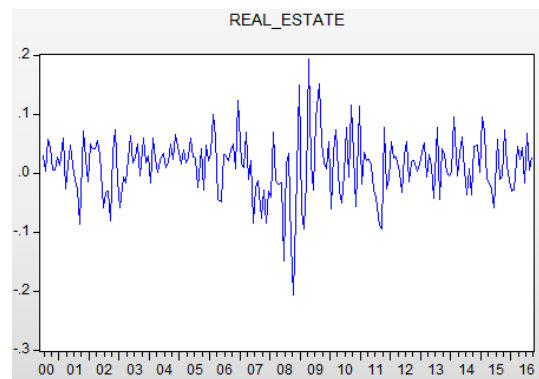
Graph 1: Banks returns' Index



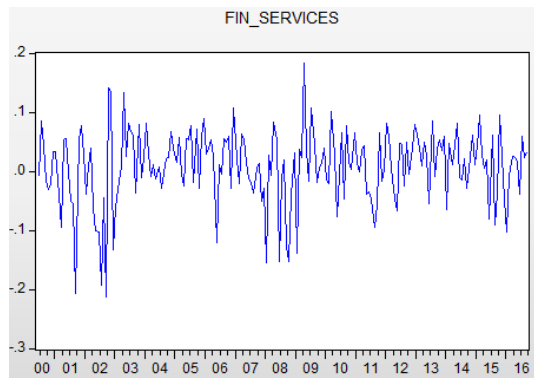
Graph 2: Insurance companies returns' Index



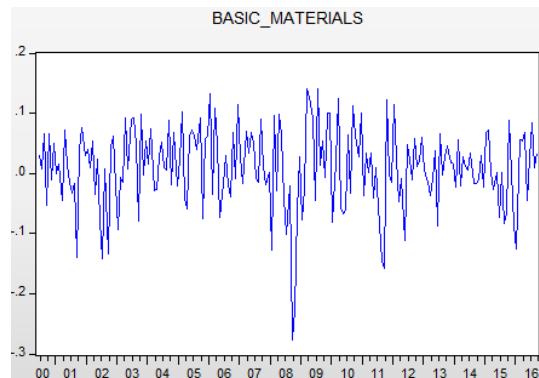
Graph 3: Non financial companies returns' Index



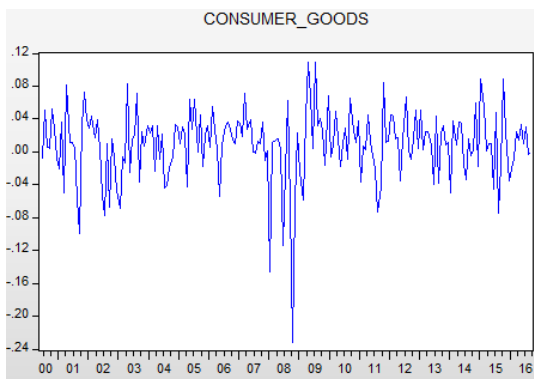
Graph 4: Real estate companies returns' Index



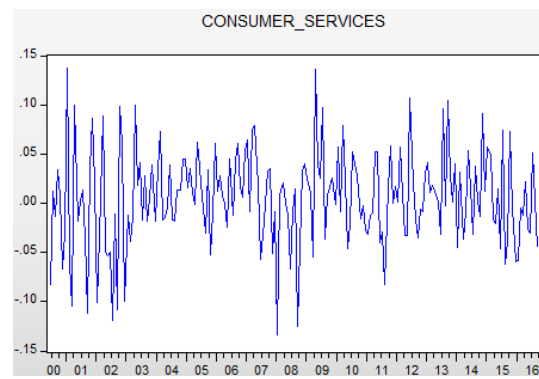
Graph 5: Financial services companies returns' Index



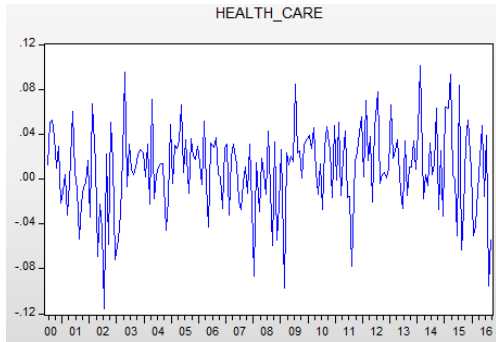
Graph 6: Basic materials companies returns' Index



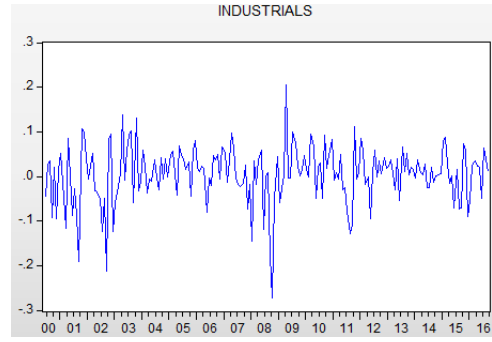
Graph 7: Consumer goods companies returns' Index



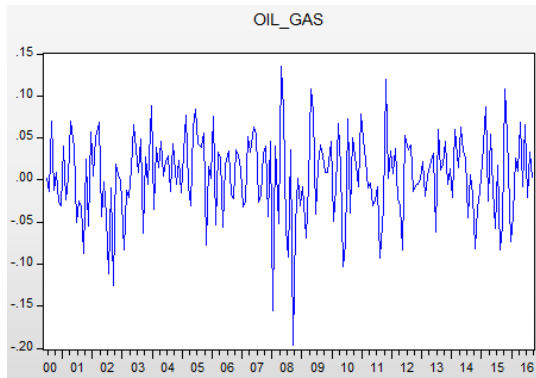
Graph 8: Consumer services companies returns' Index



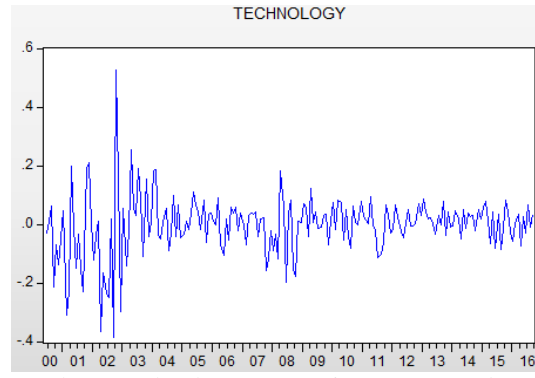
Graph 9: Health care companies returns' Index



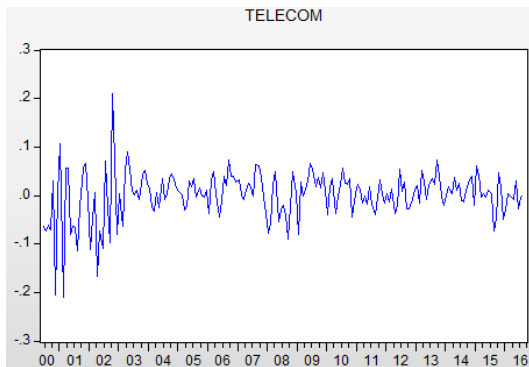
Graph 10: Industrials companies returns' Index



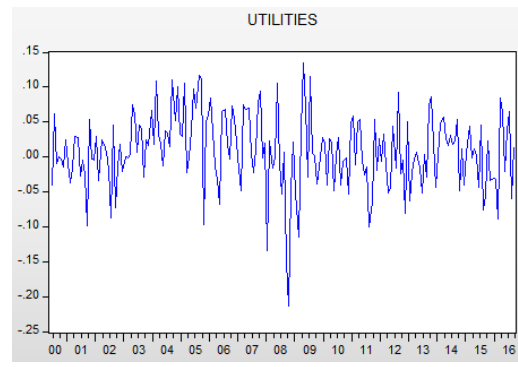
Graph 11: Oil and gas companies returns' Index



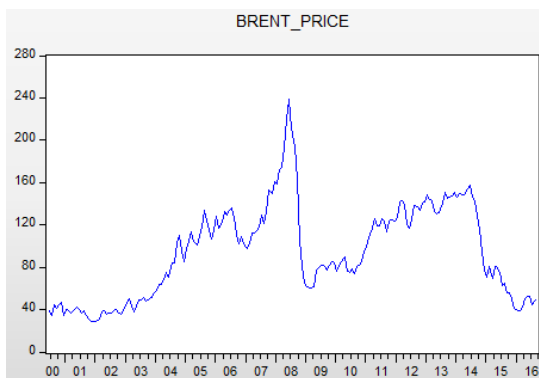
Graph 12: Technology companies returns' Index



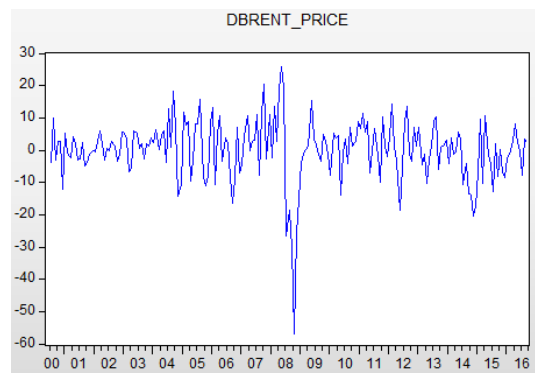
Graph 13: Telecommunications companies returns' Index



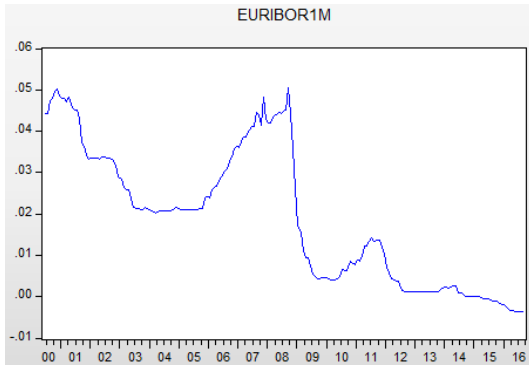
Graph 14: Utilities companies returns' Index



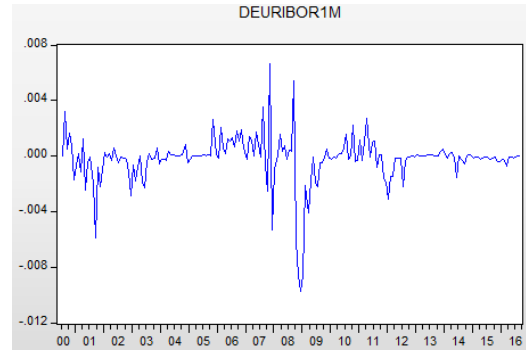
Graph 15: Brent crude oil price



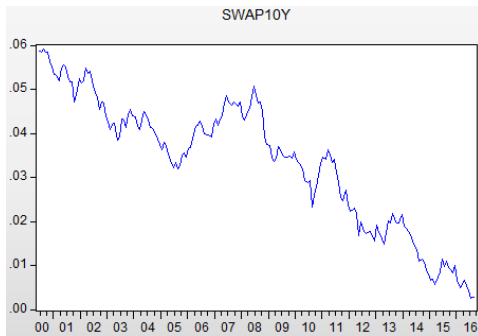
Graph 16: First difference of Brent crude oil price



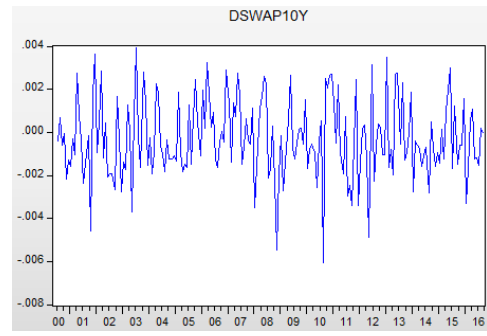
Graph 17: 1-month Euribor rate



Graph 18: First difference of 1-month Euribor rate



Graph 19: 10-year Swap rate



Graph 20: First difference of 10-year swap rate

3. Dickey-Fuller Tests

3.1 Banks

Null Hypothesis: BANKS has a unit root
 Exogenous: Constant
 Lag Length: 0 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-11.35696	0.0000
Test critical values:		
1% level	-3.463924	
5% level	-2.876200	
10% level	-2.574663	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(BANKS)
 Method: Least Squares
 Date: 11/28/16 Time: 23:46
 Sample (adjusted): 2000M07 2016M09
 Included observations: 195 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
BANKS(-1)	-0.800472	0.070483	-11.35696	0.0000
C	0.003997	0.004633	0.862780	0.3893
R-squared	0.400585	Mean dependent var		-0.000167
Adjusted R-squared	0.397479	S.D. dependent var		0.083082
S.E. of regression	0.064490	Akaike info criterion		-2.634407
Sum squared resid	0.802682	Schwarz criterion		-2.600838
Log likelihood	258.8547	Hannan-Quinn criter.		-2.620815
F-statistic	128.9806	Durbin-Watson stat		1.954183
Prob(F-statistic)	0.000000			

3.2 Insurance companies

Null Hypothesis: INSURERS has a unit root
 Exogenous: Constant
 Lag Length: 0 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-13.38962	0.0000
Test critical values:		
1% level	-3.463924	
5% level	-2.876200	
10% level	-2.574663	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(INSURERS)
 Method: Least Squares
 Date: 11/28/16 Time: 23:55
 Sample (adjusted): 2000M07 2016M09
 Included observations: 195 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INSURERS(-1)	-0.963047	0.071925	-13.38962	0.0000
C	0.001721	0.005310	0.324143	0.7462
R-squared	0.481576	Mean dependent var		-3.75E-05
Adjusted R-squared	0.478889	S.D. dependent var		0.102685
S.E. of regression	0.074126	Akaike info criterion		-2.355886
Sum squared resid	1.060482	Schwarz criterion		-2.322317
Log likelihood	231.6989	Hannan-Quinn criter.		-2.342295
F-statistic	179.2818	Durbin-Watson stat		1.991300
Prob(F-statistic)	0.000000			

3.3 Non-financial companies

Null Hypothesis: NONFINANCIALS has a unit root
 Exogenous: Constant
 Lag Length: 0 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-12.45919	0.0000
Test critical values: 1% level	-3.463924	
5% level	-2.876200	
10% level	-2.574663	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(NONFINANCIALS)
 Method: Least Squares
 Date: 11/28/16 Time: 23:57
 Sample (adjusted): 2000M07 2016M09
 Included observations: 195 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NONFINANCIALS(-1)	-0.889442	0.071388	-12.45919	0.0000
C	0.005255	0.003252	1.616083	0.1077
R-squared	0.445771	Mean dependent var		0.000136
Adjusted R-squared	0.442899	S.D. dependent var		0.060350
S.E. of regression	0.045045	Akaike info criterion		-3.352119
Sum squared resid	0.391602	Schwarz criterion		-3.318550
Log likelihood	328.8316	Hannan-Quinn criter.		-3.338527
F-statistic	155.2315	Durbin-Watson stat		1.989976
Prob(F-statistic)	0.000000			

3.4 Brent Price

3.4.1 Brent Price level

Null Hypothesis: BRENT_PRICE has a unit root
 Exogenous: Constant
 Lag Length: 1 (Automatic - based on AIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.420904	0.1373
Test critical values: 1% level	-3.464101	
5% level	-2.876277	
10% level	-2.574704	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(BRENT_PRICE)
 Method: Least Squares
 Date: 12/01/16 Time: 11:27
 Sample (adjusted): 2000M08 2016M09
 Included observations: 194 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
BRENT_PRICE(-1)	-0.034427	0.014221	-2.420904	0.0164
D(BRENT_PRICE(-1))	0.407759	0.065900	6.187552	0.0000
C	3.311500	1.478739	2.239408	0.0263
R-squared	0.178603	Mean dependent var		0.082113
Adjusted R-squared	0.170002	S.D. dependent var		9.488275
S.E. of regression	8.644220	Akaike info criterion		7.167002
Sum squared resid	14272.01	Schwarz criterion		7.217536
Log likelihood	-692.1992	Hannan-Quinn criter.		7.187465
F-statistic	20.76533	Durbin-Watson stat		2.035450
Prob(F-statistic)	0.000000			

3.4.2 Brent Price first difference

Null Hypothesis: D(BRENT_PRICE) has a unit root
 Exogenous: Constant
 Lag Length: 0 (Automatic - based on AIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.165805	0.0000
Test critical values:		
1% level	-3.464101	
5% level	-2.876277	
10% level	-2.574704	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(BRENT_PRICE,2)
 Method: Least Squares
 Date: 12/01/16 Time: 09:42
 Sample (adjusted): 2000M08 2016M09
 Included observations: 194 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(BRENT_PRICE(-1))	-0.608456	0.066383	-9.165805	0.0000
C	0.062173	0.628435	0.098933	0.9213
R-squared	0.304378	Mean dependent var		0.031186
Adjusted R-squared	0.300755	S.D. dependent var		10.46743
S.E. of regression	8.752957	Akaike info criterion		7.186916
Sum squared resid	14709.94	Schwarz criterion		7.220605
Log likelihood	-695.1309	Hannan-Quinn criter.		7.200558
F-statistic	84.01198	Durbin-Watson stat		2.009186
Prob(F-statistic)	0.000000			

3.5 1M-Euribor

3.5.1 1M-Euribor level

Null Hypothesis: EURIBOR1M has a unit root
 Exogenous: Constant
 Lag Length: 2 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.741084	0.4090
Test critical values:		
1% level	-3.464280	
5% level	-2.876356	
10% level	-2.574746	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(EURIBOR1M)
 Method: Least Squares
 Date: 11/29/16 Time: 00:08
 Sample (adjusted): 2000M09 2016M09
 Included observations: 193 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EURIBOR1M(-1)	-0.012075	0.006936	-1.741084	0.0833
D(EURIBOR1M(-1))	0.311459	0.069880	4.457067	0.0000
D(EURIBOR1M(-2))	0.209183	0.070080	2.984904	0.0032
C	9.21E-05	0.000176	0.523985	0.6009
R-squared	0.201067	Mean dependent var		-0.000265
Adjusted R-squared	0.188385	S.D. dependent var		0.001759
S.E. of regression	0.001584	Akaike info criterion		-10.03661
Sum squared resid	0.000475	Schwarz criterion		-9.968989
Log likelihood	972.5328	Hannan-Quinn criter.		-10.00923
F-statistic	15.85517	Durbin-Watson stat		2.058165
Prob(F-statistic)	0.000000			

3.5.2 1M-Euribor first difference

Null Hypothesis: D(EURIBOR1M) has a unit root
 Exogenous: Constant
 Lag Length: 1 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-6.310591	0.0000
Test critical values:		
1% level	-3.464280	
5% level	-2.876356	
10% level	-2.574746	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(EURIBOR1M,2)
 Method: Least Squares
 Date: 11/29/16 Time: 00:09
 Sample (adjusted): 2000M09 2016M09
 Included observations: 193 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EURIBOR1M(-1))	-0.489901	0.077632	-6.310591	0.0000
D(EURIBOR1M(-1),2)	-0.199871	0.070248	-2.845209	0.0049
C	-0.000138	0.000116	-1.189557	0.2357
R-squared	0.339224	Mean dependent var		-1.67E-05
Adjusted R-squared	0.332268	S.D. dependent var		0.001949
S.E. of regression	0.001593	Akaike info criterion		-10.03106
Sum squared resid	0.000482	Schwarz criterion		-9.980345
Log likelihood	970.9973	Hannan-Quinn criter.		-10.01052
F-statistic	48.77029	Durbin-Watson stat		2.044711
Prob(F-statistic)	0.000000			

3.6 10Y-Swap rate

3.6.1 10Y-Swap rate level

Null Hypothesis: SWAP10Y has a unit root
 Exogenous: Constant
 Lag Length: 0 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.443714	0.8978
Test critical values:		
1% level	-3.463924	
5% level	-2.876200	
10% level	-2.574663	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(SWAP10Y)
 Method: Least Squares
 Date: 11/29/16 Time: 00:10
 Sample (adjusted): 2000M07 2016M09
 Included observations: 195 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SWAP10Y(-1)	-0.003880	0.008744	-0.443714	0.6577
C	-0.000157	0.000320	-0.490156	0.6246
R-squared	0.001019	Mean dependent var		-0.000287
Adjusted R-squared	-0.004157	S.D. dependent var		0.001798
S.E. of regression	0.001802	Akaike info criterion		-9.790008
Sum squared resid	0.000626	Schwarz criterion		-9.756439
Log likelihood	956.5258	Hannan-Quinn criter.		-9.776416
F-statistic	0.196882	Durbin-Watson stat		1.863377
Prob(F-statistic)	0.657747			

3.6.1 10Y-Swap rate first difference

Null Hypothesis: D(SWAP10Y) has a unit root
 Exogenous: Constant
 Lag Length: 0 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-12.97493	0.0000
Test critical values:		
1% level	-3.464101	
5% level	-2.876277	
10% level	-2.574704	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(SWAP10Y,2)
 Method: Least Squares
 Date: 11/29/16 Time: 00:11
 Sample (adjusted): 2000M08 2016M09
 Included observations: 194 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(SWAP10Y(-1))	-0.934393	0.072015	-12.97493	0.0000
C	-0.000268	0.000131	-2.042568	0.0425
R-squared	0.467183	Mean dependent var		1.55E-06
Adjusted R-squared	0.464408	S.D. dependent var		0.002464
S.E. of regression	0.001803	Akaike info criterion		-9.788069
Sum squared resid	0.000624	Schwarz criterion		-9.754379
Log likelihood	951.4427	Hannan-Quinn criter.		-9.774427
F-statistic	168.3488	Durbin-Watson stat		1.989604
Prob(F-statistic)	0.000000			

3.7 Basic materials

Null Hypothesis: BASIC_MATERIALS has a unit root
 Exogenous: None
 Lag Length: 0 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-12.33894	0.0000
Test critical values:		
1% level	-2.576875	
5% level	-1.942465	
10% level	-1.615617	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(BASIC_MATERIALS)
 Method: Least Squares
 Date: 12/19/16 Time: 06:11
 Sample (adjusted): 2000M07 2016M09
 Included observations: 195 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
BASIC_MATERIALS(-1)	-0.879587	0.071285	-12.33894	0.0000
R-squared	0.439710	Mean dependent var		2.38E-05
Adjusted R-squared	0.439710	S.D. dependent var		0.089615
S.E. of regression	0.067079	Akaike info criterion		-2.560772
Sum squared resid	0.872925	Schwarz criterion		-2.543987
Log likelihood	250.6752	Hannan-Quinn criter.		-2.553976
Durbin-Watson stat	2.020058			

3.8 Consumer goods

Null Hypothesis: CONSUMER_GOODS has a unit root
 Exogenous: None
 Lag Length: 0 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-11.70122	0.0000
Test critical values:		
1% level	-2.576875	
5% level	-1.942465	
10% level	-1.615617	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(CONSUMER_GOODS)
 Method: Least Squares
 Date: 12/19/16 Time: 06:13
 Sample (adjusted): 2000M07 2016M09
 Included observations: 195 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CONSUMER_GOODS(-1)	-0.827436	0.070714	-11.70122	0.0000
R-squared	0.413753	Mean dependent var		3.78E-05
Adjusted R-squared	0.413753	S.D. dependent var		0.056256
S.E. of regression	0.043073	Akaike info criterion		-3.446709
Sum squared resid	0.359931	Schwarz criterion		-3.429924
Log likelihood	337.0541	Hannan-Quinn criter.		-3.439913
Durbin-Watson stat	1.992590			

3.9 Consumer services

Null Hypothesis: CONSUMER_SERVICES has a unit root
 Exogenous: None
 Lag Length: 0 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-13.86242	0.0000
Test critical values:		
1% level	-2.576875	
5% level	-1.942465	
10% level	-1.615617	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(CONSUMER_SERVICES)
 Method: Least Squares
 Date: 12/19/16 Time: 06:15
 Sample (adjusted): 2000M07 2016M09
 Included observations: 195 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CONSUMER_SERVICES(-1)	-0.990094	0.071423	-13.86242	0.0000
R-squared	0.497622	Mean dependent var		0.000191
Adjusted R-squared	0.497622	S.D. dependent var		0.068359
S.E. of regression	0.048452	Akaike info criterion		-3.211375
Sum squared resid	0.455432	Schwarz criterion		-3.194590
Log likelihood	314.1091	Hannan-Quinn criter.		-3.204579
Durbin-Watson stat	1.988276			

3.10 Financial services

Null Hypothesis: FIN_SERVICES has a unit root
 Exogenous: None
 Lag Length: 0 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-11.97819	0.0000
Test critical values:		
1% level	-2.576875	
5% level	-1.942465	
10% level	-1.615617	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(FIN_SERVICES)
 Method: Least Squares
 Date: 12/19/16 Time: 06:17
 Sample (adjusted): 2000M07 2016M09
 Included observations: 195 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FIN_SERVICES(-1)	-0.850935	0.071040	-11.97819	0.0000
R-squared	0.425143	Mean dependent var		0.000205
Adjusted R-squared	0.425143	S.D. dependent var		0.082619
S.E. of regression	0.062641	Akaike info criterion		-2.697666
Sum squared resid	0.761245	Schwarz criterion		-2.680881
Log likelihood	264.0224	Hannan-Quinn criter.		-2.690870
Durbin-Watson stat	1.984670			

3.11 Healthcare

Null Hypothesis: HEALTH_CARE has a unit root
 Exogenous: None
 Lag Length: 0 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-12.53354	0.0000
Test critical values:		
1% level	-2.576875	
5% level	-1.942465	
10% level	-1.615617	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(HEALTH_CARE)
 Method: Least Squares
 Date: 12/19/16 Time: 06:16
 Sample (adjusted): 2000M07 2016M09
 Included observations: 195 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
HEALTH_CARE(-1)	-0.899678	0.071782	-12.53354	0.0000
R-squared	0.447410	Mean dependent var		-0.000339
Adjusted R-squared	0.447410	S.D. dependent var		0.050994
S.E. of regression	0.037907	Akaike info criterion		-3.702242
Sum squared resid	0.278768	Schwarz criterion		-3.685457
Log likelihood	361.9686	Hannan-Quinn criter.		-3.695446
Durbin-Watson stat	2.014881			

3.12 Industrials

Null Hypothesis: INDUSTRIALS has a unit root
 Exogenous: None
 Lag Length: 0 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-12.08501	0.0000
Test critical values: 1% level	-2.576875	
5% level	-1.942465	
10% level	-1.615617	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(INDUSTRIALS)
 Method: Least Squares
 Date: 12/19/16 Time: 06:17
 Sample (adjusted): 2000M07 2016M09
 Included observations: 195 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INDUSTRIALS(-1)	-0.857758	0.070977	-12.08501	0.0000
R-squared	0.429484	Mean dependent var		0.000293
Adjusted R-squared	0.429484	S.D. dependent var		0.083547
S.E. of regression	0.063105	Akaike info criterion		-2.682918
Sum squared resid	0.772555	Schwarz criterion		-2.666133
Log likelihood	262.5845	Hannan-Quinn criter.		-2.676122
Durbin-Watson stat	1.982704			

3.13 Oil and gas

Null Hypothesis: OIL_GAS has a unit root
 Exogenous: None
 Lag Length: 0 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-13.99502	0.0000
Test critical values: 1% level	-2.576875	
5% level	-1.942465	
10% level	-1.615617	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(OIL_GAS)
 Method: Least Squares
 Date: 12/19/16 Time: 06:18
 Sample (adjusted): 2000M07 2016M09
 Included observations: 195 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
OIL_GAS(-1)	-1.004775	0.071795	-13.99502	0.0000
R-squared	0.502386	Mean dependent var		3.99E-06
Adjusted R-squared	0.502386	S.D. dependent var		0.071733
S.E. of regression	0.050602	Akaike info criterion		-3.124543
Sum squared resid	0.496746	Schwarz criterion		-3.107759
Log likelihood	305.6430	Hannan-Quinn criter.		-3.117747
Durbin-Watson stat	1.999257			

3.14 Real estate

Null Hypothesis: REAL_ESTATE has a unit root
 Exogenous: None
 Lag Length: 0 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-11.80378	0.0000
Test critical values:		
1% level	-2.576875	
5% level	-1.942465	
10% level	-1.615617	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(REAL_ESTATE)
 Method: Least Squares
 Date: 12/19/16 Time: 06:19
 Sample (adjusted): 2000M07 2016M09
 Included observations: 195 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
REAL_ESTATE(-1)	-0.835842	0.070811	-11.80378	0.0000
R-squared	0.417993	Mean dependent var		-1.41E-05
Adjusted R-squared	0.417993	S.D. dependent var		0.068325
S.E. of regression	0.052124	Akaike info criterion		-3.065253
Sum squared resid	0.527088	Schwarz criterion		-3.048468
Log likelihood	299.8622	Hannan-Quinn criter.		-3.058457
Durbin-Watson stat	1.979644			

3.15 Technology

Null Hypothesis: TECHNOLOGY has a unit root
 Exogenous: None
 Lag Length: 0 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-13.53912	0.0000
Test critical values:		
1% level	-2.576875	
5% level	-1.942465	
10% level	-1.615617	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(TECHNOLOGY)
 Method: Least Squares
 Date: 12/19/16 Time: 06:19
 Sample (adjusted): 2000M07 2016M09
 Included observations: 195 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TECHNOLOGY(-1)	-0.971721	0.071771	-13.53912	0.0000
R-squared	0.485829	Mean dependent var		0.000316
Adjusted R-squared	0.485829	S.D. dependent var		0.144250
S.E. of regression	0.103435	Akaike info criterion		-1.694626
Sum squared resid	2.075579	Schwarz criterion		-1.677841
Log likelihood	166.2260	Hannan-Quinn criter.		-1.687830
Durbin-Watson stat	1.994713			

3.16 Telecom

Null Hypothesis: TELECOM has a unit root
 Exogenous: None
 Lag Length: 0 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-12.39083	0.0000
Test critical values: 1% level	-2.576936	
5% level	-1.942473	
10% level	-1.615611	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(TELECOM)
 Method: Least Squares
 Date: 12/19/16 Time: 06:20
 Sample (adjusted): 2000M07 2016M08
 Included observations: 194 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TELECOM(-1)	-0.881865	0.071171	-12.39083	0.0000
R-squared	0.443041	Mean dependent var		0.000314
Adjusted R-squared	0.443041	S.D. dependent var		0.065351
S.E. of regression	0.048771	Akaike info criterion		-3.198210
Sum squared resid	0.459077	Schwarz criterion		-3.181365
Log likelihood	311.2264	Hannan-Quinn criter.		-3.191389
Durbin-Watson stat	1.990807			

3.17 Utilities

Null Hypothesis: UTILITIES has a unit root
 Exogenous: None
 Lag Length: 0 (Automatic - based on SIC, maxlag=14)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-11.38312	0.0000
Test critical values: 1% level	-2.576875	
5% level	-1.942465	
10% level	-1.615617	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(UTILITIES)
 Method: Least Squares
 Date: 12/19/16 Time: 06:20
 Sample (adjusted): 2000M07 2016M09
 Included observations: 195 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
UTILITIES(-1)	-0.799566	0.070241	-11.38312	0.0000
R-squared	0.400438	Mean dependent var		0.000282
Adjusted R-squared	0.400438	S.D. dependent var		0.067627
S.E. of regression	0.052364	Akaike info criterion		-3.056064
Sum squared resid	0.531954	Schwarz criterion		-3.039279
Log likelihood	298.9662	Hannan-Quinn criter.		-3.049268
Durbin-Watson stat	1.988315			

4. VAR model full sample

4.1 VAR model with all variables

Vector Autoregression Estimates
 Date: 12/17/16 Time: 11:27
 Sample (adjusted): 2000M08 2016M09
 Included observations: 190 after adjustments
 Standard errors in () & t-statistics in []

	BANKS	INSURERS	NONFINAN...
BANKS(-1)	0.261163 (0.13534) [1.92965]	0.178683 (0.15811) [1.13010]	-0.035213 (0.09832) [-0.35813]
BANKS(-2)	-0.057812 (0.13690) [-0.42228]	0.035963 (0.15994) [0.22486]	-0.051822 (0.09946) [-0.52104]
INSURERS(-1)	-0.215082 (0.11478) [-1.87383]	-0.217868 (0.13409) [-1.62475]	-0.008780 (0.08339) [-0.10529]
INSURERS(-2)	-0.243983 (0.11650) [-2.09432]	-0.237944 (0.13610) [-1.74832]	-0.020262 (0.08463) [-0.23940]
NONFINANCIALS(-1)	0.137698 (0.15639) [0.88046]	0.148671 (0.18271) [0.81372]	0.096552 (0.11362) [0.84979]
NONFINANCIALS(-2)	0.256556 (0.15404) [1.66556]	0.139402 (0.17995) [0.77466]	0.022024 (0.11191) [0.19681]
C	0.006545 (0.00686) [0.95462]	-0.003162 (0.00801) [-0.39476]	0.006832 (0.00498) [1.37164]
CRISIS	5.25E-05 (0.00918) [0.00572]	0.012471 (0.01072) [1.16302]	0.001618 (0.00667) [0.24262]
DBRENT_PRICE	-2.50E-08 (5.7E-08) [-0.43542]	-4.30E-08 (6.7E-08) [-0.64115]	1.61E-08 (4.2E-08) [0.38477]
DEURIBOR1M	4.335848 (2.69310) [1.60999]	3.710556 (3.14620) [1.17938]	0.917489 (1.95650) [0.46894]
DSWAP10Y	9.146958 (2.60489) [3.51145]	10.20309 (3.04316) [3.35280]	7.062841 (1.89242) [3.73217]
R-squared	0.182964	0.124644	0.092514
Adj. R-squared	0.137320	0.075742	0.041817
Sum sq. resids	0.678164	0.925559	0.357925
S.E. equation	0.061552	0.071908	0.044717
F-statistic	4.008461	2.548825	1.824828
Log likelihood	265.7638	236.2179	326.4750
Akaike AIC	-2.681724	-2.370715	-3.320789
Schwarz SC	-2.493739	-2.182729	-3.132804
Mean dependent	0.005195	0.001528	0.005541
S.D. dependent	0.066270	0.074796	0.045682
Determinant resid covariance (dof adj.)		5.49E-09	
Determinant resid covariance		4.59E-09	
Log likelihood		1015.086	
Akaike information criterion		-10.33774	
Schwarz criterion		-9.773787	

4.2 VAR Lag Order Selection Criteria

VAR Lag Order Selection Criteria
 Endogenous variables: BANKS INSURERS NONFINANCIALS
 Exogenous variables: C CRISIS DBRENT_PRICE DEURIBOR1M DSWAP10Y
 Date: 12/17/16 Time: 11:27
 Sample: 2000M06 2016M09
 Included observations: 184

Lag	LogL	LR	FPE	AIC	SC	HQ
0	975.4874	NA	5.87e-09	-10.44008	-10.17799*	-10.33385*
1	984.2617	16.78549	5.88e-09	-10.43763	-10.01829	-10.26766
2	996.2153	22.47804	5.70e-09*	-10.46973*	-9.893140	-10.23603
3	1004.997	16.22663	5.72e-09	-10.46736	-9.733512	-10.16992
4	1010.674	10.30535	5.93e-09	-10.43124	-9.540143	-10.07007
5	1014.266	6.403883	6.30e-09	-10.37246	-9.324112	-9.947552
6	1026.126	20.75479	6.11e-09	-10.40355	-9.197946	-9.914902
7	1027.327	2.061619	6.66e-09	-10.31877	-8.955916	-9.766387
8	1039.665	20.78673*	6.44e-09	-10.35505	-8.834945	-9.738933

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

4.3 Autocorrelation LM test

VAR Residual Serial Correlation LM T...
 Null Hypothesis: no serial correlation ...
 Date: 12/17/16 Time: 11:30
 Sample: 2000M06 2016M09
 Included observations: 190

Lags	LM-Stat	Prob
1	15.79897	0.0712
2	3.044238	0.9625
3	17.94647	0.0358

Probs from chi-square with 9 df.

4.4 Heteroscedasticity White test

VAR Residual Heteroskedasticity Tests: Includes Cross Terms
 Date: 12/17/16 Time: 11:30
 Sample: 2000M06 2016M09
 Included observations: 190

Joint test:		
Chi-sq	df	Prob.
618.7639	384	0.0000

Individual components:					
Dependent	R-squared	F(64,125)	Prob.	Chi-sq(64)	Prob.
res1*res1	0.711728	4.822154	0.0000	135.2283	0.0000
res2*res2	0.747075	5.769015	0.0000	141.9442	0.0000
res3*res3	0.552420	2.410619	0.0000	104.9598	0.0009
res2*res1	0.762491	6.270235	0.0000	144.8732	0.0000
res3*res1	0.667898	3.927980	0.0000	126.9007	0.0000
res3*res2	0.741766	5.610253	0.0000	140.9354	0.0000

4.5 VAR model with all variables estimated through GMM-HAC

System: UNTITLED
 Estimation Method: Generalized Method of Moments
 Date: 12/17/16 Time: 11:33
 Sample: 2000M08 2016M09
 Included observations: 190
 Total system (balanced) observations 570
 Kernel: Bartlett, Bandwidth: Fixed (5), No prewhitening
 Linear estimation after one-step weighting matrix

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.006545	0.005581	1.172797	0.2414
C(2)	0.261163	0.211096	1.237177	0.2166
C(3)	-0.057812	0.147030	-0.393200	0.6943
C(4)	-0.215082	0.165308	-1.301096	0.1938
C(5)	-0.243983	0.180951	-1.348335	0.1781
C(6)	0.137698	0.192803	0.714191	0.4754
C(7)	0.256556	0.161322	1.590338	0.1123
C(8)	5.25E-05	0.009481	0.005534	0.9956
C(9)	-2.50E-08	7.50E-09	-3.335045	0.0009
C(10)	4.335848	3.362599	1.289434	0.1978
C(11)	9.146958	2.867205	3.190200	0.0015
C(12)	0.006832	0.004910	1.391284	0.1647
C(13)	-0.035213	0.105178	-0.334790	0.7379
C(14)	-0.051822	0.122065	-0.424548	0.6713
C(15)	-0.008780	0.073132	-0.120051	0.9045
C(16)	-0.020262	0.108659	-0.186469	0.8521
C(17)	0.096552	0.118404	0.815440	0.4152
C(18)	0.022024	0.108950	0.202151	0.8399
C(19)	0.001618	0.007009	0.230813	0.8175
C(20)	1.61E-08	4.14E-09	3.880719	0.0001
C(21)	0.917489	1.945056	0.471703	0.6373
C(22)	7.062841	2.127123	3.320372	0.0010
C(23)	-0.003162	0.008054	-0.392604	0.6948
C(24)	0.178683	0.178741	0.999673	0.3179
C(25)	0.035963	0.188418	0.190870	0.8487
C(26)	-0.217868	0.137331	-1.586451	0.1132
C(27)	-0.237944	0.193235	-1.231368	0.2187
C(28)	0.148671	0.210966	0.704719	0.4813
C(29)	0.139402	0.164317	0.848374	0.3966
C(30)	0.012471	0.009978	1.249851	0.2119
C(31)	-4.30E-08	6.88E-09	-6.254093	0.0000
C(32)	3.710556	3.315897	1.119020	0.2636
C(33)	10.20309	3.976027	2.566152	0.0106

Determinant residual covariance 4.59E-09
 J-statistic -2.76E-40

Equation: BANKS = C(1) + C(2)*BANKS(-1) + C(3)*BANKS(-2) + C(4)
 *INSURERS(-1) + C(5)*INSURERS(-2) + C(6)*NONFINANCIALS(-1) +
 C(7)*NONFINANCIALS(-2) + C(8)*CRISIS + C(9)*DBRENT_PRICE +
 C(10)*DEURIBOR1M + C(11)*DSWAP10Y

Instruments: C BANKS(-1) BANKS(-2) INSURERS(-1) INSURERS(-2)
 NONFINANCIALS(-1) NONFINANCIALS(-2) CRISIS DBRENT_PRICE
 DEURIBOR1M DSWAP10Y

Observations: 190

R-squared	0.182964	Mean dependent var	0.005195
Adjusted R-squared	0.137320	S.D. dependent var	0.066270
S.E. of regression	0.061552	Sum squared resid	0.678164
Durbin-Watson stat	1.956871		

Equation: NONFINANCIALS = C(12) + C(13)*BANKS(-1) + C(14)*BANKS(-2)
 + C(15)*INSURERS(-1) + C(16)*INSURERS(-2) + C(17)
 *NONFINANCIALS(-1) + C(18)*NONFINANCIALS(-2) + C(19)*CRISIS +
 C(20)*DBRENT_PRICE + C(21)*DEURIBOR1M + C(22)*DSWAP10Y

Instruments: C BANKS(-1) BANKS(-2) INSURERS(-1) INSURERS(-2)
 NONFINANCIALS(-1) NONFINANCIALS(-2) CRISIS DBRENT_PRICE
 DEURIBOR1M DSWAP10Y

Observations: 190

R-squared	0.092514	Mean dependent var	0.005541
Adjusted R-squared	0.041817	S.D. dependent var	0.045682
S.E. of regression	0.044717	Sum squared resid	0.357925
Durbin-Watson stat	1.947110		

Equation: INSURERS = C(23) + C(24)*BANKS(-1) + C(25)*BANKS(-2) +
 C(26)*INSURERS(-1) + C(27)*INSURERS(-2) + C(28)
 *NONFINANCIALS(-1) + C(29)*NONFINANCIALS(-2) + C(30)*CRISIS +
 C(31)*DBRENT_PRICE + C(32)*DEURIBOR1M + C(33)*DSWAP10Y
 Instruments: C BANKS(-1) BANKS(-2) INSURERS(-1) INSURERS(-2)
 NONFINANCIALS(-1) NONFINANCIALS(-2) CRISIS DBRENT_PRICE
 DEURIBOR1M DSWAP10Y

Observations: 190

R-squared	0.124644	Mean dependent var	0.001528
Adjusted R-squared	0.075742	S.D. dependent var	0.074796
S.E. of regression	0.071908	Sum squared resid	0.925559
Durbin-Watson stat	2.002522		

4.6 Reduced VAR model estimated through OLS (only with significant variables)

Vector Autoregression Estimates
 Date: 12/17/16 Time: 11:56
 Sample (adjusted): 2000M09 2016M09
 Included observations: 189 after adjustments
 Standard errors in () & t-statistics in []

	BANKS	INSURERS	NONFINANC...
BANKS(-1)	0.267072 (0.13430) [1.98864]	0.141836 (0.15943) [0.88964]	-0.067911 (0.09731) [-0.69790]
BANKS(-2)	-0.108872 (0.13566) [-0.80256]	0.002251 (0.16104) [0.01398]	-0.080437 (0.09829) [-0.81835]
BANKS(-3)	0.270631 (0.13178) [2.05367]	0.150641 (0.15644) [0.96294]	0.111852 (0.09548) [1.17144]
INSURERS(-1)	-0.241960 (0.11193) [-2.16180]	-0.211426 (0.13287) [-1.59123]	-0.013286 (0.08110) [-0.16382]
INSURERS(-2)	-0.261704 (0.11410) [-2.29367]	-0.242673 (0.13545) [-1.79161]	-0.030371 (0.08267) [-0.36737]
INSURERS(-3)	-0.234506 (0.11667) [-2.01003]	-0.225602 (0.13850) [-1.62889]	-0.190854 (0.08453) [-2.25773]
NONFINANCIALS(-1)	0.188241 (0.15547) [1.21080]	0.199692 (0.18456) [1.08198]	0.141776 (0.11265) [1.25858]
NONFINANCIALS(-2)	0.334284 (0.15490) [2.15808]	0.181853 (0.18388) [0.98895]	0.056319 (0.11223) [0.50180]
NONFINANCIALS(-3)	0.240587 (0.15413) [1.56089]	0.322533 (0.18298) [1.76270]	0.270689 (0.11168) [2.42380]
C	0.002598 (0.00468) [0.55541]	0.000366 (0.00555) [0.06589]	0.005420 (0.00339) [1.59961]
DBRENT_PRICE	-3.39E-08 (5.7E-08) [-0.59943]	-5.33E-08 (6.7E-08) [-0.79452]	7.72E-09 (4.1E-08) [0.18860]
DSWAP10Y	9.529879 (2.53400) [3.76081]	10.29102 (3.00818) [3.42101]	6.896843 (1.83604) [3.75636]
R-squared	0.221374	0.140519	0.140349
Adj. R-squared	0.172985	0.087105	0.086924
Sum sq. resids	0.644781	0.908673	0.338504
S.E. equation	0.060356	0.071650	0.043732
F-statistic	4.574863	2.630753	2.627037
Log likelihood	268.6366	236.2159	329.5298
Akaike AIC	-2.715731	-2.372655	-3.360104
Schwarz SC	-2.509906	-2.166830	-3.154279
Mean dependent	0.004963	0.001585	0.005407
S.D. dependent	0.066369	0.074991	0.045766
Determinant resid covariance (dof adj.)		5.32E-09	
Determinant resid covariance		4.37E-09	
Log likelihood		1014.399	
Akaike information criterion		-10.35343	
Schwarz criterion		-9.735957	

4.7 VAR Lag Order Selection Criteria of the model presented in 4.6

VAR Lag Order Selection Criteria

Endogenous variables: BANKS INSURERS NONFINANCIALS

Exogenous variables: C DBRENT_PRICE DSWAP10Y

Date: 12/17/16 Time: 11:55

Sample: 2000M06 2016M09

Included observations: 184

Lag	LogL	LR	FPE	AIC	SC	HQ
0	971.0946	NA	5.77e-09	-10.45755	-10.30030*	-10.39381*
1	980.7754	18.73014	5.72e-09	-10.46495	-10.15045	-10.33748
2	992.1364	21.61069	5.58e-09	-10.49061	-10.01886	-10.29940
3	1001.634	17.75622	5.55e-09*	-10.49602*	-9.867012	-10.24108
4	1007.235	10.28961	5.76e-09	-10.45908	-9.672819	-10.14040
5	1009.989	4.968243	6.17e-09	-10.39118	-9.447670	-10.00877
6	1020.571	18.74865	6.08e-09	-10.40838	-9.307614	-9.962225
7	1022.421	3.218116	6.58e-09	-10.33067	-9.072648	-9.820776
8	1035.448	22.23057*	6.31e-09	-10.37444	-8.959166	-9.800810

* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

4.8 Reduced VAR model estimated through GMM-HAC (only with significant variables)

System: UNTITLED
 Estimation Method: Generalized Method of Moments
 Date: 12/17/16 Time: 12:00
 Sample: 2000M09 2016M09
 Included observations: 189
 Total system (balanced) observations 567
 Kernel: Bartlett, Bandwidth: Fixed (5), No prewhitening
 Linear estimation after one-step weighting matrix

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.002598	0.005031	0.516316	0.6058
C(2)	0.267072	0.195427	1.366606	0.1723
C(3)	-0.108872	0.149942	-0.726094	0.4681
C(4)	0.270631	0.126564	2.138293	0.0329
C(5)	-0.241960	0.153806	-1.573149	0.1163
C(6)	-0.261704	0.170666	-1.533428	0.1258
C(7)	-0.234506	0.094229	-2.488682	0.0131
C(8)	0.188241	0.217600	0.865077	0.3874
C(9)	0.334284	0.162442	2.057867	0.0401
C(10)	0.240587	0.159212	1.511107	0.1314
C(11)	-3.39E-08	9.79E-09	-3.459434	0.0006
C(12)	9.529879	2.663189	3.578371	0.0004
C(13)	0.000366	0.005536	0.066080	0.9473
C(14)	0.141836	0.178371	0.795175	0.4269
C(15)	0.002251	0.195774	0.011497	0.9908
C(16)	0.150641	0.129555	1.162763	0.2454
C(17)	-0.211426	0.137338	-1.539465	0.1243
C(18)	-0.242673	0.194722	-1.246248	0.2132
C(19)	-0.225602	0.124224	-1.816087	0.0699
C(20)	0.199692	0.227725	0.876903	0.3809
C(21)	0.181853	0.173320	1.049232	0.2945
C(22)	0.322533	0.201580	1.600023	0.1102
C(23)	-5.33E-08	6.97E-09	-7.644258	0.0000
C(24)	10.29102	3.640271	2.826993	0.0049
C(25)	0.005420	0.003361	1.612975	0.1073
C(26)	-0.067911	0.096659	-0.702589	0.4826
C(27)	-0.080437	0.117407	-0.685110	0.4936
C(28)	0.111852	0.082859	1.349909	0.1776
C(29)	-0.013286	0.068809	-0.193080	0.8470
C(30)	-0.030371	0.103315	-0.293962	0.7689
C(31)	-0.190854	0.069896	-2.730558	0.0065
C(32)	0.141776	0.118187	1.199592	0.2308
C(33)	0.056319	0.109923	0.512352	0.6086
C(34)	0.270689	0.107411	2.520133	0.0120
C(35)	7.72E-09	3.82E-09	2.020919	0.0438
C(36)	6.896843	2.036345	3.386874	0.0008
Determinant residual covariance		4.37E-09		
J-statistic		1.65E-24		

Equation: BANKS = C(1) + C(2)*BANKS(-1) + C(3)*BANKS(-2) + C(4)
 *BANKS(-3) + C(5)*INSURERS(-1) + C(6)*INSURERS(-2) + C(7)
 *INSURERS(-3) + C(8)*NONFINANCIALS(-1) + C(9)*NONFINANCIALS(-2) + C(10)*NONFINANCIALS(-3) + C(11)*DBRENT_PRICE + C(12)
 *DSWAP10Y

Instruments: C BANKS(-1) BANKS(-2) BANKS(-3) INSURERS(-1)
 INSURERS(-2) INSURERS(-3) NONFINANCIALS(-1) NONFINANCIALS(-2)
 NONFINANCIALS(-3) DBRENT_PRICE DSWAP10Y

Observations: 189			
R-squared	0.221374	Mean dependent var	0.004963
Adjusted R-squared	0.172985	S.D. dependent var	0.066369
S.E. of regression	0.060356	Sum squared resid	0.644781
Durbin-Watson stat	1.950728		

Equation: $INSURERS = C(13) + C(14)*BANKS(-1) + C(15)*BANKS(-2) + C(16)*BANKS(-3) + C(17)*INSURERS(-1) + C(18)*INSURERS(-2) + C(19)*INSURERS(-3) + C(20)*NONFINANCIALS(-1) + C(21)*NONFINANCIALS(-2) + C(22)*NONFINANCIALS(-3) + C(23)*DBRENT_PRICE + C(24)*DSWAP10Y$

Instruments: C BANKS(-1) BANKS(-2) BANKS(-3) INSURERS(-1) INSURERS(-2) INSURERS(-3) NONFINANCIALS(-1) NONFINANCIALS(-2) NONFINANCIALS(-3) DBRENT_PRICE DSWAP10Y

Observations: 189

R-squared	0.140519	Mean dependent var	0.001585
Adjusted R-squared	0.087105	S.D. dependent var	0.074991
S.E. of regression	0.071650	Sum squared resid	0.908673
Durbin-Watson stat	1.992982		

Equation: $NONFINANCIALS = C(25) + C(26)*BANKS(-1) + C(27)*BANKS(-2) + C(28)*BANKS(-3) + C(29)*INSURERS(-1) + C(30)*INSURERS(-2) + C(31)*INSURERS(-3) + C(32)*NONFINANCIALS(-1) + C(33)*NONFINANCIALS(-2) + C(34)*NONFINANCIALS(-3) + C(35)*DBRENT_PRICE + C(36)*DSWAP10Y$

Instruments: C BANKS(-1) BANKS(-2) BANKS(-3) INSURERS(-1) INSURERS(-2) INSURERS(-3) NONFINANCIALS(-1) NONFINANCIALS(-2) NONFINANCIALS(-3) DBRENT_PRICE DSWAP10Y

Observations: 189

R-squared	0.140349	Mean dependent var	0.005407
Adjusted R-squared	0.086924	S.D. dependent var	0.045766
S.E. of regression	0.043732	Sum squared resid	0.338504
Durbin-Watson stat	1.872678		

4.9 Granger causality Tests

4.9.1 Granger causality test from Insurers to banks

Wald Test:
System: {%system}

Test Statistic	Value	df	Probability
Chi-square	9.716863	3	0.0211

Null Hypothesis: $C(5)=C(6)=C(7)=0$
Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(5)	-0.241960	0.153806
C(6)	-0.261704	0.170666
C(7)	-0.234506	0.094229

Restrictions are linear in coefficients.

4.9.2 Granger causality test from non-financial companies to banks

Wald Test:
System: {%system}

Test Statistic	Value	df	Probability
Chi-square	5.964065	3	0.1134

Null Hypothesis: $C(8)=C(9)=C(10)=0$
Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(8)	0.188241	0.217600
C(9)	0.334284	0.162442
C(10)	0.240587	0.159212

Restrictions are linear in coefficients.

4.9.3 Granger causality test from banks to insurers

Wald Test:
System: {%system}

Test Statistic	Value	df	Probability
Chi-square	1.747472	3	0.6264

Null Hypothesis: $C(14)=C(15)=C(16)=0$
Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(14)	0.141836	0.178371
C(15)	0.002251	0.195774
C(16)	0.150641	0.129555

Restrictions are linear in coefficients.

4.9.4 Granger causality test from non-financial companies to insurers

Wald Test:
System: {%system}

Test Statistic	Value	df	Probability
Chi-square	3.345532	3	0.3414

Null Hypothesis: $C(20)=C(21)=C(22)=0$
Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(20)	0.199692	0.227725
C(21)	0.181853	0.173320
C(22)	0.322533	0.201580

Restrictions are linear in coefficients.

4.9.5 Granger causality test from banks to non-financial companies

Wald Test:
System: {%system}

Test Statistic	Value	df	Probability
Chi-square	2.989423	3	0.3933

Null Hypothesis: C(26)=C(27)=C(28)=0
Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(26)	-0.067911	0.096659
C(27)	-0.080437	0.117407
C(28)	0.111852	0.082859

Restrictions are linear in coefficients.

4.9.6 Granger causality test from insurers to non-financial companies

Wald Test:
System: {%system}

Test Statistic	Value	df	Probability
Chi-square	8.335172	3	0.0396

Null Hypothesis: C(29)=C(30)=C(31)=0
Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(29)	-0.013286	0.068809
C(30)	-0.030371	0.103315
C(31)	-0.190854	0.069896

Restrictions are linear in coefficients.

5. VAR model before crisis

5.1 VAR model with all variables

Vector Autoregression Estimates
 Date: 12/17/16 Time: 12:27
 Sample (adjusted): 2000M08 2007M12
 Included observations: 87 after adjustments
 Standard errors in () & t-statistics in []

	BANKS	INSURERS	NONFINANC...
BANKS(-1)	-0.421900 (0.22006) [-1.91724]	-0.568072 (0.35757) [-1.58868]	-0.590692 (0.21642) [-2.72941]
BANKS(-2)	0.016245 (0.22270) [0.07294]	0.496362 (0.36187) [1.37166]	-0.223392 (0.21902) [-1.01998]
INSURERS(-1)	0.138791 (0.12719) [1.09124]	0.074240 (0.20667) [0.35922]	0.198283 (0.12508) [1.58521]
INSURERS(-2)	0.014025 (0.12744) [0.11005]	-0.147371 (0.20707) [-0.71168]	0.099768 (0.12533) [0.79605]
NONFINANCIALS(-1)	0.300835 (0.17099) [1.75935]	0.533545 (0.27785) [1.92027]	0.237069 (0.16816) [1.40974]
NONFINANCIALS(-2)	-0.093971 (0.16442) [-0.57153]	-0.165421 (0.26717) [-0.61916]	-0.020446 (0.16170) [-0.12644]
C	0.014339 (0.00580) [2.47115]	0.001713 (0.00943) [0.18167]	0.012837 (0.00571) [2.24945]
DBRENT_PRICE	-0.000569 (0.00071) [-0.79556]	-0.001006 (0.00116) [-0.86627]	0.000613 (0.00070) [0.87252]
DEURIBOR1M	3.501924 (3.28619) [1.06565]	5.420770 (5.33980) [1.01516]	4.968953 (3.23185) [1.53749]
DSWAP10Y	12.49056 (3.10779) [4.01912]	17.66802 (5.04992) [3.49868]	11.07634 (3.05640) [3.62398]
R-squared	0.228870	0.197398	0.249091
Adj. R-squared	0.138738	0.103588	0.161322
Sum sq. resids	0.167533	0.442350	0.162039
S.E. equation	0.046645	0.075794	0.045874
F-statistic	2.539280	2.104223	2.838040
Log likelihood	148.5354	106.3003	149.9859
Akaike AIC	-3.184721	-2.213800	-3.218066
Schwarz SC	-2.901283	-1.930362	-2.934628
Mean dependent	0.008642	-0.001567	0.005370
S.D. dependent	0.050262	0.080054	0.050092
Determinant resid covariance (dof adj.)		3.02E-09	
Determinant resid covariance		2.09E-09	
Log likelihood		498.9751	
Akaike information criterion		-10.78104	
Schwarz criterion		-9.930723	

5.2 VAR Lag Order Selection Criteria

VAR Lag Order Selection Criteria

Endogenous variables: BANKS INSURERS NONFINANCIALS

Exogenous variables: C DBRENT_PRICE DEURIBOR1MDSWAP10Y

Date: 12/17/16 Time: 12:27

Sample: 2000M06 2007M12

Included observations: 81

Lag	LogL	LR	FPE	AIC	SC	HQ
0	461.7513	NA	3.02e-09	-11.10497	-10.75024*	-10.96265*
1	471.6163	18.02506	2.96e-09*	-11.12633*	-10.50555	-10.87726
2	479.3083	13.48471	3.06e-09	-11.09403	-10.20720	-10.73822
3	488.0674	14.70657	3.10e-09	-11.08808	-9.935201	-10.62553
4	491.9564	6.241632	3.54e-09	-10.96189	-9.542954	-10.39259
5	498.3842	9.840149	3.81e-09	-10.89838	-9.213394	-10.22234
6	510.8553	18.16773	3.55e-09	-10.98408	-9.033049	-10.20130
7	523.2142	17.08884*	3.34e-09	-11.06702	-8.849935	-10.17749
8	528.2796	6.628780	3.78e-09	-10.96987	-8.486734	-9.973601

* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

5.3 Autocorrelation LM test

VAR Residual Serial Correlation LMT...

Null Hypothesis: no serial correlation a...

Date: 12/17/16 Time: 12:27

Sample: 2000M06 2007M12

Included observations: 87

Lags	LM-Stat	Prob
1	15.65518	0.0744
2	5.517419	0.7871
3	7.571833	0.5778

Probs from chi-square with 9 df.

5.4 Heteroscedasticity White test

VAR Residual Heteroskedasticity Tests: Includes Cross Terms

Date: 12/17/16 Time: 12:27

Sample: 2000M06 2007M12

Included observations: 87

Joint test:		
Chi-sq	df	Prob.
383.2187	324	0.0131

Individual components:

Dependent	R-squared	F(54,32)	Prob.	Chi-sq(54)	Prob.
res1*res1	0.811733	2.555026	0.0028	70.62077	0.0640
res2*res2	0.772496	2.012168	0.0181	67.20718	0.1070
res3*res3	0.744670	1.728298	0.0496	64.78631	0.1494
res2*res1	0.790584	2.237140	0.0082	68.78077	0.0849
res3*res1	0.753597	1.812380	0.0368	65.56293	0.1346
res3*res2	0.761697	1.894124	0.0275	66.26762	0.1221

5.5 VAR model with all variables estimated through GMM-HAC

System: UNTITLED
 Estimation Method: Generalized Method of Moments
 Date: 12/17/16 Time: 12:31
 Sample: 2000M07 2007M12
 Included observations: 88
 Total system (balanced) observations 264
 Kernel: Bartlett, Bandwidth: Fixed (4), No prewhitening
 Linear estimation after one-step weighting matrix

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.014526	0.004434	3.276191	0.0012
C(2)	-0.383524	0.259244	-1.479396	0.1403
C(3)	0.136673	0.132721	1.029780	0.3041
C(4)	0.255927	0.194217	1.317739	0.1888
C(5)	-0.000574	0.000469	-1.224425	0.2220
C(6)	3.281415	4.608725	0.712001	0.4771
C(7)	12.20103	3.279641	3.720234	0.0002
C(8)	0.006098	0.007514	0.811496	0.4179
C(9)	-0.458929	0.375084	-1.223536	0.2223
C(10)	0.080378	0.180751	0.444692	0.6569
C(11)	0.368671	0.237772	1.550521	0.1223
C(12)	-0.000973	0.000641	-1.517059	0.1306
C(13)	6.448857	6.997645	0.921575	0.3577
C(14)	16.61867	6.840184	2.429565	0.0158
C(15)	0.011001	0.004847	2.269551	0.0241
C(16)	-0.586294	0.222604	-2.633795	0.0090
C(17)	0.190483	0.107658	1.769339	0.0781
C(18)	0.256139	0.131234	1.951768	0.0521
C(19)	0.000584	0.000562	1.038476	0.3001
C(20)	4.240295	2.828971	1.498882	0.1352
C(21)	11.27952	3.069488	3.674725	0.0003
Determinant residual covariance		2.48E-09		
J-statistic		1.47E-39		

Equation: $BANKS = C(1) + C(2)*BANKS(-1) + C(3)*INSURERS(-1) + C(4)*NONFINANCIALS(-1) + C(5)*DBRENT_PRICE + C(6)*DEURIBOR1M + C(7)*DSWAP10Y$

Instruments: C BANKS(-1) INSURERS(-1) NONFINANCIALS(-1) DBRENT_PRICE DEURIBOR1M DSWAP10Y

Observations: 88

R-squared	0.213718	Mean dependent var	0.009066
Adjusted R-squared	0.155475	S.D. dependent var	0.050130
S.E. of regression	0.046069	Sum squared resid	0.171908
Durbin-Watson stat	2.031942		

Equation: $INSURERS = C(8) + C(9)*BANKS(-1) + C(10)*INSURERS(-1) + C(11)*NONFINANCIALS(-1) + C(12)*DBRENT_PRICE + C(13)*DEURIBOR1M + C(14)*DSWAP10Y$

Instruments: C BANKS(-1) INSURERS(-1) NONFINANCIALS(-1) DBRENT_PRICE DEURIBOR1M DSWAP10Y

Observations: 88

R-squared	0.167351	Mean dependent var	-0.000899
Adjusted R-squared	0.105673	S.D. dependent var	0.079839
S.E. of regression	0.075503	Sum squared resid	0.461753
Durbin-Watson stat	2.087709		

Equation: $NONFINANCIALS = C(15) + C(16)*BANKS(-1) + C(17)*INSURERS(-1) + C(18)*NONFINANCIALS(-1) + C(19)*DBRENT_PRICE + C(20)*DEURIBOR1M + C(21)*DSWAP10Y$

Instruments: C BANKS(-1) INSURERS(-1) NONFINANCIALS(-1) DBRENT_PRICE DEURIBOR1M DSWAP10Y

Observations: 88

R-squared	0.227995	Mean dependent var	0.005401
Adjusted R-squared	0.170810	S.D. dependent var	0.049804
S.E. of regression	0.045351	Sum squared resid	0.166597
Durbin-Watson stat	1.884751		

5.6 Reduced VAR model estimated through OLS (only with significant variables)

Vector Autoregression Estimates

Date: 12/17/16 Time: 12:38

Sample (adjusted): 2000M08 2007M12

Included observations: 89 after adjustments

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

	BANKS	INSURERS	NONFINANC...
BANKS(-1)	-0.328435 (0.21815) [-1.50556]	-0.450965 (0.34843) [-1.29427]	-0.550418 (0.21049) [-2.61498]
BANKS(-2)	-0.012839 (0.22142) [-0.05799]	0.483094 (0.35366) [1.36599]	-0.185667 (0.21364) [-0.86905]
INSURERS(-1)	0.121933 (0.12845) [0.94926]	0.049942 (0.20516) [0.24343]	0.193625 (0.12394) [1.56227]
INSURERS(-2)	0.025164 (0.12772) [0.19703]	-0.149838 (0.20400) [-0.73452]	0.088471 (0.12323) [0.71791]
NONFINANCIALS(-1)	0.205372 (0.16871) [1.21731]	0.420983 (0.26947) [1.56228]	0.225086 (0.16278) [1.38273]
NONFINANCIALS(-2)	-0.099842 (0.16519) [-0.60442]	-0.157366 (0.26384) [-0.59645]	-0.035070 (0.15938) [-0.22003]
C	0.011746 (0.00575) [2.04291]	-0.001781 (0.00918) [-0.19391]	0.012879 (0.00555) [2.32155]
DSWAP10Y	11.41223 (3.07658) [3.70939]	16.72837 (4.91400) [3.40423]	11.50257 (2.96852) [3.87484]
R-squared	0.173813	0.159513	0.222523
Adj. R-squared	0.102414	0.086879	0.155334
Sum sq. resids	0.181706	0.463555	0.169165
S.E. equation	0.047363	0.075650	0.045700
F-statistic	2.434387	2.196104	3.311887
Log likelihood	149.3477	107.6718	152.5299
Akaike AIC	-3.176352	-2.239815	-3.247862
Schwarz SC	-2.952654	-2.016117	-3.024164
Mean dependent	0.007903	-0.001590	0.005901
S.D. dependent	0.049992	0.079167	0.049725
Determinant resid covariance (dof adj.)		3.23E-09	
Determinant resid covariance		2.43E-09	
Log likelihood		503.7876	
Akaike information criterion		-10.78174	
Schwarz criterion		-10.11065	

5.7 VAR Lag Order Selection Criteria of the model presented in 5.6

VAR Lag Order Selection Criteria
Endogenous variables: BANKS INSURERS NONFINANCIALS
Exogenous variables: C DSWAP10Y
Date: 12/17/16 Time: 12:39
Sample: 2000M06 2007M12
Included observations: 83

Lag	LogL	LR	FPE	AIC	SC	HQ
0	468.5482	NA	2.90e-09*	-11.14574*	-10.97088*	-11.07549*
1	476.2691	14.51168	2.99e-09	-11.11492	-10.67778	-10.93930
2	483.9638	13.90594	3.09e-09	-11.08346	-10.38404	-10.80247
3	492.2158	14.31687	3.15e-09	-11.06544	-10.10373	-10.67908
4	495.2823	5.098356	3.66e-09	-10.92246	-9.698472	-10.43073
5	501.5963	10.04156	3.93e-09	-10.85774	-9.371466	-10.26064
6	513.1546	17.54642	3.74e-09	-10.91939	-9.170829	-10.21692
7	524.9785	17.09475*	3.55e-09	-10.98743	-8.976590	-10.17959
8	529.2936	5.926713	4.06e-09	-10.87454	-8.601416	-9.961328

* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

5.8 Reduced VAR model estimated through GMM-HAC (only with significant variables)

System: UNTITLED
 Estimation Method: Generalized Method of Moments
 Date: 12/17/16 Time: 12:40
 Sample: 2000M07 2007M12
 Included observations: 90
 Total system (balanced) observations 270
 Kernel: Bartlett, Bandwidth: Fixed (4), No prewhitening
 Linear estimation after one-step weighting matrix

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.011553	0.004812	2.401062	0.0171
C(2)	-0.295964	0.262614	-1.126989	0.2608
C(3)	0.119250	0.140083	0.851280	0.3954
C(4)	0.167221	0.197045	0.848645	0.3969
C(5)	11.05803	3.404407	3.248152	0.0013
C(6)	0.002850	0.007771	0.366695	0.7142
C(7)	-0.355172	0.380091	-0.934441	0.3510
C(8)	0.060367	0.192201	0.314081	0.7537
C(9)	0.267531	0.248171	1.078012	0.2820
C(10)	15.94914	6.716322	2.374683	0.0183
C(11)	0.011091	0.004644	2.388384	0.0177
C(12)	-0.544317	0.219914	-2.475133	0.0140
C(13)	0.185431	0.109838	1.688223	0.0926
C(14)	0.237218	0.137528	1.724866	0.0858
C(15)	11.47167	3.076511	3.728792	0.0002
Determinant residual covariance		2.87E-09		
J-statistic		-1.00E-41		

Equation: $BANKS = C(1) + C(2)*BANKS(-1) + C(3)*INSURERS(-1) + C(4)*NONFINANCIALS(-1) + C(5)*DSWAP10Y$

Instruments: C BANKS(-1) INSURERS(-1) NONFINANCIALS(-1) DSWAP10Y

Observations: 90

R-squared	0.158147	Mean dependent var	0.008326
Adjusted R-squared	0.118531	S.D. dependent var	0.049872
S.E. of regression	0.046823	Sum squared resid	0.186357
Durbin-Watson stat	1.955135		

Equation: $INSURERS = C(6) + C(7)*BANKS(-1) + C(8)*INSURERS(-1) + C(9)*NONFINANCIALS(-1) + C(10)*DSWAP10Y$

Instruments: C BANKS(-1) INSURERS(-1) NONFINANCIALS(-1) DSWAP10Y

Observations: 90

R-squared	0.130556	Mean dependent var	-0.000937
Adjusted R-squared	0.089641	S.D. dependent var	0.078964
S.E. of regression	0.075342	Sum squared resid	0.482496
Durbin-Watson stat	2.002075		

Equation: $NONFINANCIALS = C(11) + C(12)*BANKS(-1) + C(13)*INSURERS(-1) + C(14)*NONFINANCIALS(-1) + C(15)*DSWAP10Y$

Instruments: C BANKS(-1) INSURERS(-1) NONFINANCIALS(-1) DSWAP10Y

Observations: 90

R-squared	0.205320	Mean dependent var	0.005926
Adjusted R-squared	0.167923	S.D. dependent var	0.049445
S.E. of regression	0.045103	Sum squared resid	0.172913
Durbin-Watson stat	1.935847		

5.9 Granger causality

5.9.1 Granger causality test from Insurers to banks

Wald Test:
System: {%system}

Test Statistic	Value	df	Probability
Chi-square	0.724677	1	0.3946

Null Hypothesis: C(3)=0
Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(3)	0.119250	0.140083

Restrictions are linear in coefficients.

5.9.2 Granger causality test from non-financial companies to banks

Wald Test:
System: {%system}

Test Statistic	Value	df	Probability
Chi-square	0.720199	1	0.3961

Null Hypothesis: C(4)=0
Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(4)	0.167221	0.197045

Restrictions are linear in coefficients.

5.9.3 Granger causality test from banks to insurers

Wald Test:
System: {%system}

Test Statistic	Value	df	Probability
Chi-square	0.873179	1	0.3501

Null Hypothesis: C(7)=0
Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(7)	-0.355172	0.380091

Restrictions are linear in coefficients.

5.9.4 Granger causality test from non-financial companies to insurers

Wald Test:
System: {%system}

Test Statistic	Value	df	Probability
Chi-square	1.162109	1	0.2810

Null Hypothesis: C(9)=0
Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(9)	0.267531	0.248171

Restrictions are linear in coefficients.

5.9.5 Granger causality test from banks to non-financial companies

Wald Test:
System: {%system}

Test Statistic	Value	df	Probability
Chi-square	6.126283	1	0.0133

Null Hypothesis: C(12)=0
Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(12)	-0.544317	0.219914

Restrictions are linear in coefficients.

5.9.6 Granger causality test from insurers to non-financial companies

Wald Test:
System: {%system}

Test Statistic	Value	df	Probability
Chi-square	2.850096	1	0.0914

Null Hypothesis: C(13)=0
Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(13)	0.185431	0.109838

Restrictions are linear in coefficients.

6. VAR model after crisis

6.1 VAR model with all variables

Vector Autoregression Estimates

Date: 12/17/16 Time: 12:53

Sample: 2008M01 2016M09

Included observations: 103

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

	BANKS	INSURERS	NONFINANC...
BANKS(-1)	0.487322 (0.19911) [2.44747]	0.447232 (0.18601) [2.40431]	0.107120 (0.12173) [0.87999]
BANKS(-2)	0.086651 (0.20694) [0.41873]	0.213029 (0.19332) [1.10194]	-0.010729 (0.12651) [-0.08481]
INSURERS(-1)	-0.495838 (0.20422) [-2.42794]	-0.435788 (0.19079) [-2.28418]	-0.074611 (0.12485) [-0.59760]
INSURERS(-2)	-0.616059 (0.20592) [-2.99175]	-0.568867 (0.19237) [-2.95714]	-0.074853 (0.12589) [-0.59460]
NONFINANCIALS(-1)	0.163263 (0.26775) [0.60976]	0.045495 (0.25013) [0.18189]	0.056582 (0.16369) [0.34567]
NONFINANCIALS(-2)	0.499792 (0.26925) [1.85622]	0.091604 (0.25154) [0.36418]	0.082567 (0.16461) [0.50160]
C	0.006441 (0.00745) [0.86448]	0.009639 (0.00696) [1.38469]	0.006489 (0.00456) [1.42455]
DBRENT_PRICE	-2.20E-08 (6.5E-08) [-0.34035]	-4.86E-08 (6.0E-08) [-0.80494]	1.31E-08 (3.9E-08) [0.33154]
DEURIBOR1M	4.327881 (3.92920) [1.10147]	2.752744 (3.67068) [0.74993]	-1.127814 (2.40213) [-0.46951]
DSWAP10Y	8.982521 (3.96655) [2.26457]	7.284598 (3.70558) [1.96585]	4.468686 (2.42497) [1.84278]
R-squared	0.278021	0.237308	0.077156
Adj. R-squared	0.208152	0.163499	-0.012152
Sum sq. resids	0.441032	0.384907	0.164838
S.E. equation	0.068864	0.064333	0.042100
F-statistic	3.979181	3.215167	0.863934
Log likelihood	134.6977	141.7076	185.3818
Akaike AIC	-2.421315	-2.557430	-3.405472
Schwarz SC	-2.165516	-2.301631	-3.149673
Mean dependent	0.002284	0.004142	0.005686
S.D. dependent	0.077388	0.070340	0.041847
Determinant resid covariance (dof adj.)		3.48E-09	
Determinant resid covariance		2.56E-09	
Log likelihood		580.3735	
Akaike information criterion		-10.68686	
Schwarz criterion		-9.919467	

6.2 VAR Lag Order Selection Criteria

VAR Lag Order Selection Criteria
 Endogenous variables: BANKS INSURERS NONFINANCIALS
 Exogenous variables: C DBRENT_PRICE DEURIBOR1M DSWAP10Y
 Date: 12/17/16 Time: 12:53
 Sample: 2008M01 2016M09
 Included observations: 103

Lag	LogL	LR	FPE	AIC	SC	HQ
0	554.7922	NA	5.31e-09	-10.53965	-10.23270*	-10.41533*
1	561.2358	12.01126	5.59e-09	-10.49001	-9.952837	-10.27244
2	580.3735	34.55933	4.59e-09*	-10.68686*	-9.919467	-10.37604
3	586.3039	10.36380	4.89e-09	-10.62726	-9.629643	-10.22319
4	597.4718	18.86627*	4.70e-09	-10.66936	-9.441521	-10.17204
5	601.3985	6.404674	5.22e-09	-10.57084	-9.112791	-9.980283
6	607.2958	9.275430	5.58e-09	-10.51060	-8.822326	-9.826790
7	610.5099	4.867835	6.30e-09	-10.39825	-8.479758	-9.621195
8	620.0859	13.94566	6.31e-09	-10.40943	-8.260723	-9.539133

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

6.3 Autocorrelation LM test

VAR Residual Serial Correlation LMT...
 Null Hypothesis: no serial correlation a...
 Date: 12/17/16 Time: 12:54
 Sample: 2008M01 2016M09
 Included observations: 103

Lags	LM-Stat	Prob
1	6.262573	0.7134
2	16.24972	0.0618
3	12.33220	0.1952

Probs from chi-square with 9 df.

6.4 Heteroscedasticity White test

VAR Residual Heteroskedasticity Tests: Includes Cross Terms
 Date: 12/17/16 Time: 12:54
 Sample: 2008M01 2016M09
 Included observations: 103

Joint test:		
Chi-sq	df	Prob.
398.7292	324	0.0029

Individual components:					
Dependent	R-squared	F(54,48)	Prob.	Chi-sq(54)	Prob.
res1*res1	0.638180	1.567826	0.0575	65.73252	0.1315
res2*res2	0.770515	2.984514	0.0001	79.36302	0.0139
res3*res3	0.669506	1.800684	0.0200	68.95907	0.0827
res2*res1	0.674521	1.842131	0.0165	69.47569	0.0764
res3*res1	0.638464	1.569755	0.0570	65.76177	0.1310
res3*res2	0.720136	2.287258	0.0021	74.17401	0.0356

6.5 VAR model with all variables estimated through GMM-HAC

System: UNTITLED
 Estimation Method: Generalized Method of Moments
 Date: 12/17/16 Time: 12:56
 Sample: 2008M01 2016M09
 Included observations: 103
 Total system (balanced) observations 309
 Kernel: Bartlett, Bandwidth: Fixed (5), No prewhitening
 Linear estimation after one-step weighting matrix

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.006441	0.007498	0.859063	0.3910
C(2)	0.487322	0.228132	2.136139	0.0335
C(3)	0.086651	0.199218	0.434954	0.6639
C(4)	-0.495838	0.248615	-1.994401	0.0471
C(5)	-0.616059	0.279652	-2.202948	0.0284
C(6)	0.163263	0.315541	0.517406	0.6053
C(7)	0.499792	0.218635	2.285964	0.0230
C(8)	-2.20E-08	8.47E-09	-2.596077	0.0099
C(9)	4.327881	3.584089	1.207526	0.2283
C(10)	8.982521	4.181866	2.147970	0.0326
C(11)	0.009639	0.006632	1.453453	0.1472
C(12)	0.447232	0.151728	2.947597	0.0035
C(13)	0.213029	0.220045	0.968112	0.3338
C(14)	-0.435788	0.173875	-2.506327	0.0128
C(15)	-0.568867	0.251067	-2.265802	0.0242
C(16)	0.045495	0.350866	0.129666	0.8969
C(17)	0.091604	0.199016	0.460286	0.6457
C(18)	-4.86E-08	7.21E-09	-6.736594	0.0000
C(19)	2.752744	2.447113	1.124894	0.2616
C(20)	7.284598	4.041607	1.802401	0.0726
C(21)	0.006489	0.004723	1.373870	0.1706
C(22)	0.107120	0.096716	1.107565	0.2690
C(23)	-0.010729	0.131955	-0.081309	0.9353
C(24)	-0.074611	0.103204	-0.722953	0.4703
C(25)	-0.074853	0.145521	-0.514382	0.6074
C(26)	0.056582	0.194252	0.291281	0.7711
C(27)	0.082567	0.132067	0.625192	0.5324
C(28)	1.31E-08	5.09E-09	2.572875	0.0106
C(29)	-1.127814	1.828488	-0.616801	0.5379
C(30)	4.468686	2.540742	1.758812	0.0797
Determinant residual covariance		2.56E-09		
J-statistic		6.46E-26		

Equation: $BANKS = C(1) + C(2)*BANKS(-1) + C(3)*BANKS(-2) + C(4)*INSURERS(-1) + C(5)*INSURERS(-2) + C(6)*NONFINANCIALS(-1) + C(7)*NONFINANCIALS(-2) + C(8)*DBRENT_PRICE + C(9)*DEURIBOR1M + C(10)*DSWAP10Y$
 Instruments: C BANKS(-1) BANKS(-2) INSURERS(-1) INSURERS(-2) NONFINANCIALS(-1) NONFINANCIALS(-2) DBRENT_PRICE DEURIBOR1M DSWAP10Y

Observations: 103

R-squared	0.278021	Mean dependent var	0.002284
Adjusted R-squared	0.208152	S.D. dependent var	0.077388
S.E. of regression	0.068864	Sum squared resid	0.441032
Durbin-Watson stat	1.897255		

Equation: $INSURERS = C(11) + C(12)*BANKS(-1) + C(13)*BANKS(-2) + C(14)*INSURERS(-1) + C(15)*INSURERS(-2) + C(16)*NONFINANCIALS(-1) + C(17)*NONFINANCIALS(-2) + C(18)*DBRENT_PRICE + C(19)*DEURIBOR1M + C(20)*DSWAP10Y$
 Instruments: C BANKS(-1) BANKS(-2) INSURERS(-1) INSURERS(-2) NONFINANCIALS(-1) NONFINANCIALS(-2) DBRENT_PRICE DEURIBOR1M DSWAP10Y

Observations: 103

R-squared	0.237308	Mean dependent var	0.004142
Adjusted R-squared	0.163499	S.D. dependent var	0.070340
S.E. of regression	0.064333	Sum squared resid	0.384907
Durbin-Watson stat	1.926221		

Equation: $NONFINANCIALS = C(21) + C(22)*BANKS(-1) + C(23)*BANKS(-2) + C(24)*INSURERS(-1) + C(25)*INSURERS(-2) + C(26)*NONFINANCIALS(-1) + C(27)*NONFINANCIALS(-2) + C(28)*DBRENT_PRICE + C(29)*DEURIBOR1M + C(30)*DSWAP10Y$
 Instruments: C BANKS(-1) BANKS(-2) INSURERS(-1) INSURERS(-2) NONFINANCIALS(-1) NONFINANCIALS(-2) DBRENT_PRICE DEURIBOR1M DSWAP10Y

Observations: 103

R-squared	0.077156	Mean dependent var	0.005686
Adjusted R-squared	-0.012152	S.D. dependent var	0.041847
S.E. of regression	0.042100	Sum squared resid	0.164838
Durbin-Watson stat	1.914977		

6.6 Reduced VAR model estimated through OLS (only with significant variables)

Vector Autoregression Estimates
 Date: 12/17/16 Time: 13:01
 Sample: 2008M01 2016M09
 Included observations: 103
 Standard errors in () & t-statistics in []

	BANKS	INSURERS	NONFINANC...
BANKS(-1)	0.439827 (0.21188) [2.07583]	0.423972 (0.19927) [2.12764]	0.146816 (0.12823) [1.14494]
BANKS(-2)	0.131013 (0.21260) [0.61623]	0.304231 (0.19995) [1.52155]	0.072034 (0.12867) [0.55984]
BANKS(-3)	0.187593 (0.20670) [0.90757]	0.206687 (0.19440) [1.06322]	0.096998 (0.12510) [0.77539]
BANKS(-4)	-0.359637 (0.20778) [-1.73082]	-0.179430 (0.19542) [-0.91819]	-0.164814 (0.12575) [-1.31062]
INSURERS(-1)	-0.407167 (0.21037) [-1.93548]	-0.422736 (0.19785) [-2.13667]	-0.075686 (0.12732) [-0.59447]
INSURERS(-2)	-0.513139 (0.21215) [-2.41871]	-0.500557 (0.19953) [-2.50872]	-0.043633 (0.12840) [-0.33983]
INSURERS(-3)	-0.078313 (0.22317) [-0.35091]	-0.089485 (0.20989) [-0.42635]	0.010949 (0.13506) [0.08107]
INSURERS(-4)	0.635020 (0.22796) [2.78568]	0.552081 (0.21439) [2.57512]	0.447666 (0.13796) [3.24485]
NONFINANCIALS(-1)	0.181745 (0.27274) [0.66636]	0.091884 (0.25651) [0.35821]	0.026819 (0.16506) [0.16247]
NONFINANCIALS(-2)	0.325869 (0.27750) [1.17431]	-0.071049 (0.26098) [-0.27224]	-0.084026 (0.16794) [-0.50032]
NONFINANCIALS(-3)	0.169320 (0.28152) [0.60145]	-0.139418 (0.26476) [-0.52658]	-0.075493 (0.17038) [-0.44310]
NONFINANCIALS(-4)	-0.236054 (0.28501) [-0.82824]	-0.267258 (0.26804) [-0.99707]	-0.415944 (0.17249) [-2.41144]
C	0.003923 (0.00740) [0.53038]	0.009542 (0.00696) [1.37166]	0.008975 (0.00448) [2.00484]
DBRENT_PRICE	-7.83E-08 (6.5E-08) [-1.21010]	-9.67E-08 (6.1E-08) [-1.58898]	-2.37E-08 (3.9E-08) [-0.60397]
DSWAP10Y	10.10369 (3.79052) [2.66552]	7.681831 (3.56490) [2.15485]	4.182917 (2.29404) [1.82338]
R-squared	0.368125	0.323500	0.208494
Adj. R-squared	0.267599	0.215875	0.082572
Sum sq. resids	0.385991	0.341409	0.141378
S.E. equation	0.066229	0.062287	0.040082
F-statistic	3.662004	3.005806	1.655744
Log likelihood	141.5629	147.8836	193.2882
Akaike AIC	-2.457531	-2.580264	-3.461907
Schwarz SC	-2.073833	-2.196566	-3.078208
Mean dependent	0.002284	0.004142	0.005686
S.D. dependent	0.077388	0.070340	0.041847
Determinant resid covariance (dof adj.)		3.02E-09	
Determinant resid covariance		1.88E-09	
Log likelihood		596.2114	
Akaike information criterion		-10.70313	
Schwarz criterion		-9.552038	

6.7 VAR Lag Order Selection Criteria of the model presented in 6.6

VAR Lag Order Selection Criteria
Endogenous variables: BANKS INSURERS NONFINANCIALS
Exogenous variables: C DBRENT_PRICE DSWAP10Y
Date: 12/17/16 Time: 12:59
Sample: 2008M01 2016M09
Included observations: 103

Lag	LogL	LR	FPE	AIC	SC	HQ
0	551.4989	NA	5.34e-09	-10.53396	-10.30374*	-10.44071*
1	558.8746	13.89203	5.52e-09	-10.50242	-10.04198	-10.31593
2	577.0698	33.21062	4.62e-09	-10.68097	-9.990309	-10.40123
3	583.6016	11.54172	4.85e-09	-10.63304	-9.712165	-10.26005
4	596.2114	21.54674*	4.54e-09*	-10.70313*	-9.552038	-10.23690
5	600.0769	6.379963	5.04e-09	-10.60343	-9.222120	-10.04395
6	604.6923	7.348760	5.52e-09	-10.51830	-8.906763	-9.865570
7	607.9835	5.048764	6.22e-09	-10.40745	-8.565695	-9.661475
8	618.0460	14.84945	6.17e-09	-10.42808	-8.356106	-9.588858

* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

6.8 Reduced VAR model estimated through GMM-HAC (only with significant variables)

System: UNTITLED
 Estimation Method: Generalized Method of Moments
 Date: 12/17/16 Time: 13:08
 Sample: 2008M01 2016M09
 Included observations: 103
 Total system (balanced) observations 309
 Kernel: Bartlett, Bandwidth: Fixed (5), No prewhitening
 Linear estimation after one-step weighting matrix

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.003923	0.007878	0.497971	0.6189
C(2)	0.439827	0.226351	1.943121	0.0531
C(3)	0.131013	0.212941	0.615255	0.5389
C(4)	0.187593	0.233421	0.803669	0.4223
C(5)	-0.359637	0.181183	-1.984946	0.0482
C(6)	-0.407167	0.224483	-1.813801	0.0708
C(7)	-0.513139	0.261960	-1.958844	0.0512
C(8)	-0.078313	0.205411	-0.381248	0.7033
C(9)	0.635020	0.168536	3.767866	0.0002
C(10)	0.181745	0.325194	0.558880	0.5767
C(11)	0.325869	0.175196	1.860023	0.0640
C(12)	0.169320	0.219581	0.771105	0.4413
C(13)	-0.236054	0.247797	-0.952612	0.3417
C(14)	-7.83E-08	1.62E-08	-4.847529	0.0000
C(15)	10.10369	4.046416	2.496947	0.0131
C(16)	0.009542	0.006323	1.509148	0.1325
C(17)	0.423972	0.165585	2.560449	0.0110
C(18)	0.304231	0.239033	1.272761	0.2042
C(19)	0.206687	0.201654	1.024955	0.3063
C(20)	-0.179430	0.173090	-1.036626	0.3009
C(21)	-0.422736	0.164846	-2.564439	0.0109
C(22)	-0.500557	0.208514	-2.400588	0.0171
C(23)	-0.089485	0.171983	-0.520310	0.6033
C(24)	0.552081	0.179369	3.077905	0.0023
C(25)	0.091884	0.341955	0.268701	0.7884
C(26)	-0.071049	0.241835	-0.293790	0.7691
C(27)	-0.139418	0.213863	-0.651904	0.5150
C(28)	-0.267258	0.253892	-1.052643	0.2935
C(29)	-9.67E-08	1.76E-08	-5.480559	0.0000
C(30)	7.681831	3.903849	1.967758	0.0501
C(31)	0.008975	0.004342	2.067211	0.0397
C(32)	0.146816	0.110464	1.329087	0.1850
C(33)	0.072034	0.111318	0.647101	0.5181
C(34)	0.096998	0.124538	0.778866	0.4368
C(35)	-0.164814	0.078798	-2.091595	0.0374
C(36)	-0.075686	0.084470	-0.896017	0.3711
C(37)	-0.043633	0.135557	-0.321881	0.7478
C(38)	0.010949	0.124299	0.088089	0.9299
C(39)	0.447666	0.115852	3.864124	0.0001
C(40)	0.026819	0.182086	0.147286	0.8830
C(41)	-0.084026	0.108728	-0.772809	0.4403
C(42)	-0.075493	0.120786	-0.625017	0.5325
C(43)	-0.415944	0.155769	-2.670263	0.0080
C(44)	-2.37E-08	1.29E-08	-1.837245	0.0673
C(45)	4.182917	2.452942	1.705265	0.0893
Determinant residual covariance		1.88E-09		
J-statistic		-1.65E-24		

Equation: $BANKS = C(1) + C(2)*BANKS(-1) + C(3)*BANKS(-2) + C(4) *BANKS(-3) + C(5)*BANKS(-4) + C(6)*INSURERS(-1) + C(7) *INSURERS(-2) + C(8)*INSURERS(-3) + C(9)*INSURERS(-4) + C(10) *NONFINANCIALS(-1) + C(11)*NONFINANCIALS(-2) + C(12) *NONFINANCIALS(-3) + C(13)*NONFINANCIALS(-4) + C(14) *DBRENT_PRICE + C(15)*DSWAP10Y$

Instruments: C BANKS(-1) BANKS(-2) BANKS(-3) BANKS(-4) INSURERS(-1) INSURERS(-2) INSURERS(-3) INSURERS(-4) NONFINANCIALS(-1) NONFINANCIALS(-2) NONFINANCIALS(-3) NONFINANCIALS(-4) DBRENT_PRICE DSWAP10Y

Observations: 103

R-squared	0.368125	Mean dependent var	0.002284
Adjusted R-squared	0.267599	S.D. dependent var	0.077388
S.E. of regression	0.066229	Sum squared resid	0.385991
Durbin-Watson stat	1.903373		

Equation: $INSURERS = C(16) + C(17)*BANKS(-1) + C(18)*BANKS(-2) + C(19)*BANKS(-3) + C(20)*BANKS(-4) + C(21)*INSURERS(-1) + C(22) *INSURERS(-2) + C(23)*INSURERS(-3) + C(24)*INSURERS(-4) + C(25)*NONFINANCIALS(-1) + C(26)*NONFINANCIALS(-2) + C(27) *NONFINANCIALS(-3) + C(28)*NONFINANCIALS(-4) + C(29) *DBRENT_PRICE + C(30)*DSWAP10Y$

Instruments: C BANKS(-1) BANKS(-2) BANKS(-3) BANKS(-4) INSURERS(-1) INSURERS(-2) INSURERS(-3) INSURERS(-4) NONFINANCIALS(-1) NONFINANCIALS(-2) NONFINANCIALS(-3) NONFINANCIALS(-4) DBRENT_PRICE DSWAP10Y

Observations: 103

R-squared	0.323500	Mean dependent var	0.004142
Adjusted R-squared	0.215875	S.D. dependent var	0.070340
S.E. of regression	0.062287	Sum squared resid	0.341409
Durbin-Watson stat	1.951547		

Equation: $NONFINANCIALS = C(31) + C(32)*BANKS(-1) + C(33)*BANKS(-2) + C(34)*BANKS(-3) + C(35)*BANKS(-4) + C(36)*INSURERS(-1) + C(37) *INSURERS(-2) + C(38)*INSURERS(-3) + C(39)*INSURERS(-4) + C(40)*NONFINANCIALS(-1) + C(41)*NONFINANCIALS(-2) + C(42) *NONFINANCIALS(-3) + C(43)*NONFINANCIALS(-4) + C(44) *DBRENT_PRICE + C(45)*DSWAP10Y$

Instruments: C BANKS(-1) BANKS(-2) BANKS(-3) BANKS(-4) INSURERS(-1) INSURERS(-2) INSURERS(-3) INSURERS(-4) NONFINANCIALS(-1) NONFINANCIALS(-2) NONFINANCIALS(-3) NONFINANCIALS(-4) DBRENT_PRICE DSWAP10Y

Observations: 103

R-squared	0.208494	Mean dependent var	0.005686
Adjusted R-squared	0.082572	S.D. dependent var	0.041847
S.E. of regression	0.040082	Sum squared resid	0.141378
Durbin-Watson stat	1.883009		

6.9 Granger causality

6.9.1 Granger causality test from Insurers to banks

Wald Test:
System: {%system}

Test Statistic	Value	df	Probability
Chi-square	20.37896	4	0.0004

Null Hypothesis: $C(6)=C(7)=C(8)=C(9)=0$
Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(6)	-0.407167	0.224483
C(7)	-0.513139	0.261960
C(8)	-0.078313	0.205411
C(9)	0.635020	0.168536

Restrictions are linear in coefficients.

6.9.2 Granger causality test from non-financial companies to banks

Wald Test:
System: {%system}

Test Statistic	Value	df	Probability
Chi-square	6.636368	4	0.1564

Null Hypothesis: $C(10)=C(11)=C(12)=C(13)=0$
Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(10)	0.181745	0.325194
C(11)	0.325869	0.175196
C(12)	0.169320	0.219581
C(13)	-0.236054	0.247797

Restrictions are linear in coefficients.

6.9.3 Granger causality test from banks to insurers

Wald Test:
System: {%system}

Test Statistic	Value	df	Probability
Chi-square	12.30136	4	0.0152

Null Hypothesis: $C(17)=C(18)=C(19)=C(20)=0$
Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(17)	0.423972	0.165585
C(18)	0.304231	0.239033
C(19)	0.206687	0.201654
C(20)	-0.179430	0.173090

Restrictions are linear in coefficients.

6.9.4 Granger causality test from non-financial companies to insurers

Wald Test:
System: {%system}

Test Statistic	Value	df	Probability
Chi-square	1.605680	4	0.8078

Null Hypothesis: $C(25)=C(26)=C(27)=C(28)=0$
Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(25)	0.091884	0.341955
C(26)	-0.071049	0.241835
C(27)	-0.139418	0.213863
C(28)	-0.267258	0.253892

Restrictions are linear in coefficients.

6.9.5 Granger causality test from banks to non-financial companies

Wald Test:
System: {%system}

Test Statistic	Value	df	Probability
Chi-square	7.822287	4	0.0983

Null Hypothesis: C(32)=C(33)=C(34)=C(35)=0
Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(32)	0.146816	0.110464
C(33)	0.072034	0.111318
C(34)	0.096998	0.124538
C(35)	-0.164814	0.078798

Restrictions are linear in coefficients.

6.9.6 Granger causality test from insurers to non-financial companies

Wald Test:
System: {%system}

Test Statistic	Value	df	Probability
Chi-square	19.55460	4	0.0006

Null Hypothesis: C(36)=C(37)=C(38)=C(39)=0
Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(36)	-0.075686	0.084470
C(37)	-0.043633	0.135557
C(38)	0.010949	0.124299
C(39)	0.447666	0.115852

Restrictions are linear in coefficients.

7. VAR model with split non-financial industries

7.1 Reduced VAR model estimated through GMM-HAC (only with significant variables) – Full sample

System: UNTITLED
 Estimation Method: Generalized Method of Moments
 Date: 01/06/17 Time: 18:33
 Sample: 2000M07 2016M09
 Included observations: 195
 Total system (unbalanced) observations 1559
 Kernel: Bartlett, Bandwidth: Fixed (5), No prewhitening
 Linear estimation after one-step weighting matrix

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.000653	0.005506	0.118564	0.9056
C(2)	0.296218	0.274138	1.080545	0.2801
C(3)	-0.351025	0.151824	-2.312044	0.0209
C(4)	0.016340	0.200363	0.081552	0.9350
C(5)	0.186447	0.141900	1.313932	0.1891
C(6)	0.164789	0.118789	1.387234	0.1656
C(7)	0.342497	0.141781	2.415678	0.0158
C(8)	0.214201	0.097357	2.200164	0.0279
C(9)	-0.372448	0.133837	-2.782856	0.0055
C(10)	-0.003028	0.005705	-0.530730	0.5957
C(11)	0.184289	0.242923	0.758628	0.4482
C(12)	-0.389157	0.155231	-2.506962	0.0123
C(13)	0.087103	0.173800	0.501169	0.6163
C(14)	0.212540	0.159338	1.333900	0.1824
C(15)	0.284795	0.161587	1.762485	0.0782
C(16)	0.439177	0.129866	3.381773	0.0007
C(17)	0.014992	0.094745	0.158230	0.8743
C(18)	-0.253131	0.141524	-1.788615	0.0739
C(19)	0.010415	0.004434	2.349029	0.0190
C(20)	0.171437	0.137806	1.244047	0.2137
C(21)	0.013023	0.080271	0.162242	0.8711
C(22)	0.056440	0.131255	0.430002	0.6673
C(23)	-0.101495	0.119214	-0.851371	0.3947
C(24)	0.081489	0.118824	0.685802	0.4929
C(25)	0.211097	0.107877	1.956827	0.0506
C(26)	0.016679	0.088797	0.187834	0.8510
C(27)	-0.179399	0.124841	-1.437016	0.1509
C(28)	0.005552	0.005321	1.043464	0.2969
C(29)	-0.002791	0.208780	-0.013368	0.9893
C(30)	-0.060740	0.114702	-0.529548	0.5965
C(31)	0.071473	0.163729	0.436533	0.6625
C(32)	-0.005894	0.153289	-0.038450	0.9693
C(33)	0.170118	0.130457	1.304015	0.1924
C(34)	0.479386	0.131033	3.658516	0.0003
C(35)	0.018572	0.096763	0.191937	0.8478
C(36)	-0.134682	0.094500	-1.425218	0.1543
C(37)	0.006825	0.002908	2.346512	0.0191
C(38)	0.009814	0.068092	0.144125	0.8854
C(39)	-0.091152	0.061300	-1.486990	0.1372
C(40)	0.098853	0.057759	1.711469	0.0872
C(41)	0.087267	0.078034	1.118318	0.2636
C(42)	0.001245	0.078903	0.015784	0.9874
C(43)	0.159973	0.055587	2.877884	0.0041
C(44)	0.020598	0.056639	0.363680	0.7161
C(45)	-0.099886	0.080043	-1.247901	0.2123
C(46)	-0.001162	0.003946	-0.294571	0.7684
C(47)	-0.096253	0.170908	-0.563186	0.5734
C(48)	-0.148693	0.092827	-1.601837	0.1094
C(49)	0.102003	0.104483	0.976259	0.3291
C(50)	0.055291	0.140237	0.394268	0.6934
C(51)	0.117878	0.092583	1.273208	0.2031
C(52)	0.211457	0.132907	1.591013	0.1118
C(53)	0.155203	0.075744	2.049059	0.0406
C(54)	-0.222755	0.100423	-2.218161	0.0267
C(55)	0.006592	0.004392	1.500965	0.1336
C(56)	0.098124	0.145733	0.673311	0.5009
C(57)	-0.135163	0.102479	-1.318929	0.1874
C(58)	0.003280	0.104810	0.031297	0.9750
C(59)	0.057948	0.104498	0.554533	0.5793
C(60)	-0.022795	0.101927	-0.223645	0.8231
C(61)	0.275859	0.108454	2.543565	0.0111
C(62)	0.120945	0.088608	1.364947	0.1725
C(63)	-0.013241	0.105355	-0.125677	0.9000
C(64)	0.002319	0.003927	0.590547	0.5549
C(65)	0.063962	0.131164	0.487648	0.6259
C(66)	-0.043466	0.089941	-0.483271	0.6290
C(67)	0.105354	0.082281	1.280412	0.2006
C(68)	0.059780	0.096365	0.620350	0.5351
C(69)	0.112463	0.110463	1.018105	0.3088
C(70)	0.262084	0.083441	3.140934	0.0017
C(71)	-0.003544	0.076399	-0.046389	0.9630
C(72)	-0.236530	0.087336	-2.708279	0.0068
Determinant residual covariance		1.93E-23		
J-statistic		0.000000		

Equation: $BANKS = C(1) + C(2)*BANKS(-1) + C(3)*INSURERS(-1) + C(4)*REAL_ESTATE(-1) + C(5)*FIN_SERVICES(-1) + C(6)*HEALTH_CARE(-1) + C(7)*TELECOM(-1) + C(8)*UTILITIES(-1) + C(9)*OIL_GAS(-1)$
 Instruments: C BANKS(-1) INSURERS(-1) REAL_ESTATE(-1) FIN_SERVICES(-1) HEALTH_CARE(-1) TELECOM(-1) UTILITIES(-1) OIL_GAS(-1)
 Observations: 195

R-squared	0.157358	Mean dependent var	0.005035
Adjusted R-squared	0.121116	S.D. dependent var	0.065646
S.E. of regression	0.061542	Sum squared resid	0.704458
Durbin-Watson stat	1.944192		

Equation: $INSURERS = C(10) + C(11)*BANKS(-1) + C(12)*INSURERS(-1) + C(13)*REAL_ESTATE(-1) + C(14)*FIN_SERVICES(-1) + C(15)*HEALTH_CARE(-1) + C(16)*TELECOM(-1) + C(17)*UTILITIES(-1) + C(18)*OIL_GAS(-1)$
 Instruments: C BANKS(-1) INSURERS(-1) REAL_ESTATE(-1) FIN_SERVICES(-1) HEALTH_CARE(-1) TELECOM(-1) UTILITIES(-1) OIL_GAS(-1)
 Observations: 195

R-squared	0.131700	Mean dependent var	0.001789
Adjusted R-squared	0.094353	S.D. dependent var	0.073986
S.E. of regression	0.070409	Sum squared resid	0.922076
Durbin-Watson stat	2.002643		

Equation: $REAL_ESTATE = C(19) + C(20)*BANKS(-1) + C(21)*INSURERS(-1) + C(22)*REAL_ESTATE(-1) + C(23)*FIN_SERVICES(-1) + C(24)*HEALTH_CARE(-1) + C(25)*TELECOM(-1) + C(26)*UTILITIES(-1) + C(27)*OIL_GAS(-1)$
 Instruments: C BANKS(-1) INSURERS(-1) REAL_ESTATE(-1) FIN_SERVICES(-1) HEALTH_CARE(-1) TELECOM(-1) UTILITIES(-1) OIL_GAS(-1)
 Observations: 195

R-squared	0.084300	Mean dependent var	0.011492
Adjusted R-squared	0.044915	S.D. dependent var	0.051570
S.E. of regression	0.050399	Sum squared resid	0.472443
Durbin-Watson stat	1.943615		

Equation: $FIN_SERVICES = C(28) + C(29)*BANKS(-1) + C(30)*INSURERS(-1) + C(31)*REAL_ESTATE(-1) + C(32)*FIN_SERVICES(-1) + C(33)*HEALTH_CARE(-1) + C(34)*TELECOM(-1) + C(35)*UTILITIES(-1) + C(36)*OIL_GAS(-1)$
 Instruments: C BANKS(-1) INSURERS(-1) REAL_ESTATE(-1) FIN_SERVICES(-1) HEALTH_CARE(-1) TELECOM(-1) UTILITIES(-1) OIL_GAS(-1)
 Observations: 195

R-squared	0.134794	Mean dependent var	0.007757
Adjusted R-squared	0.097581	S.D. dependent var	0.062869
S.E. of regression	0.059723	Sum squared resid	0.663429
Durbin-Watson stat	1.910742		

Equation: $HEALTH_CARE = C(37) + C(38)*BANKS(-1) + C(39)*INSURERS(-1) + C(40)*REAL_ESTATE(-1) + C(41)*FIN_SERVICES(-1) + C(42)*HEALTH_CARE(-1) + C(43)*TELECOM(-1) + C(44)*UTILITIES(-1) + C(45)*OIL_GAS(-1)$
 Instruments: C BANKS(-1) INSURERS(-1) REAL_ESTATE(-1) FIN_SERVICES(-1) HEALTH_CARE(-1) TELECOM(-1) UTILITIES(-1) OIL_GAS(-1)
 Observations: 195

R-squared	0.067601	Mean dependent var	0.008411
Adjusted R-squared	0.027498	S.D. dependent var	0.037152
S.E. of regression	0.036638	Sum squared resid	0.249677
Durbin-Watson stat	1.928963		

Equation: $TELECOM = C(46) + C(47)*BANKS(-1) + C(48)*INSURERS(-1) + C(49)*REAL_ESTATE(-1) + C(50)*FIN_SERVICES(-1) + C(51)*HEALTH_CARE(-1) + C(52)*TELECOM(-1) + C(53)*UTILITIES(-1) + C(54)*OIL_GAS(-1)$
 Instruments: C BANKS(-1) INSURERS(-1) REAL_ESTATE(-1) FIN_SERVICES(-1) HEALTH_CARE(-1) TELECOM(-1) UTILITIES(-1) OIL_GAS(-1)
 Observations: 194

R-squared	0.076973	Mean dependent var	0.001394
Adjusted R-squared	0.037058	S.D. dependent var	0.049098
S.E. of regression	0.048180	Sum squared resid	0.429441
Durbin-Watson stat	2.019548		

Equation: $UTILITIES = C(55) + C(56)*BANKS(-1) + C(57)*INSURERS(-1) + C(58)*REAL_ESTATE(-1) + C(59)*FIN_SERVICES(-1) + C(60)*HEALTH_CARE(-1) + C(61)*TELECOM(-1) + C(62)*UTILITIES(-1) + C(63)*OIL_GAS(-1)$
 Instruments: C BANKS(-1) INSURERS(-1) REAL_ESTATE(-1) FIN_SERVICES(-1) HEALTH_CARE(-1) TELECOM(-1) UTILITIES(-1) OIL_GAS(-1)
 Observations: 195

R-squared	0.101635	Mean dependent var	0.008342
Adjusted R-squared	0.062995	S.D. dependent var	0.052794
S.E. of regression	0.051104	Sum squared resid	0.485758
Durbin-Watson stat	1.998359		

Equation: $OIL_GAS = C(64) + C(65)*BANKS(-1) + C(66)*INSURERS(-1) + C(67)*REAL_ESTATE(-1) + C(68)*FIN_SERVICES(-1) + C(69)*HEALTH_CARE(-1) + C(70)*TELECOM(-1) + C(71)*UTILITIES(-1) + C(72)*OIL_GAS(-1)$
 Instruments: C BANKS(-1) INSURERS(-1) REAL_ESTATE(-1) FIN_SERVICES(-1) HEALTH_CARE(-1) TELECOM(-1) UTILITIES(-1) OIL_GAS(-1)
 Observations: 195

R-squared	0.112105	Mean dependent var	0.004425
Adjusted R-squared	0.073916	S.D. dependent var	0.050408
S.E. of regression	0.048509	Sum squared resid	0.437678
Durbin-Watson stat	1.921654		

7.2 Reduced VAR model estimated through GMM-HAC (only with significant variables) – Before the crisis

System: UNTITLED
 Estimation Method: Generalized Method of Moments
 Date: 01/06/17 Time: 18:32
 Sample: 2000M07 2007M12
 Included observations: 90
 Total system (balanced) observations 720
 Kernel: Bartlett, Bandwidth: Fixed (4), No prewhitening
 Linear estimation after one-step weighting matrix

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.004216	0.004729	0.891489	0.3730
C(2)	-0.556819	0.267161	-2.084208	0.0375
C(3)	-0.091144	0.148401	-0.614171	0.5393
C(4)	0.339778	0.127161	2.672035	0.0077
C(5)	0.281537	0.194873	1.444721	0.1490
C(6)	0.343622	0.184818	1.859248	0.0634
C(7)	0.266372	0.098600	2.701550	0.0071
C(8)	0.100870	0.131088	0.769484	0.4419
C(9)	-0.274336	0.127381	-2.153664	0.0316
C(10)	-0.007465	0.008090	-0.922758	0.3565
C(11)	-0.607046	0.389257	-1.559497	0.1194
C(12)	-0.275109	0.227331	-1.210166	0.2267
C(13)	0.425001	0.185122	2.295781	0.0220
C(14)	0.219916	0.340231	0.646372	0.5183
C(15)	0.898934	0.326841	2.750368	0.0061
C(16)	0.479830	0.100057	4.795584	0.0000
C(17)	0.066841	0.186139	0.359090	0.7196
C(18)	-0.352143	0.146863	-2.397757	0.0168
C(19)	0.013131	0.005398	2.432412	0.0153
C(20)	-0.107739	0.234395	-0.459648	0.6459
C(21)	0.097701	0.111414	0.876919	0.3809
C(22)	0.227660	0.117438	1.938558	0.0530
C(23)	0.008596	0.164306	0.052319	0.9583
C(24)	0.120298	0.178849	0.672624	0.5014
C(25)	0.088767	0.096370	0.921107	0.3573
C(26)	-0.061275	0.131491	-0.465999	0.6414
C(27)	-0.130946	0.131990	-0.992090	0.3215
C(28)	0.004176	0.007531	0.554583	0.5794
C(29)	-0.824416	0.322099	-2.559512	0.0107
C(30)	0.087906	0.176729	0.497407	0.6191
C(31)	0.394525	0.161265	2.446435	0.0147
C(32)	0.175911	0.254693	0.690677	0.4900
C(33)	0.420432	0.216279	1.943935	0.0523
C(34)	0.468046	0.120404	3.887288	0.0001
C(35)	0.126465	0.148041	0.854258	0.3933
C(36)	-0.214572	0.147243	-1.457268	0.1455
C(37)	0.000158	0.004255	0.037232	0.9703
C(38)	0.045791	0.157415	0.290893	0.7712
C(39)	-0.208291	0.101522	-2.051676	0.0406
C(40)	0.195085	0.087744	2.223347	0.0265
C(41)	0.087456	0.149455	0.585166	0.5586
C(42)	0.162494	0.147016	1.105278	0.2694
C(43)	0.106989	0.058589	1.826088	0.0683
C(44)	0.077913	0.090049	0.865231	0.3872
C(45)	-0.136438	0.089383	-1.526431	0.1274
C(46)	-0.004273	0.005873	-0.727627	0.4671
C(47)	-1.092053	0.420230	-2.598700	0.0096
C(48)	0.068675	0.160145	0.428832	0.6682
C(49)	0.271364	0.151945	1.785932	0.0746
C(50)	0.326572	0.298787	1.092993	0.2748
C(51)	0.243067	0.169972	1.430045	0.1532
C(52)	0.240197	0.101341	2.370195	0.0181
C(53)	0.461783	0.142566	3.239088	0.0013
C(54)	-0.612959	0.217288	-2.820945	0.0049
C(55)	0.020359	0.006054	3.363115	0.0008
C(56)	-0.333373	0.227570	-1.464926	0.1434
C(57)	0.160203	0.118137	1.356077	0.1755
C(58)	0.001530	0.135856	0.011261	0.9910
C(59)	-0.037065	0.172902	-0.214367	0.8303
C(60)	0.114457	0.187421	0.610695	0.5416
C(61)	0.224822	0.081863	2.746311	0.0062
C(62)	0.221873	0.130603	1.698839	0.0898
C(63)	-0.134545	0.130384	-1.031911	0.3025
C(64)	0.003725	0.005130	0.726093	0.4680
C(65)	-0.184626	0.199533	-0.925294	0.3552
C(66)	-0.012526	0.107606	-0.116404	0.9074
C(67)	0.098264	0.122606	0.801464	0.4232
C(68)	0.064441	0.165616	0.389099	0.6973
C(69)	0.346093	0.167670	2.064127	0.0394
C(70)	0.199562	0.075979	2.626553	0.0088
C(71)	0.145235	0.099969	1.452795	0.1468
C(72)	-0.293606	0.120874	-2.429032	0.0154
Determinant residual covariance	2.71E-24			
J-statistic	3.44E-41			

Equation: $BANKS = C(1) + C(2)*BANKS(-1) + C(3)*INSURERS(-1) + C(4)*REAL_ESTATE(-1) + C(5)*FIN_SERVICES(-1) + C(6)*HEALTH_CARE(-1) + C(7)*TELECOM(-1) + C(8)*UTILITIES(-1) + C(9)*OIL_GAS(-1)$
 Instruments: C BANKS(-1) INSURERS(-1) REAL_ESTATE(-1) FIN_SERVICES(-1) HEALTH_CARE(-1) TELECOM(-1) UTILITIES(-1) OIL_GAS(-1)
 Observations: 90

R-squared	0.220055	Mean dependent var	0.008326
Adjusted R-squared	0.143024	S.D. dependent var	0.049872
S.E. of regression	0.046168	Sum squared resid	0.172653
Durbin-Watson stat	1.941068		

Equation: $INSURERS = C(10) + C(11)*BANKS(-1) + C(12)*INSURERS(-1) + C(13)*REAL_ESTATE(-1) + C(14)*FIN_SERVICES(-1) + C(15)*HEALTH_CARE(-1) + C(16)*TELECOM(-1) + C(17)*UTILITIES(-1) + C(18)*OIL_GAS(-1)$
 Instruments: C BANKS(-1) INSURERS(-1) REAL_ESTATE(-1) FIN_SERVICES(-1) HEALTH_CARE(-1) TELECOM(-1) UTILITIES(-1) OIL_GAS(-1)
 Observations: 90

R-squared	0.232246	Mean dependent var	-0.000937
Adjusted R-squared	0.156419	S.D. dependent var	0.078964
S.E. of regression	0.072526	Sum squared resid	0.426063
Durbin-Watson stat	2.036771		

Equation: $REAL_ESTATE = C(19) + C(20)*BANKS(-1) + C(21)*INSURERS(-1) + C(22)*REAL_ESTATE(-1) + C(23)*FIN_SERVICES(-1) + C(24)*HEALTH_CARE(-1) + C(25)*TELECOM(-1) + C(26)*UTILITIES(-1) + C(27)*OIL_GAS(-1)$
 Instruments: C BANKS(-1) INSURERS(-1) REAL_ESTATE(-1) FIN_SERVICES(-1) HEALTH_CARE(-1) TELECOM(-1) UTILITIES(-1) OIL_GAS(-1)
 Observations: 90

R-squared	0.102589	Mean dependent var	0.014031
Adjusted R-squared	0.013956	S.D. dependent var	0.041375
S.E. of regression	0.041085	Sum squared resid	0.136726
Durbin-Watson stat	1.977605		

Equation: $FIN_SERVICES = C(28) + C(29)*BANKS(-1) + C(30)*INSURERS(-1) + C(31)*REAL_ESTATE(-1) + C(32)*FIN_SERVICES(-1) + C(33)*HEALTH_CARE(-1) + C(34)*TELECOM(-1) + C(35)*UTILITIES(-1) + C(36)*OIL_GAS(-1)$
 Instruments: C BANKS(-1) INSURERS(-1) REAL_ESTATE(-1) FIN_SERVICES(-1) HEALTH_CARE(-1) TELECOM(-1) UTILITIES(-1) OIL_GAS(-1)
 Observations: 90

R-squared	0.237367	Mean dependent var	0.006900
Adjusted R-squared	0.162045	S.D. dependent var	0.066991
S.E. of regression	0.061323	Sum squared resid	0.304606
Durbin-Watson stat	1.887373		

Equation: $HEALTH_CARE = C(37) + C(38)*BANKS(-1) + C(39)*INSURERS(-1) + C(40)*REAL_ESTATE(-1) + C(41)*FIN_SERVICES(-1) + C(42)*HEALTH_CARE(-1) + C(43)*TELECOM(-1) + C(44)*UTILITIES(-1) + C(45)*OIL_GAS(-1)$
 Instruments: C BANKS(-1) INSURERS(-1) REAL_ESTATE(-1) FIN_SERVICES(-1) HEALTH_CARE(-1) TELECOM(-1) UTILITIES(-1) OIL_GAS(-1)
 Observations: 90

R-squared	0.122311	Mean dependent var	0.005771
Adjusted R-squared	0.035626	S.D. dependent var	0.034760
S.E. of regression	0.034135	Sum squared resid	0.094383
Durbin-Watson stat	1.876607		

Equation: $TELECOM = C(46) + C(47)*BANKS(-1) + C(48)*INSURERS(-1) + C(49)*REAL_ESTATE(-1) + C(50)*FIN_SERVICES(-1) + C(51)*HEALTH_CARE(-1) + C(52)*TELECOM(-1) + C(53)*UTILITIES(-1) + C(54)*OIL_GAS(-1)$
 Instruments: C BANKS(-1) INSURERS(-1) REAL_ESTATE(-1) FIN_SERVICES(-1) HEALTH_CARE(-1) TELECOM(-1) UTILITIES(-1) OIL_GAS(-1)
 Observations: 90

R-squared	0.277769	Mean dependent var	-0.001156
Adjusted R-squared	0.206437	S.D. dependent var	0.062843
S.E. of regression	0.055982	Sum squared resid	0.253853
Durbin-Watson stat	2.137985		

Equation: $UTILITIES = C(55) + C(56)*BANKS(-1) + C(57)*INSURERS(-1) + C(58)*REAL_ESTATE(-1) + C(59)*FIN_SERVICES(-1) + C(60)*HEALTH_CARE(-1) + C(61)*TELECOM(-1) + C(62)*UTILITIES(-1) + C(63)*OIL_GAS(-1)$
 Instruments: C BANKS(-1) INSURERS(-1) REAL_ESTATE(-1) FIN_SERVICES(-1) HEALTH_CARE(-1) TELECOM(-1) UTILITIES(-1) OIL_GAS(-1)
 Observations: 90

R-squared	0.126751	Mean dependent var	0.021056
Adjusted R-squared	0.040504	S.D. dependent var	0.047366
S.E. of regression	0.046397	Sum squared resid	0.174364
Durbin-Watson stat	1.906746		

Equation: $OIL_GAS = C(64) + C(65)*BANKS(-1) + C(66)*INSURERS(-1) + C(67)*REAL_ESTATE(-1) + C(68)*FIN_SERVICES(-1) + C(69)*HEALTH_CARE(-1) + C(70)*TELECOM(-1) + C(71)*UTILITIES(-1) + C(72)*OIL_GAS(-1)$
 Instruments: C BANKS(-1) INSURERS(-1) REAL_ESTATE(-1) FIN_SERVICES(-1) HEALTH_CARE(-1) TELECOM(-1) UTILITIES(-1) OIL_GAS(-1)
 Observations: 90

R-squared	0.145115	Mean dependent var	0.006907
Adjusted R-squared	0.060681	S.D. dependent var	0.044572
S.E. of regression	0.043199	Sum squared resid	0.151156
Durbin-Watson stat	2.014111		

7.3 Reduced VAR model estimated through GMM-HAC (only with significant variables) – After the crisis

System: UNTITLED
 Estimation Method: Generalized Method of Moments
 Date: 01/06/17 Time: 18:34
 Sample: 2008M01 2016M09
 Included observations: 105
 Total system (unbalanced) observations 839
 Kernel: Bartlett, Bandwidth: Fixed (5), No prewhitening
 Linear estimation after one-step weighting matrix

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.002948	0.007622	0.386754	0.6990
C(2)	0.601067	0.310351	1.936733	0.0531
C(3)	-0.584684	0.225833	-2.589009	0.0098
C(4)	-0.174684	0.257118	-0.679392	0.4971
C(5)	0.161484	0.198511	0.813480	0.4162
C(6)	-0.039595	0.149841	-0.264244	0.7917
C(7)	1.065060	0.247167	4.309074	0.0000
C(8)	0.344223	0.162264	2.121373	0.0342
C(9)	-0.538826	0.193506	-2.784539	0.0055
C(10)	0.003641	0.006343	0.574051	0.5661
C(11)	0.446377	0.228587	1.952768	0.0512
C(12)	-0.491196	0.194892	-2.520356	0.0119
C(13)	-0.094625	0.251360	-0.376451	0.7067
C(14)	0.199150	0.183630	1.084514	0.2785
C(15)	-0.065636	0.148982	-0.440565	0.6597
C(16)	0.817216	0.306380	2.667330	0.0078
C(17)	0.103988	0.119868	0.867520	0.3859
C(18)	-0.306210	0.204416	-1.497972	0.1346
C(19)	0.010083	0.005816	1.733690	0.0834
C(20)	0.368637	0.156236	2.359488	0.0185
C(21)	-0.171017	0.182587	-0.936633	0.3492
C(22)	-0.006749	0.195040	-0.034601	0.9724
C(23)	-0.266652	0.175100	-1.522852	0.1282
C(24)	-0.039382	0.143833	-0.273806	0.7843
C(25)	0.823154	0.272822	3.017189	0.0026
C(26)	0.081227	0.125584	0.646791	0.5180
C(27)	-0.241411	0.151571	-1.592730	0.1116
C(28)	0.008292	0.006153	1.347660	0.1782
C(29)	0.340795	0.195994	1.738799	0.0825
C(30)	-0.221453	0.155686	-1.422436	0.1553
C(31)	-0.058758	0.183612	-0.320010	0.7490
C(32)	-0.183286	0.211191	-0.867872	0.3857
C(33)	-0.018786	0.156543	-0.120007	0.9045
C(34)	0.908677	0.227423	3.995533	0.0001
C(35)	-0.017772	0.136574	-0.130130	0.8965
C(36)	-0.141837	0.140039	-1.012841	0.3115
C(37)	0.010022	0.003600	2.783878	0.0055
C(38)	-0.020245	0.102781	-0.196970	0.8439
C(39)	0.022456	0.095323	0.235576	0.8138
C(40)	-0.023697	0.076964	-0.307892	0.7582
C(41)	0.101688	0.133194	0.763456	0.4454
C(42)	-0.076267	0.091540	-0.833148	0.4050
C(43)	0.407525	0.110691	3.681633	0.0002
C(44)	0.030280	0.077084	0.392817	0.6946
C(45)	-0.145014	0.129084	-1.123409	0.2616
C(46)	0.003695	0.003319	1.113379	0.2659
C(47)	0.229020	0.086877	2.636155	0.0086
C(48)	-0.276567	0.078088	-3.541751	0.0004
C(49)	0.035304	0.081457	0.433403	0.6648
C(50)	-0.096836	0.124789	-0.775996	0.4380
C(51)	-0.012666	0.095473	-0.132662	0.8945
C(52)	0.399290	0.102860	3.881882	0.0001
C(53)	-0.001294	0.061010	-0.021208	0.9831
C(54)	-0.039097	0.097578	-0.400671	0.6888
C(55)	-0.004155	0.005289	-0.785475	0.4324
C(56)	0.242511	0.180031	1.347053	0.1784
C(57)	-0.350500	0.157366	-2.227293	0.0262
C(58)	0.034022	0.160057	0.212561	0.8317
C(59)	0.109972	0.160194	0.686490	0.4926
C(60)	-0.084513	0.122156	-0.691849	0.4892
C(61)	0.689779	0.207319	3.327129	0.0009
C(62)	-0.019146	0.115414	-0.165889	0.8683
C(63)	0.004259	0.129925	0.032778	0.9739
C(64)	-0.000653	0.005822	-0.112127	0.9108
C(65)	0.135875	0.165135	0.822813	0.4109
C(66)	-0.050818	0.172359	-0.294841	0.7682
C(67)	0.080240	0.128168	0.626054	0.5315
C(68)	0.068554	0.147236	0.465604	0.6416
C(69)	0.006791	0.148394	0.045761	0.9635
C(70)	0.628985	0.202507	3.105997	0.0020
C(71)	-0.118282	0.116653	-1.013963	0.3109
C(72)	-0.278486	0.116116	-2.398336	0.0167
Determinant residual covariance	5.00E-24			
J-statistic	-1.12E-43			

Equation: $BANKS = C(1) + C(2)*BANKS(-1) + C(3)*INSURERS(-1) + C(4)*REAL_ESTATE(-1) + C(5)*FIN_SERVICES(-1) + C(6)*HEALTH_CARE(-1) + C(7)*TELECOM(-1) + C(8)*UTILITIES(-1) + C(9)*OIL_GAS(-1)$
 Instruments: C BANKS(-1) INSURERS(-1) REAL_ESTATE(-1) FIN_SERVICES(-1) HEALTH_CARE(-1) TELECOM(-1) UTILITIES(-1) OIL_GAS(-1)

Observations: 105

R-squared	0.307710	Mean dependent var	0.002214
Adjusted R-squared	0.250020	S.D. dependent var	0.076764
S.E. of regression	0.066478	Sum squared resid	0.424259
Durbin-Watson stat	1.883446		

Equation: $INSURERS = C(10) + C(11)*BANKS(-1) + C(12)*INSURERS(-1) + C(13)*REAL_ESTATE(-1) + C(14)*FIN_SERVICES(-1) + C(15)*HEALTH_CARE(-1) + C(16)*TELECOM(-1) + C(17)*UTILITIES(-1) + C(18)*OIL_GAS(-1)$

Instruments: C BANKS(-1) INSURERS(-1) REAL_ESTATE(-1) FIN_SERVICES(-1) HEALTH_CARE(-1) TELECOM(-1) UTILITIES(-1) OIL_GAS(-1)

Observations: 105

R-squared	0.204454	Mean dependent var	0.004125
Adjusted R-squared	0.138158	S.D. dependent var	0.069735
S.E. of regression	0.064738	Sum squared resid	0.402342
Durbin-Watson stat	2.003043		

Equation: $REAL_ESTATE = C(19) + C(20)*BANKS(-1) + C(21)*INSURERS(-1) + C(22)*REAL_ESTATE(-1) + C(23)*FIN_SERVICES(-1) + C(24)*HEALTH_CARE(-1) + C(25)*TELECOM(-1) + C(26)*UTILITIES(-1) + C(27)*OIL_GAS(-1)$

Instruments: C BANKS(-1) INSURERS(-1) REAL_ESTATE(-1) FIN_SERVICES(-1) HEALTH_CARE(-1) TELECOM(-1) UTILITIES(-1) OIL_GAS(-1)

Observations: 105

R-squared	0.205307	Mean dependent var	0.009316
Adjusted R-squared	0.139083	S.D. dependent var	0.059039
S.E. of regression	0.054780	Sum squared resid	0.288078
Durbin-Watson stat	1.994456		

Equation: $FIN_SERVICES = C(28) + C(29)*BANKS(-1) + C(30)*INSURERS(-1) + C(31)*REAL_ESTATE(-1) + C(32)*FIN_SERVICES(-1) + C(33)*HEALTH_CARE(-1) + C(34)*TELECOM(-1) + C(35)*UTILITIES(-1) + C(36)*OIL_GAS(-1)$

Instruments: C BANKS(-1) INSURERS(-1) REAL_ESTATE(-1) FIN_SERVICES(-1) HEALTH_CARE(-1) TELECOM(-1) UTILITIES(-1) OIL_GAS(-1)

Observations: 105

R-squared	0.212812	Mean dependent var	0.008492
Adjusted R-squared	0.147213	S.D. dependent var	0.059424
S.E. of regression	0.054876	Sum squared resid	0.289096
Durbin-Watson stat	1.835727		

Equation: $HEALTH_CARE = C(37) + C(38)*BANKS(-1) + C(39)*INSURERS(-1) + C(40)*REAL_ESTATE(-1) + C(41)*FIN_SERVICES(-1) + C(42)*HEALTH_CARE(-1) + C(43)*TELECOM(-1) + C(44)*UTILITIES(-1) + C(45)*OIL_GAS(-1)$

Instruments: C BANKS(-1) INSURERS(-1) REAL_ESTATE(-1) FIN_SERVICES(-1) HEALTH_CARE(-1) TELECOM(-1) UTILITIES(-1) OIL_GAS(-1)

Observations: 105

R-squared	0.124925	Mean dependent var	0.010675
Adjusted R-squared	0.052002	S.D. dependent var	0.039110
S.E. of regression	0.038080	Sum squared resid	0.139205
Durbin-Watson stat	1.982481		

Equation: $TELECOM = C(46) + C(47)*BANKS(-1) + C(48)*INSURERS(-1) + C(49)*REAL_ESTATE(-1) + C(50)*FIN_SERVICES(-1) + C(51)*HEALTH_CARE(-1) + C(52)*TELECOM(-1) + C(53)*UTILITIES(-1) + C(54)*OIL_GAS(-1)$

Instruments: C BANKS(-1) INSURERS(-1) REAL_ESTATE(-1) FIN_SERVICES(-1) HEALTH_CARE(-1) TELECOM(-1) UTILITIES(-1) OIL_GAS(-1)

Observations: 104

R-squared	0.156810	Mean dependent var	0.003601
Adjusted R-squared	0.085804	S.D. dependent var	0.033075
S.E. of regression	0.031624	Sum squared resid	0.095009
Durbin-Watson stat	1.932757		

Equation: $UTILITIES = C(55) + C(56)*BANKS(-1) + C(57)*INSURERS(-1) + C(58)*REAL_ESTATE(-1) + C(59)*FIN_SERVICES(-1) + C(60)*HEALTH_CARE(-1) + C(61)*TELECOM(-1) + C(62)*UTILITIES(-1) + C(63)*OIL_GAS(-1)$

Instruments: C BANKS(-1) INSURERS(-1) REAL_ESTATE(-1) FIN_SERVICES(-1) HEALTH_CARE(-1) TELECOM(-1) UTILITIES(-1) OIL_GAS(-1)

Observations: 105

R-squared	0.210155	Mean dependent var	-0.002557
Adjusted R-squared	0.144335	S.D. dependent var	0.054949
S.E. of regression	0.050829	Sum squared resid	0.248026
Durbin-Watson stat	2.010235		

Equation: $OIL_GAS = C(64) + C(65)*BANKS(-1) + C(66)*INSURERS(-1) + C(67)*REAL_ESTATE(-1) + C(68)*FIN_SERVICES(-1) + C(69)*HEALTH_CARE(-1) + C(70)*TELECOM(-1) + C(71)*UTILITIES(-1) + C(72)*OIL_GAS(-1)$

Instruments: C BANKS(-1) INSURERS(-1) REAL_ESTATE(-1) FIN_SERVICES(-1) HEALTH_CARE(-1) TELECOM(-1) UTILITIES(-1) OIL_GAS(-1)

Observations: 105

R-squared	0.180489	Mean dependent var	0.002297
Adjusted R-squared	0.112196	S.D. dependent var	0.055043
S.E. of regression	0.051864	Sum squared resid	0.258224
Durbin-Watson stat	1.774471		

8. Markov-Switching Model

Variable order: Insurers; Banks; Non-financials

***** Numerical Optimization Converged *****

Final log Likelihood: 946.39

Number of estimated parameters: 50

Number of Observations: 196

Number of Equations: 3

Optimizer: fminsearch

Number of Equations in System: 3

Distribution Assumption -> Normal

Standard error calculation -> 1

***** Final Parameters for Equation #1 *****

Intercept - Parameter Value (Standard Error, p value)

State 1, Intercept = 0.03 (0.00,0.00)

State 2, Intercept = 0.00 (0.03,0.91)

Dependent Variable #1 - Parameter Value (Standard Error, p value)

State 1, Lag 1 = -0.28 (0.12,0.03)

State 2, Lag 1 = 0.25 (0.42,0.56)

State 1, Lag 2 = -0.42 (0.12,0.00)

State 2, Lag 2 = 0.24 (0.43,0.58)

Dependent Variable #2 - Parameter Value (Standard Error, p value)

State 1, Lag 1 = 0.05 (0.19,0.81)

State 2, Lag 1 = 0.35 (0.32,0.28)

State 1, Lag 2 = 0.18 (0.13,0.16)

State 2, Lag 2 = 0.04 (0.36,0.91)

Dependent Variable #3 - Parameter Value (Standard Error, p value)

State 1, Lag 1 = -0.10 (0.15,0.49)

State 2, Lag 1 = -0.44 (0.61,0.47)

State 1, Lag 2 = 0.24 (0.14,0.09)

State 2, Lag 2 = -0.76 (0.66,0.26)

***** Final Parameters for Equation #2 *****

Intercept - Parameter Value (Standard Error, p value)

State 1, Intercept = 0.03 (0.00,0.00)

State 2, Intercept = -0.02 (0.01,0.06)

Dependent Variable #1 - Parameter Value (Standard Error, p value)

State 1, Lag 1 = -0.06 (0.11,0.55)

State 2, Lag 1 = -0.35 (0.23,0.14)

State 1, Lag 2 = 0.00 (0.01,0.95)

State 2, Lag 2 = -0.58 (0.22,0.01)

Dependent Variable #2 - Parameter Value (Standard Error, p value)

State 1, Lag 1 = -0.10 (0.16,0.54)

State 2, Lag 1 = 0.57 (0.25,0.02)

State 1, Lag 2 = -0.32 (0.09,0.00)

State 2, Lag 2 = 0.09 (0.29,0.75)

Dependent Variable #3 - Parameter Value (Standard Error, p value)

State 1, Lag 1 = -0.02 (0.14,0.87)

State 2, Lag 1 = 0.27 (0.35,0.44)

State 1, Lag 2 = 0.28 (0.12,0.02)

State 2, Lag 2 = 0.61 (0.34,0.07)

***** Final Parameters for Equation #3 *****

Intercept - Parameter Value (Standard Error, p value)

State 1, Intercept = 0.03 (0.00,0.00)

State 2, Intercept = -0.03 (0.01,0.00)

Dependent Variable #1 - Parameter Value (Standard Error, p value)

State 1, Lag 1 = 0.00 (0.04,0.94)

State 2, Lag 1 = 0.00 (0.03,0.89)

State 1, Lag 2 = -0.02 (0.09,0.82)

State 2, Lag 2 = -0.13 (0.14,0.35)

Dependent Variable #2 - Parameter Value (Standard Error, p value)

State 1, Lag 1 = -0.01 (0.09,0.94)

State 2, Lag 1 = 0.14 (0.12,0.25)

State 1, Lag 2 = -0.04 (0.09,0.67)

State 2, Lag 2 = -0.03 (0.19,0.87)

Dependent Variable #3 - Parameter Value (Standard Error, p value)

State 1, Lag 1 = -0.19 (0.10,0.07)

State 2, Lag 1 = 0.14 (0.19,0.46)

State 1, Lag 2 = 0.01 (0.13,0.95)

State 2, Lag 2 = 0.06 (0.21,0.78)

---> Transition Probabilities Matrix (std. error, p-value) <---

0.80 (0.21,0.00) 0.36 (0.21,0.08)

0.20 (NaN, NaN) 0.64 (NaN, NaN)

---> Expected Duration of Regimes <---

Expected duration of Regime #1: 5.02 time periods

Expected duration of Regime #2: 2.75 time periods

---> Covariance Matrix <---

State 1

0.00137 (0.00025,0.00) 0.00000 (NaN, NaN) 0.00000 (NaN, NaN)

0.00000 (NaN, NaN) 0.00101 (0.00020,0.00) 0.00000 (NaN, NaN)

0.00000 (NaN, NaN) 0.00000 (NaN, NaN) 0.00072 (0.00012,0.00)

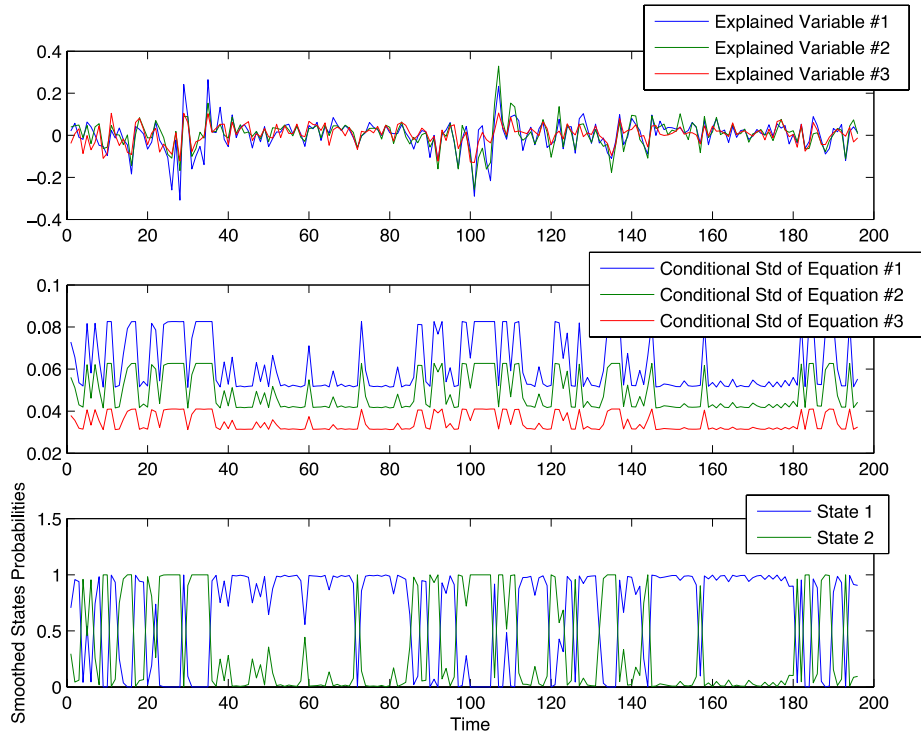
State 2

0.01181 (0.00574,0.04) 0.00000 (NaN, NaN) 0.00000 (NaN, NaN)

0.00000 (NaN, NaN) 0.00647 (0.00154,0.00) 0.00000 (NaN, NaN)

0.00000 (NaN, NaN) 0.00000 (NaN, NaN) 0.00241 (0.00048,0.00)

>>



9. Interconnectedness intra-industry

9.1 Before crisis

System: UNTITLED
 Estimation Method: Generalized Method of Moments
 Date: 01/06/17 Time: 05:16
 Sample: 2000M07 2007M12
 Included observations: 90
 Total system (balanced) observations 720
 Kernel: Bartlett, Bandwidth: Fixed (4), No prewhitening
 Linear estimation after one-step weighting matrix

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-0.007888	0.009934	-0.794013	0.4275
C(2)	0.521146	0.327465	1.591456	0.1120
C(3)	0.080962	0.237141	0.341408	0.7329
C(4)	0.326034	0.116384	2.801378	0.0052
C(5)	0.278127	0.391245	0.710876	0.4774
C(6)	-0.504523	0.425251	-1.186412	0.2359
C(7)	-0.424970	0.241585	-1.759088	0.0790
C(8)	0.267121	0.251784	1.060915	0.2891
C(9)	-0.539167	0.210437	-2.562137	0.0106
C(10)	-0.001425	0.009025	-0.157860	0.8746
C(11)	0.649729	0.312632	2.078257	0.0381
C(12)	-0.032168	0.190416	-0.168938	0.8659
C(13)	0.179751	0.105550	1.702990	0.0890
C(14)	0.455112	0.270249	1.684046	0.0927
C(15)	-0.181711	0.164378	-1.105450	0.2694
C(16)	-0.557930	0.279123	-1.998871	0.0460
C(17)	-0.145276	0.165129	-0.879776	0.3793
C(18)	-0.471695	0.174191	-2.707913	0.0069
C(19)	-0.006652	0.011197	-0.594099	0.5527
C(20)	0.607157	0.305364	1.988307	0.0472
C(21)	0.264926	0.172553	1.535330	0.1252
C(22)	0.166821	0.101807	1.638594	0.1018
C(23)	0.388296	0.235113	1.651528	0.0991
C(24)	-0.061996	0.206798	-0.299789	0.7644
C(25)	-0.463101	0.308222	-1.502493	0.1335
C(26)	0.096593	0.243778	0.396233	0.6921
C(27)	-0.664393	0.189348	-3.508839	0.0005
C(28)	-0.005135	0.006666	-0.770344	0.4414
C(29)	0.441232	0.229181	1.925251	0.0546
C(30)	0.198029	0.239085	0.828277	0.4078
C(31)	0.133591	0.117320	1.138687	0.2553
C(32)	0.194107	0.188576	1.029329	0.3037
C(33)	-0.398205	0.182910	-2.177058	0.0298
C(34)	-0.406946	0.227514	-1.788667	0.0741
C(35)	-0.029133	0.176556	-0.165008	0.8690
C(36)	-0.225050	0.180547	-1.246489	0.2130
C(37)	0.002391	0.006343	0.377031	0.7063
C(38)	0.170733	0.163543	1.043965	0.2969
C(39)	-0.200630	0.146982	-1.364997	0.1727
C(40)	0.288660	0.087838	3.286278	0.0011
C(41)	0.361947	0.200593	1.804386	0.0716
C(42)	-0.127937	0.137611	-0.929698	0.3529
C(43)	-0.194756	0.151879	-1.282313	0.2002
C(44)	-0.043923	0.127951	-0.343280	0.7315
C(45)	-0.188626	0.144909	-1.301693	0.1935
C(46)	-0.006006	0.009112	-0.659197	0.5100
C(47)	0.488661	0.293704	1.663789	0.0966
C(48)	0.037299	0.281341	0.132578	0.8946
C(49)	0.259348	0.117038	2.215924	0.0270
C(50)	0.664415	0.438440	1.515406	0.1302
C(51)	-0.582080	0.517135	-1.125587	0.2608
C(52)	-0.576466	0.217103	-2.655259	0.0081
C(53)	0.046161	0.283196	0.163000	0.8706
C(54)	-0.394102	0.226869	-1.737138	0.0828
C(55)	0.000135	0.006940	0.019524	0.9844
C(56)	0.371459	0.199400	1.862882	0.0629
C(57)	0.015555	0.177187	0.087791	0.9301
C(58)	0.246681	0.090192	2.735062	0.0064
C(59)	0.216782	0.196343	1.104103	0.2700
C(60)	-0.221067	0.169211	-1.306453	0.1919
C(61)	-0.240996	0.150794	-1.598179	0.1105
C(62)	0.010212	0.150203	0.067986	0.9458
C(63)	-0.432435	0.140921	-3.068629	0.0022
C(64)	-0.010483	0.010171	-1.030612	0.3031
C(65)	0.720938	0.370811	1.944220	0.0523

C(66)	0.127143	0.235906	0.538957	0.5901
C(67)	0.141277	0.137021	1.031060	0.3029
C(68)	0.334782	0.398964	0.839129	0.4017
C(69)	-0.497255	0.317151	-1.567881	0.1174
C(70)	-0.573221	0.324530	-1.766311	0.0778
C(71)	0.344597	0.284633	1.210672	0.2265
C(72)	-0.645278	0.191131	-3.376106	0.0008

Determinant residual covariance	5.73E-21
J-statistic	-4.02E-40

Equation: $_ALVGY = C(1) + C(2)*_ALVGY(-1) + C(3)*_CSFP(-1) + C(4)*_ZURN(-1) + C(5)*_SRENVX(-1) + C(6)*_GIM(-1) + C(7)*_MU2GY(-1) + C(8)*_AGSBB(-1) + C(9)*_AGNNA(-1)$

Instruments: C $_ALVGY(-1) _CSFP(-1) _ZURN(-1) _SRENVX(-1) _GIM(-1) _MU2GY(-1) _AGSBB(-1) _AGNNA(-1)$

Observations: 90

R-squared	0.289310	Mean dependent var	-0.007969
Adjusted R-squared	0.219119	S.D. dependent var	0.117052
S.E. of regression	0.103436	Sum squared resid	0.866619
Durbin-Watson stat	1.996502		

Equation: $_CSFP = C(10) + C(11)*_ALVGY(-1) + C(12)*_CSFP(-1) + C(13)*_ZURN(-1) + C(14)*_SRENVX(-1) + C(15)*_GIM(-1) + C(16)*_MU2GY(-1) + C(17)*_AGSBB(-1) + C(18)*_AGNNA(-1)$

Instruments: C $_ALVGY(-1) _CSFP(-1) _ZURN(-1) _SRENVX(-1) _GIM(-1) _MU2GY(-1) _AGSBB(-1) _AGNNA(-1)$

Observations: 90

R-squared	0.270810	Mean dependent var	-0.002058
Adjusted R-squared	0.198791	S.D. dependent var	0.103465
S.E. of regression	0.092612	Sum squared resid	0.694736
Durbin-Watson stat	1.993139		

Equation: $_ZURN = C(19) + C(20)*_ALVGY(-1) + C(21)*_CSFP(-1) + C(22)*_ZURN(-1) + C(23)*_SRENVX(-1) + C(24)*_GIM(-1) + C(25)*_MU2GY(-1) + C(26)*_AGSBB(-1) + C(27)*_AGNNA(-1)$

Instruments: C $_ALVGY(-1) _CSFP(-1) _ZURN(-1) _SRENVX(-1) _GIM(-1) _MU2GY(-1) _AGSBB(-1) _AGNNA(-1)$

Observations: 90

R-squared	0.218943	Mean dependent var	-0.005294
Adjusted R-squared	0.141802	S.D. dependent var	0.119252
S.E. of regression	0.110474	Sum squared resid	0.988565
Durbin-Watson stat	1.746939		

Equation: $_SRENVX = C(28) + C(29)*_ALVGY(-1) + C(30)*_CSFP(-1) + C(31)*_ZURN(-1) + C(32)*_SRENVX(-1) + C(33)*_GIM(-1) + C(34)*_MU2GY(-1) + C(35)*_AGSBB(-1) + C(36)*_AGNNA(-1)$

Instruments: C $_ALVGY(-1) _CSFP(-1) _ZURN(-1) _SRENVX(-1) _GIM(-1) _MU2GY(-1) _AGSBB(-1) _AGNNA(-1)$

Observations: 90

R-squared	0.266485	Mean dependent var	-0.006401
Adjusted R-squared	0.194039	S.D. dependent var	0.080753
S.E. of regression	0.072496	Sum squared resid	0.425714
Durbin-Watson stat	1.964456		

Equation: $_GIM = C(37) + C(38)*_ALVGY(-1) + C(39)*_CSFP(-1) + C(40)*_ZURN(-1) + C(41)*_SRENVX(-1) + C(42)*_GIM(-1) + C(43)*_MU2GY(-1) + C(44)*_AGSBB(-1) + C(45)*_AGNNA(-1)$

Instruments: C $_ALVGY(-1) _CSFP(-1) _ZURN(-1) _SRENVX(-1) _GIM(-1) _MU2GY(-1) _AGSBB(-1) _AGNNA(-1)$

Observations: 90

R-squared	0.260469	Mean dependent var	0.000588
Adjusted R-squared	0.187429	S.D. dependent var	0.068266
S.E. of regression	0.061537	Sum squared resid	0.306726
Durbin-Watson stat	1.967849		

Equation: $_MU2GY = C(46) + C(47)*_ALVGY(-1) + C(48)*_CSFP(-1) + C(49)*_ZURN(-1) + C(50)*_SRENVX(-1) + C(51)*_GIM(-1) + C(52)*_MU2GY(-1) + C(53)*_AGSBB(-1) + C(54)*_AGNNA(-1)$

Instruments: C $_ALVGY(-1) _CSFP(-1) _ZURN(-1) _SRENVX(-1) _GIM(-1) _MU2GY(-1) _AGSBB(-1) _AGNNA(-1)$

Observations: 90

R-squared	0.311922	Mean dependent var	-0.008098
Adjusted R-squared	0.243964	S.D. dependent var	0.121848
S.E. of regression	0.105947	Sum squared resid	0.909211
Durbin-Watson stat	2.042309		

Equation: $_AGSBB = C(55) + C(56)*_ALVGY(-1) + C(57)*_CSFP(-1) + C(58)*_ZURN(-1) + C(59)*_SRENVX(-1) + C(60)*_GIM(-1) + C(61)*_MU2GY(-1) + C(62)*_AGSBB(-1) + C(63)*_AGNNA(-1)$

Instruments: C $_ALVGY(-1) _CSFP(-1) _ZURN(-1) _SRENVX(-1) _GIM(-1) _MU2GY(-1) _AGSBB(-1) _AGNNA(-1)$

Observations: 90

R-squared	0.274668	Mean dependent var	-4.39E-05
Adjusted R-squared	0.203030	S.D. dependent var	0.078108
S.E. of regression	0.069730	Sum squared resid	0.393843
Durbin-Watson stat	1.977730		

Equation: $_AGNNA = C(64) + C(65)*_ALVGY(-1) + C(66)*_CSFP(-1) + C(67)*_ZURN(-1) + C(68)*_SRENVX(-1) + C(69)*_GIM(-1) + C(70)*_MU2GY(-1) + C(71)*_AGSBB(-1) + C(72)*_AGNNA(-1)$

Instruments: C $_ALVGY(-1) _CSFP(-1) _ZURN(-1) _SRENVX(-1) _GIM(-1) _MU2GY(-1) _AGSBB(-1) _AGNNA(-1)$

Observations: 90

R-squared	0.295384	Mean dependent var	-0.009295
Adjusted R-squared	0.225793	S.D. dependent var	0.122544
S.E. of regression	0.107825	Sum squared resid	0.941731
Durbin-Watson stat	2.002048		

9.2 After crisis

System: UNTITLED
 Estimation Method: Generalized Method of Moments
 Date: 01/06/17 Time: 05:20
 Sample: 2008M01 2016M09
 Included observations: 105
 Total system (balanced) observations 945
 Kernel: Bartlett, Bandwidth: Fixed (5), No prewhitening
 Linear estimation after one-step weighting matrix

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-0.001938	0.008943	-0.216748	0.8285
C(2)	0.401975	0.339224	1.184983	0.2364
C(3)	-0.533273	0.322431	-1.653915	0.0985
C(4)	-0.123832	0.291216	-0.425224	0.6708
C(5)	0.005667	0.138597	0.040890	0.9674
C(6)	0.192701	0.149088	1.292528	0.1965
C(7)	-0.226753	0.191254	-1.185615	0.2361
C(8)	0.006595	0.150776	0.043739	0.9651
C(9)	0.056722	0.158699	0.357420	0.7209
C(10)	0.387869	0.361063	1.074241	0.2830
C(11)	-0.006161	0.009493	-0.649031	0.5165
C(12)	0.449506	0.248402	1.809592	0.0707
C(13)	-0.491048	0.194079	-2.530147	0.0116
C(14)	-0.164062	0.261806	-0.626655	0.5311
C(15)	-0.130536	0.183966	-0.709564	0.4782
C(16)	0.332430	0.162950	2.040075	0.0416
C(17)	-0.439301	0.220984	-1.987936	0.0471
C(18)	0.148293	0.231815	0.639706	0.5225
C(19)	0.038610	0.284439	0.135741	0.8921
C(20)	0.432475	0.360202	1.200645	0.2302
C(21)	0.002908	0.006362	0.457034	0.6478
C(22)	0.234705	0.178208	1.317029	0.1882
C(23)	-0.305226	0.141105	-2.163109	0.0308
C(24)	-0.043770	0.194553	-0.224977	0.8221
C(25)	0.093911	0.115356	0.814094	0.4158
C(26)	0.194825	0.092914	2.096844	0.0363
C(27)	-0.358908	0.153303	-2.341169	0.0195
C(28)	0.053339	0.114307	0.466630	0.6409
C(29)	-0.026267	0.188896	-0.139055	0.8894
C(30)	0.099598	0.259052	0.384469	0.7007
C(31)	-0.011453	0.007048	-1.625117	0.1045
C(32)	0.148873	0.161900	0.919537	0.3581
C(33)	-0.152702	0.143163	-1.066630	0.2864
C(34)	-0.051175	0.165413	-0.309376	0.7571
C(35)	-0.229266	0.135925	-1.686713	0.0920
C(36)	0.229950	0.106306	2.163091	0.0308
C(37)	-0.308280	0.195359	-1.578015	0.1149
C(38)	0.128695	0.163532	0.786972	0.4315
C(39)	0.096735	0.165446	0.584690	0.5589
C(40)	0.081186	0.216946	0.374220	0.7083
C(41)	-0.000464	0.010485	-0.044269	0.9647
C(42)	-0.186122	0.234312	-0.794332	0.4272
C(43)	-0.079659	0.224284	-0.355169	0.7226
C(44)	-0.071019	0.181946	-0.390331	0.6964
C(45)	-0.214320	0.168311	-1.273360	0.2032
C(46)	0.407379	0.205214	1.985145	0.0474
C(47)	0.095771	0.245858	0.389537	0.6970
C(48)	0.160896	0.229287	0.701725	0.4830
C(49)	-0.191412	0.335910	-0.569832	0.5689
C(50)	0.269817	0.358399	0.752839	0.4518
C(51)	0.006089	0.004912	1.239643	0.2154
C(52)	-0.031337	0.105585	-0.296789	0.7667
C(53)	0.074548	0.076428	0.975393	0.3296
C(54)	-0.067932	0.143748	-0.472575	0.6366
C(55)	-0.075710	0.092430	-0.819105	0.4130
C(56)	0.118050	0.046902	2.516931	0.0120
C(57)	-0.231359	0.148806	-1.554766	0.1204
C(58)	0.014246	0.079216	0.179844	0.8573
C(59)	0.064361	0.127229	0.505867	0.6131
C(60)	0.026170	0.114698	0.228166	0.8196
C(61)	0.002921	0.009133	0.319827	0.7492
C(62)	0.646478	0.295084	2.190825	0.0287
C(63)	-0.555276	0.266943	-2.080130	0.0378
C(64)	-0.190616	0.211184	-0.902604	0.3670
C(65)	-0.098141	0.154193	-0.636480	0.5246

C(66)	0.253767	0.138534	1.831804	0.0673
C(67)	-0.271927	0.165199	-1.646063	0.1001
C(68)	-0.248605	0.153488	-1.619705	0.1057
C(69)	0.297168	0.177262	1.676435	0.0940
C(70)	0.416627	0.315514	1.320473	0.1870
C(71)	0.008414	0.005254	1.601506	0.1096
C(72)	0.101205	0.115174	0.878717	0.3798
C(73)	-0.265303	0.126010	-2.105418	0.0355
C(74)	0.125058	0.169690	0.736981	0.4613
C(75)	0.020628	0.131582	0.156768	0.8755
C(76)	0.248081	0.070035	3.542220	0.0004
C(77)	-0.113850	0.126539	-0.899723	0.3685
C(78)	0.050372	0.083299	0.604720	0.5455
C(79)	-0.174988	0.140027	-1.249671	0.2118
C(80)	0.046189	0.198803	0.232334	0.8163
C(81)	0.012122	0.005626	2.154494	0.0315
C(82)	0.085738	0.138155	0.620597	0.5350
C(83)	-0.045721	0.082668	-0.553069	0.5804
C(84)	0.030116	0.120920	0.249054	0.8034
C(85)	-0.035376	0.091636	-0.386046	0.6996
C(86)	0.129331	0.061064	2.117942	0.0345
C(87)	-0.141273	0.184487	-0.765761	0.4440
C(88)	0.104125	0.104897	0.992642	0.3212
C(89)	-0.023669	0.217495	-0.108827	0.9134
C(90)	-0.108377	0.167594	-0.646665	0.5180

Determinant residual covariance 4.41E-24
J-statistic 8.61E-41

Equation: $_ALVGY = C(1) + C(2)*_ALVGY(-1) + C(3)*_CSFP(-1) + C(4)*_ZURN(-1) + C(5)*_GIM(-1) + C(6)*_SRENVX(-1) + C(7)*_MUJ2GY(-1) + C(8)*_PRULN(-1) + C(9)*_TOPDC(-1) + C(10)*_SAMPOFH(-1)$
Instruments: C $_ALVGY(-1) _CSFP(-1) _ZURN(-1) _GIM(-1) _SRENVX(-1) _MUJ2GY(-1) _PRULN(-1) _TOPDC(-1) _SAMPOFH(-1)$

Observations: 105

R-squared	0.109762	Mean dependent var	0.002942
Adjusted R-squared	0.025424	S.D. dependent var	0.092825
S.E. of regression	0.091637	Sum squared resid	0.797747
Durbin-Watson stat	2.012734		

Equation: $_CSFP = C(11) + C(12)*_ALVGY(-1) + C(13)*_CSFP(-1) + C(14)*_ZURN(-1) + C(15)*_GIM(-1) + C(16)*_SRENVX(-1) + C(17)*_MUJ2GY(-1) + C(18)*_PRULN(-1) + C(19)*_TOPDC(-1) + C(20)*_SAMPOFH(-1)$

Instruments: C $_ALVGY(-1) _CSFP(-1) _ZURN(-1) _GIM(-1) _SRENVX(-1) _MUJ2GY(-1) _PRULN(-1) _TOPDC(-1) _SAMPOFH(-1)$

Observations: 105

R-squared	0.142609	Mean dependent var	0.000688
Adjusted R-squared	0.061382	S.D. dependent var	0.117207
S.E. of regression	0.113553	Sum squared resid	1.224953
Durbin-Watson stat	1.877234		

Equation: $_ZURN = C(21) + C(22)*_ALVGY(-1) + C(23)*_CSFP(-1) + C(24)*_ZURN(-1) + C(25)*_GIM(-1) + C(26)*_SRENVX(-1) + C(27)*_MUJ2GY(-1) + C(28)*_PRULN(-1) + C(29)*_TOPDC(-1) + C(30)*_SAMPOFH(-1)$

Instruments: C $_ALVGY(-1) _CSFP(-1) _ZURN(-1) _GIM(-1) _SRENVX(-1) _MUJ2GY(-1) _PRULN(-1) _TOPDC(-1) _SAMPOFH(-1)$

Observations: 105

R-squared	0.105861	Mean dependent var	0.002676
Adjusted R-squared	0.021153	S.D. dependent var	0.071540
S.E. of regression	0.070779	Sum squared resid	0.475918
Durbin-Watson stat	2.003306		

Equation: $_GIM = C(31) + C(32)*_ALVGY(-1) + C(33)*_CSFP(-1) + C(34)*_ZURN(-1) + C(35)*_GIM(-1) + C(36)*_SRENVX(-1) + C(37)*_MUJ2GY(-1) + C(38)*_PRULN(-1) + C(39)*_TOPDC(-1) + C(40)*_SAMPOFH(-1)$

Instruments: C $_ALVGY(-1) _CSFP(-1) _ZURN(-1) _GIM(-1) _SRENVX(-1) _MUJ2GY(-1) _PRULN(-1) _TOPDC(-1) _SAMPOFH(-1)$

Observations: 105

R-squared	0.110105	Mean dependent var	-0.007589
Adjusted R-squared	0.025799	S.D. dependent var	0.087365
S.E. of regression	0.086231	Sum squared resid	0.706396
Durbin-Watson stat	1.923787		

Equation: $_SRENVX = C(41) + C(42)*_ALVGY(-1) + C(43)*_CSFP(-1) + C(44)*_ZURN(-1) + C(45)*_GIM(-1) + C(46)*_SRENVX(-1) + C(47)*_MUV2GY(-1) + C(48)*_PRULN(-1) + C(49)*_TOPDC(-1) + C(50)*_SAMPOFH(-1)$

Instruments: C $_ALVGY(-1) _CSFP(-1) _ZURN(-1) _GIM(-1) _SRENVX(-1) _MUV2GY(-1) _PRULN(-1) _TOPDC(-1) _SAMPOFH(-1)$

Observations: 105

R-squared	0.127384	Mean dependent var	0.005660
Adjusted R-squared	0.044715	S.D. dependent var	0.119166
S.E. of regression	0.116472	Sum squared resid	1.288738
Durbin-Watson stat	1.816758		

Equation: $_MUV2GY = C(51) + C(52)*_ALVGY(-1) + C(53)*_CSFP(-1) + C(54)*_ZURN(-1) + C(55)*_GIM(-1) + C(56)*_SRENVX(-1) + C(57)*_MUV2GY(-1) + C(58)*_PRULN(-1) + C(59)*_TOPDC(-1) + C(60)*_SAMPOFH(-1)$

Instruments: C $_ALVGY(-1) _CSFP(-1) _ZURN(-1) _GIM(-1) _SRENVX(-1) _MUV2GY(-1) _PRULN(-1) _TOPDC(-1) _SAMPOFH(-1)$

Observations: 105

R-squared	0.090509	Mean dependent var	0.006312
Adjusted R-squared	0.004347	S.D. dependent var	0.054569
S.E. of regression	0.054450	Sum squared resid	0.281658
Durbin-Watson stat	1.858467		

Equation: $_PRULN = C(61) + C(62)*_ALVGY(-1) + C(63)*_CSFP(-1) + C(64)*_ZURN(-1) + C(65)*_GIM(-1) + C(66)*_SRENVX(-1) + C(67)*_MUV2GY(-1) + C(68)*_PRULN(-1) + C(69)*_TOPDC(-1) + C(70)*_SAMPOFH(-1)$

Instruments: C $_ALVGY(-1) _CSFP(-1) _ZURN(-1) _GIM(-1) _SRENVX(-1) _MUV2GY(-1) _PRULN(-1) _TOPDC(-1) _SAMPOFH(-1)$

Observations: 105

R-squared	0.180330	Mean dependent var	0.009032
Adjusted R-squared	0.102677	S.D. dependent var	0.095100
S.E. of regression	0.090085	Sum squared resid	0.770959
Durbin-Watson stat	1.969198		

Equation: $_TOPDC = C(71) + C(72)*_ALVGY(-1) + C(73)*_CSFP(-1) + C(74)*_ZURN(-1) + C(75)*_GIM(-1) + C(76)*_SRENVX(-1) + C(77)*_MUV2GY(-1) + C(78)*_PRULN(-1) + C(79)*_TOPDC(-1) + C(80)*_SAMPOFH(-1)$

Instruments: C $_ALVGY(-1) _CSFP(-1) _ZURN(-1) _GIM(-1) _SRENVX(-1) _MUV2GY(-1) _PRULN(-1) _TOPDC(-1) _SAMPOFH(-1)$

Observations: 105

R-squared	0.163256	Mean dependent var	0.008830
Adjusted R-squared	0.083986	S.D. dependent var	0.062422
S.E. of regression	0.059743	Sum squared resid	0.339078
Durbin-Watson stat	1.965096		

Equation: $_SAMPOFH = C(81) + C(82)*_ALVGY(-1) + C(83)*_CSFP(-1) + C(84)*_ZURN(-1) + C(85)*_GIM(-1) + C(86)*_SRENVX(-1) + C(87)*_MUV2GY(-1) + C(88)*_PRULN(-1) + C(89)*_TOPDC(-1) + C(90)*_SAMPOFH(-1)$

Instruments: C $_ALVGY(-1) _CSFP(-1) _ZURN(-1) _GIM(-1) _SRENVX(-1) _MUV2GY(-1) _PRULN(-1) _TOPDC(-1) _SAMPOFH(-1)$

Observations: 105

R-squared	0.090330	Mean dependent var	0.012033
Adjusted R-squared	0.004151	S.D. dependent var	0.063548
S.E. of regression	0.063416	Sum squared resid	0.382050
Durbin-Watson stat	1.908432		

9.8 Crisis period

System: UNTITLED
 Estimation Method: Generalized Method of Moments
 Date: 01/05/17 Time: 22:33
 Sample: 2008M01 2010M07
 Included observations: 31
 Total system (balanced) observations 155
 Kernel: Bartlett, Bandwidth: Fixed (4), No prewhitening
 Linear estimation after one-step weighting matrix

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-0.032758	0.020885	-1.568508	0.1193
C(2)	0.629397	0.232295	2.709477	0.0077
C(3)	-0.985388	0.379414	-2.597134	0.0105
C(4)	0.336607	0.197023	1.708466	0.0900
C(5)	-1.081290	0.339379	-3.186086	0.0018
C(6)	0.796306	0.277290	2.871743	0.0048
C(7)	-0.037603	0.023599	-1.593411	0.1136
C(8)	0.543407	0.246512	2.204380	0.0293
C(9)	-0.445998	0.282802	-1.577070	0.1173
C(10)	0.177258	0.238463	0.743336	0.4587
C(11)	-1.544608	0.561338	-2.751653	0.0068
C(12)	0.883652	0.258589	3.417204	0.0009
C(13)	-0.015084	0.013138	-1.148128	0.2531
C(14)	0.330624	0.146831	2.251732	0.0261
C(15)	-0.290795	0.176694	-1.645749	0.1023
C(16)	-0.088296	0.213062	-0.414414	0.6793
C(17)	-0.741299	0.367660	-2.016262	0.0459
C(18)	0.494164	0.127192	3.885194	0.0002
C(19)	-0.032387	0.013769	-2.352146	0.0202
C(20)	0.224039	0.135551	1.652803	0.1009
C(21)	-0.296701	0.150306	-1.973978	0.0506
C(22)	0.286070	0.176705	1.618911	0.1080
C(23)	-0.860027	0.226179	-3.802412	0.0002
C(24)	0.526511	0.118038	4.460533	0.0000
C(25)	-0.034089	0.031962	-1.066540	0.2882
C(26)	-0.034933	0.298581	-0.116998	0.9070
C(27)	-0.338373	0.362971	-0.932232	0.3530
C(28)	0.443719	0.339936	1.305299	0.1942
C(29)	-1.398508	0.414115	-3.377102	0.0010
C(30)	0.975086	0.313480	3.110522	0.0023
Determinant residual covariance		1.51E-12		
J-statistic		-8.97E-42		

Equation: $_ALVGY = C(1) + C(2)*_ALVGY(-1) + C(3)*_CSFP(-1) + C(4)*_ZURN(-1) + C(5)*_GIM(-1) + C(6)*_SRENVX(-1)$

Instruments: C $_ALVGY(-1)$ $_CSFP(-1)$ $_ZURN(-1)$ $_GIM(-1)$ $_SRENVX(-1)$
 Observations: 31

R-squared	0.446597	Mean dependent var	-0.011647
Adjusted R-squared	0.335917	S.D. dependent var	0.136917
S.E. of regression	0.111575	Sum squared resid	0.311225
Durbin-Watson stat	1.712222		

Equation: $_CSFP = C(7) + C(8)*_ALVGY(-1) + C(9)*_CSFP(-1) + C(10)*_ZURN(-1) + C(11)*_GIM(-1) + C(12)*_SRENVX(-1)$

Instruments: C $_ALVGY(-1)$ $_CSFP(-1)$ $_ZURN(-1)$ $_GIM(-1)$ $_SRENVX(-1)$
 Observations: 31

R-squared	0.311846	Mean dependent var	-0.016746
Adjusted R-squared	0.174215	S.D. dependent var	0.170635
S.E. of regression	0.155061	Sum squared resid	0.601095
Durbin-Watson stat	1.663848		

Equation: $_ZURN = C(13) + C(14)*_ALVGY(-1) + C(15)*_CSFP(-1) + C(16)*_ZURN(-1) + C(17)*_GIM(-1) + C(18)*_SRENVX(-1)$

Instruments: C $_ALVGY(-1)$ $_CSFP(-1)$ $_ZURN(-1)$ $_GIM(-1)$ $_SRENVX(-1)$
 Observations: 31

R-squared	0.277700	Mean dependent var	-0.004781
Adjusted R-squared	0.133240	S.D. dependent var	0.101544
S.E. of regression	0.094537	Sum squared resid	0.223432
Durbin-Watson stat	1.907311		

Equation: $_GIM = C(19) + C(20)*_ALVGY(-1) + C(21)*_CSFP(-1) + C(22)*_ZURN(-1) + C(23)*_GIM(-1) + C(24)*_SRENVX(-1)$

Instruments: C $_ALVGY(-1)$ $_CSFP(-1)$ $_ZURN(-1)$ $_GIM(-1)$ $_SRENVX(-1)$

Observations: 31

R-squared	0.326762	Mean dependent var	-0.020313
Adjusted R-squared	0.192114	S.D. dependent var	0.097348
S.E. of regression	0.087499	Sum squared resid	0.191400
Durbin-Watson stat	1.606725		

Equation: $_SRENVX = C(25) + C(26)*_ALVGY(-1) + C(27)*_CSFP(-1) + C(28)*_ZURN(-1) + C(29)*_GIM(-1) + C(30)*_SRENVX(-1)$

Instruments: C $_ALVGY(-1)$ $_CSFP(-1)$ $_ZURN(-1)$ $_GIM(-1)$ $_SRENVX(-1)$

Observations: 31

R-squared	0.224198	Mean dependent var	-0.014356
Adjusted R-squared	0.069038	S.D. dependent var	0.207302
S.E. of regression	0.200018	Sum squared resid	1.000180
Durbin-Watson stat	1.708005		