

# Financial Sector Interconnectedness and Monetary Policy Transmission Online Appendix not for Publication

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## 1 Content

In this appendix, we report some supplementary material that we did not insert in the main text due to space constraints:

- We show the evolution of the Corporate bonds and the Commercial Papers over the total of Credit Market instruments (Figure 1).
- We show a Figure reporting on of our measures of interconnectedness plotted against a measure of Liquidity in the spirit of Kayshap and Stein (2000) (Figure 2).
- We show a Figure reporting on of our measures of interconnectedness including significant events in the history of de-regulation of the financial System (Figure 3).
- We show a Figure reporting our measures of interconnectedness plotted together with the share of finance in GDP measure by Philippon (2015) (Figure 4).

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- We report the results obtained for the IRF to a monetary shock omitting the interaction term with the Measure of Interconnectedness and dividing the sample into the same two sub-periods analyzed in Boivin and Giannoni (2006) (Figure 5).
- We report the results obtained from the same empirical analysis illustrated in the Section 4.1 of the main paper, but using as proxy for the interconnectedness of the financial sector, the measure  $INTER_3$ , based on the liabilities side of the U.S. financial sector balance sheet (Figures 6-11). The results are broadly in line with the main results reported in the paper.
- We report the series used in the FAVAR analysis, specifying for each one which transformation was performed to the series. Series 1-50 and 89-103 are the slow moving, while the others are fast moving variables.
- We report the impulse responses for selected variables using the FAVAR and conditional to our Measure of interconnectedness being low or high (Figures 12 and 13).
- We report the impulse responses for selected variables using the FAVAR without our measure of interconnectedness (only dividing the sample in pre-84 and post-84) and we report the difference between impulse responses with related confidence bands (Figures 14 and 15).

## 1.1 Measure of Interconnectedness

Figure 1: Corporate Bonds and Commercial Papers over Total Credit

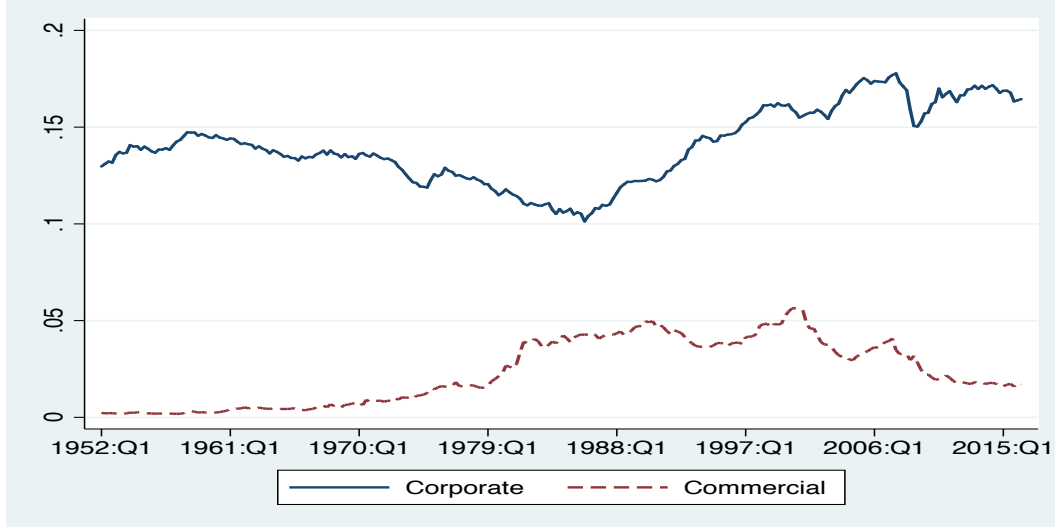


Figure 2: Interconnectedness and Liquidity

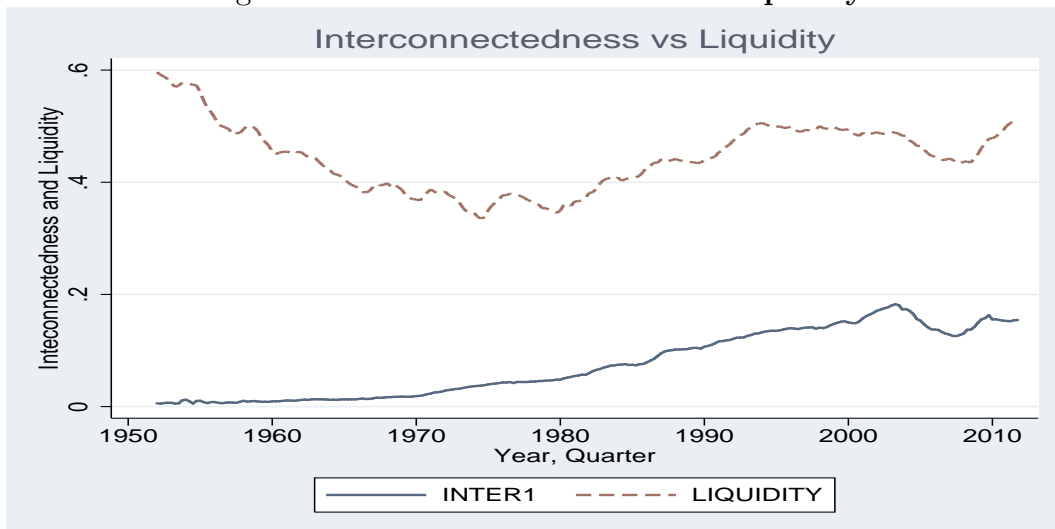


Figure 3: Interconnectedness and Financial (De)Regulation Periods

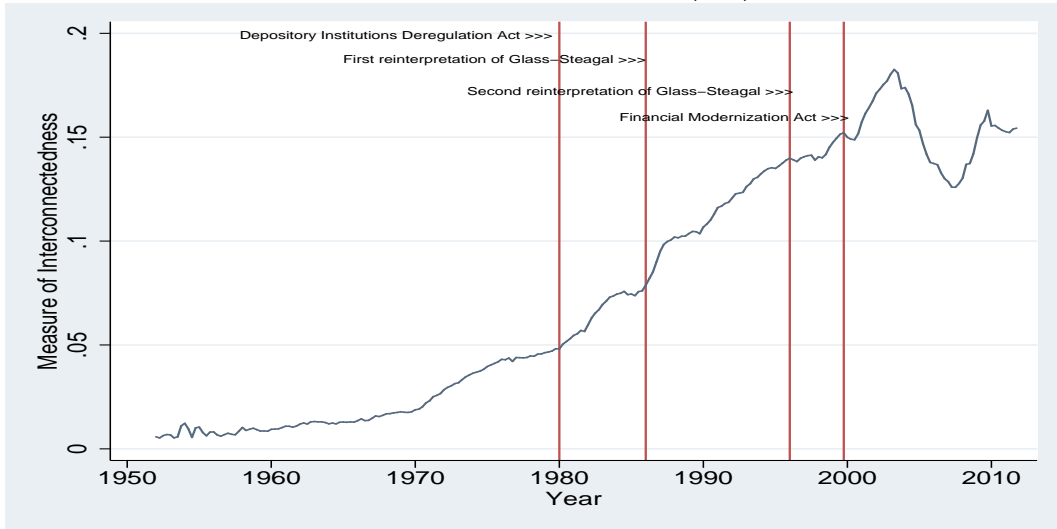
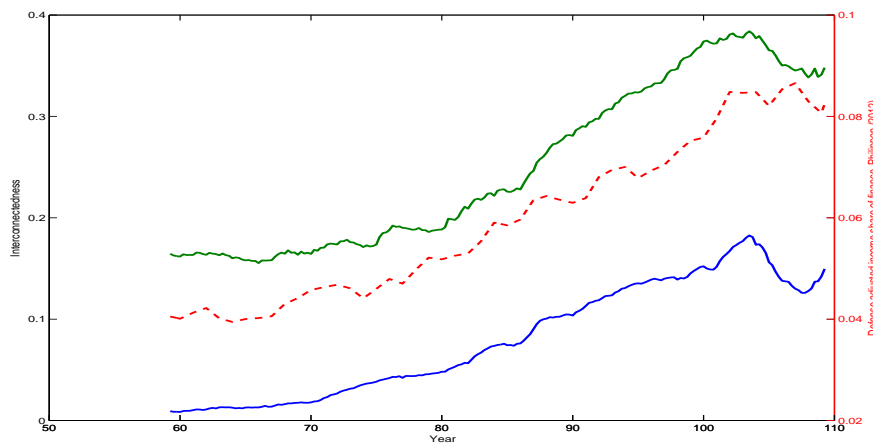


Figure 4: Interconnectedness and Share of Finance in GDP (Philippin, 2015)



## 1.2 SVAR

Figure 5: IRFs to a monetary policy shock without interaction terms - Sub-periods considered in Boivin and Giannoni (2006)

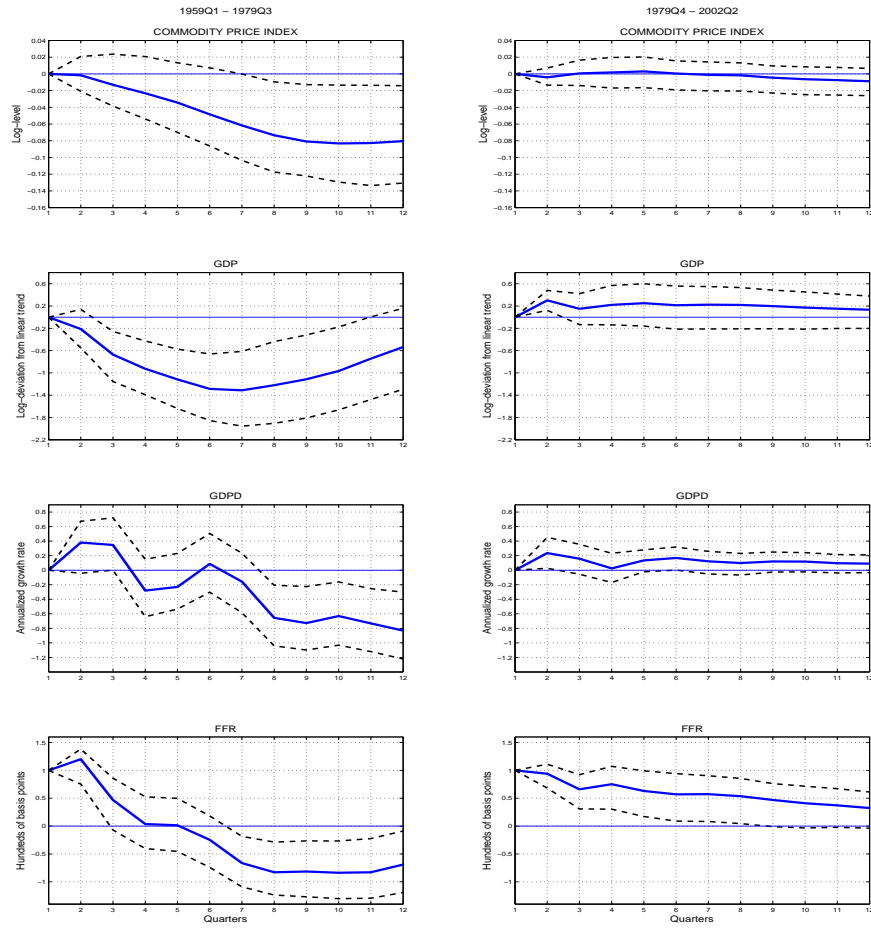


Figure 6: Comparison of IRFs to a monetary policy shock conditional on different levels of  $INTER_3$  in SVAR

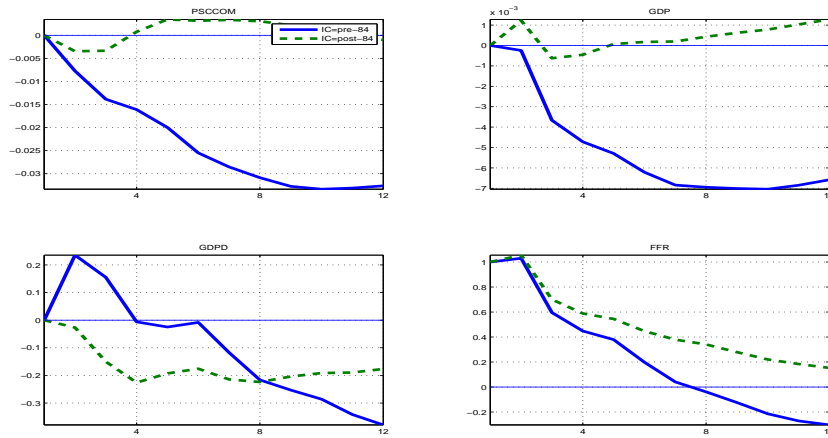
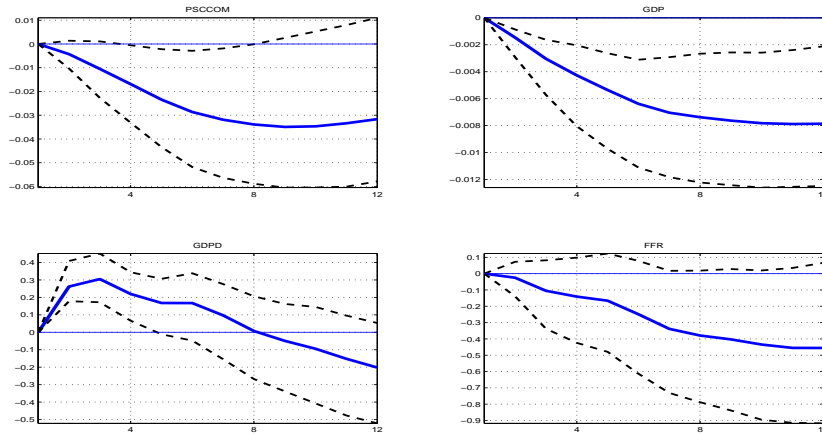


Figure 7: Difference between IRFs to a monetary policy shock with different levels of  $INTER_3$



## 1.3 FAVAR

The transformation codes are: 1 no transformation; 2 first difference; 4 logarithm; 5 first difference of logarithm; 0 variable not used in the estimation (only used for transforming other variables). A \* indicates a series that is deflated with the GDP deflator (series #89).

No.	Series Code	T-Code	Series Description
1	DRIINTL:GDPRC@US.Q	5	NIA REAL GROSS DOMESTIC PRODUCT (CHAINED-2000), SA - U.S.
2	USCEN:GDPGDR.Q	5	REAL GDP-GDS,BILLIONS OF CH (2000) \$,SAAR-US
3	USCEN:GDPSVR.Q	5	REAL GDP-SVC,BILLIONS OF CH (2000) \$,SAAR-US
4	USCEN:GDPSR.Q	5	REAL GDP-STRUC,BILLIONS OF CH (2000) \$,SAAR-US
5	BASIC:IPN11.M	5	INDUSTRIAL PRODUCTION INDEX - PRODUCTS, TOTAL
6	BASIC:IPN300.M	5	INDUSTRIAL PRODUCTION INDEX - FINAL PRODUCTS
7	BASIC:IPN12.M	5	INDUSTRIAL PRODUCTION INDEX - CONSUMER GOODS
8	BASIC:IPN13.M	5	INDUSTRIAL PRODUCTION INDEX - DURABLE CONSUMER GOODS
9	BASIC:IPN18.M	5	INDUSTRIAL PRODUCTION INDEX - NONDURABLE CONSUMER GOODS
10	BASIC:IPN25.M	5	INDUSTRIAL PRODUCTION INDEX - BUSINESS EQUIPMENT
11	BASIC:IPN32.M	5	INDUSTRIAL PRODUCTION INDEX - MATERIALS
12	BASIC:IPN34.M	5	INDUSTRIAL PRODUCTION INDEX - DURABLE GOODS MATERIALS
13	BASIC:IPN38.M	5	INDUSTRIAL PRODUCTION INDEX - NONDURABLE GOODS MATERIALS
14	BASIC:IPN10.M	5	INDUSTRIAL PRODUCTION INDEX - TOTAL INDEX
15	USCEN:UTLB00004.M	1	CAPACITY UTILIZ-MFG,SA-US
16	BASIC:PMI.M	1	PURCHASING MANAGERS' INDEX (SA)
17	BASIC:PMP.M	1	NAPM PRODUCTION INDEX (PERCENT)
18	DRIINTL:WS@US.Q	5*	NIA NOMINAL TOTAL COMPENSATION OF EMPLOYEES, SA - U.S.
19	USCEN:YPR.M	5	PERS INCOME CH 2000 \$,SA-US
20	USCEN:YP@V00C.M	5	PERS INCOME LESS TRSF PMT CH 2000 \$,SA-US
21	USCEN:AHPMF.M	5*	AHE,PROD WORKERS: MFG,SA-US
22	USCEN:AHPCON.M	5*	AHE,PROD WORKERS: CONSTR,SA-US
23	USCEN:HMPF.M	5	AWH,PROD WORKERS: MFG,SA-US
24	USCEN:HOPMD.M	5	AVG WEEKLY OT,PROD WORKERS: DUR,SA-US
25	BASIC:LHEL.M	5	INDEX OF HELP-WANTED ADVERTISING IN NEWSPAPERS (1967=100;SA)
26	BASIC:LHELX.M	1	EMPLOYMENT: RATIO; HELP-WANTED ADS:NO. UNEMPLOYED CLF
27	BASIC:LHEM.M	5	CIVILIAN LABOR FORCE: EMPLOYED, TOTAL (THOUS.,SA)
28	BASIC:LHNAG.M	5	CIVILIAN LABOR FORCE: EMPLOYED, NONAGRIC.INDUSTRIES (THOUS.,SA)
29	BASIC:LHUR.M	1	UNEMPLOYMENT RATE: ALL WORKERS, 16 YEARS & OVER (%;SA)
30	BASIC:LHU680.M	1	UNEMPLOY.BY DURATION: AVERAGE(MEAN)DURATION IN WEEKS (SA)
31	BASIC:LHU5.M	5	UNEMPLOY.BY DURATION: PERSONS UNEMPL.LESS THAN 5 WKS (THOUS.,SA)
32	BASIC:LHU14.M	5	UNEMPLOY.BY DURATION: PERSONS UNEMPL.5 TO 14 WKS (THOUS.,SA)
33	BASIC:LHU15.M	5	UNEMPLOY.BY DURATION: PERSONS UNEMPL.15 WKS + (THOUS.,SA)
34	BASIC:LHU26.M	5	UNEMPLOY.BY DURATION: PERSONS UNEMPL.15 TO 26 WKS (THOUS.,SA)
35	BASIC:CES001.M	5	EMPLOYEES, NONFARM - TOTAL NONFARM
36	BASIC:CES002.M	5	EMPLOYEES, NONFARM - TOTAL PRIVATE
37	BASIC:CES003.M	5	EMPLOYEES, NONFARM - GOODS-PRODUCING
38	USCEN:CR.Q	5	REAL PCE,BILLIONS OF CH (2000) \$,SAAR-US
39	USCEN:JQCDR.Q	5	REAL PCE-DUR,QTY INDEX (2000=100),SA,SA-US
40	USCEN:JQCNR.Q	5	REAL PCE-NDUR,QTY INDEX (2000=100),SA,SA-US
41	USCEN:JQCSVR.Q	5	REAL PCE-SVC,QTY INDEX (2000=100),SA,SA-US
42	USCEN:JQCXFAER.Q	5	REAL PCE EX FOOD&ENERGY,QTY INDEX (2000=100),SAAR-US
43	DRIINTL:CGRCUS.Q	5	REAL GOVERNMENT CONS. EXPEND.& GROSS INVESTMENT (CHAINED-2000), SA - U.S.
44	USCEN:I.Q	5*	GROSS PRIV DOM INVEST,BILLIONS OF \$,SAAR-US
45	USCEN:IF.Q	5*	GROSS PRIV DOM INVEST-FIXED,BILLIONS OF \$,SAAR-US
46	USCEN:IFNRE.Q	5*	GROSS PRIV DOM INVEST-FIXED NONRES,BILLIONS OF \$,SAAR-US
47	USCEN:IFRES.Q	5*	PRIV FIXED INVEST-RES-STRUC,BILLIONS OF \$,SAAR-US
48	USCEN:IFRE.Q	5*	GROSS PRIV DOM INVEST-FIXED RES,BILLIONS OF \$,SAAR-US
49	USCEN:II.Q	1	GROSS PRIV DOM INVEST-CH IN PRIV INVENT,BILLIONS OF \$,SAAR-US

50	USCEN:IIF.Q	1	GROSS PRIV DOM INVEST-CH IN PRIV INVENT-FARM,BILLIONS OF \$,SAAR-US
51	BASIC:HSFR.M	4	HOUSING STARTS:NONFARM(1947-58);TOTAL FARM&NONFARM(1959-)(THOUS.,SA
52	BASIC:HMOB.M	4	MOBILE HOMES: MANUFACTURERS' SHIPMENTS (THOUS.OF UNITS,SAAR)
53	BASIC:PMNV.M	1	NAPM INVENTORIES INDEX (PERCENT)
54	BASIC:PMNO.M	1	NAPM NEW ORDERS INDEX (PERCENT)
55	BASIC:PMDEL.M	1	NAPM VENDOR DELIVERIES INDEX (PERCENT)
56	BASIC:MOCMQ.M	5	NEW ORDERS (NET) - CONSUMER GOODS & MATERIALS, 1996 DOLLARS (BCI)
57	BASIC:MSONDQ.M	5	NEW ORDERS, NONDEFENSE CAPITAL GOODS, IN 1996 DOLLARS (BCI)
58	USCEN:M.Q	5	IMPORTS OF GDS&SVC,BILLIONS OF \$,SAAR-US
59	USCEN:X.Q	5	EXPORTS OF GDS&SVC,BILLIONS OF \$,SAAR-US
60	BASIC:FSPCOM.M	5	S&P'S COMMON STOCK PRICE INDEX: COMPOSITE (1941-43=10)
61	BASIC:FSPIN.M	5	S&P'S COMMON STOCK PRICE INDEX: INDUSTRIALS (1941-43=10)
62	BASIC:FSDXP.M	1	S&P'S COMPOSITE COMMON STOCK: DIVIDEND YIELD (% PER ANNUM)
63	BASIC:FSPXE.M	1	S&P'S COMPOSITE COMMON STOCK: PRICE-EARNINGS RATIO (%NSA)
64	BASIC:EXRUK.M	5	FOREIGN EXCHANGE RATE: UNITED KINGDOM (CENTS PER POUND)
65	BASIC:EXRCAN.M	5	FOREIGN EXCHANGE RATE: CANADA (CANADIAN \$ PER U.S.\$)
66	BASIC:FYGM3.M	1	INTEREST RATE: U.S.TREASURY BILLS,SEC MKT,3-MO.(% PER ANN,NSA)
67	BASIC:FYGM6.M	1	INTEREST RATE: U.S.TREASURY BILLS,SEC MKT,6-MO.(% PER ANN,NSA)
68	BASIC:FYGT1.M	1	INTEREST RATE: U.S.TREASURY CONST MATURITIES,1-YR.(% PER ANN,NSA)
69	BASIC:FYGT5.M	1	INTEREST RATE: U.S.TREASURY CONST MATURITIES,5-YR.(% PER ANN,NSA)
70	BASIC:FYGT10.M	1	INTEREST RATE: U.S.TREASURY CONST MATURITIES,10-YR.(% PER ANN,NSA)
71	BASIC:FYAAAC.M	1	BOND YIELD: MOODY'S AAA CORPORATE (% PER ANNUM)
72	BASIC:FYBAAC.M	1	BOND YIELD: MOODY'S BAA CORPORATE (% PER ANNUM)
73	FYGM6-FYFF	1	
74	FYGM3-FYFF	1	
75	FYGT1-FYFF	1	
76	FYGT5-FYFF	1	
77	FYGT10-FYFF	1	
78	FYAAAC-FYFF	1	
79	FYBAAC-FYFF	1	
80	BASIC:FM1.M	5	MONEY STOCK: M1(CURR,TRAV.CKS,DEM DEP,OTHER CK'ABLE DEP)(BIL\$,SA)
81	BASIC:FM2.M	5	MONEY STOCK:M2(M1+O'NITE RPS,EURO\$,G/P&B/D MMMFS&SAV&SM TIME DEP)(BIL\$)
82	USCEN:MNY2@00.M	5	MONEY SUPPL-M2 IN 2000 \$,SA-US
83	BASIC:FMFBA.M	5	MONETARY BASE, ADJ FOR RESERVE REQUIREMENT CHANGES(MIL\$,SA)
84	BASIC:FMRRA.M	5	DEPOSITORY INST RESERVES:TOTAL,ADJ FOR RESERVE REQ CHGS(MIL\$,SA)
85	BASIC:FMRNB.A	2	DEPOSITORY INST RESERVES:NONBORROWED,ADJ RES REQ CHGS(MIL\$,SA)
86	USCEN:ALCIBL00Z.M	5	COML&IND LOANS OUTST,SA-US
87	BASIC:FCLBMC.M	1	WKLY RP LG COM'L BANKS:NET CHANGE COM'L & INDUS LOANS(BIL\$,SAAR)
88	BASIC:CCINRV.M	5	CONSUMER CREDIT OUTSTANDING - NONREVOLVING(G19)
89	DRIINTL:PGDP@US.Q	5	NIA PRICE DEFLATOR - GROSS DOMESTIC PRODUCT, SA - U.S.
90	DRIINTL:PCP@US.Q	5	NIA PRICE DEFLATOR - PRIVATE CONSUMPTION EXPENDITURE, SA - U.S.
91	USCEN:PDII.Q	5	GROSS PRIV DOM INVEST,PRICE DEFLATORS (2000=100),SA,SA-US
92	USCEN:JPCD.Q	5	PCE-DUR,PRICE INDEX (2000=100),SA,SA-US
93	USCEN:JPCN.Q	5	PCE-NDUR,PRICE INDEX (2000=100),SA,SA-US
94	USCEN:JPCSV.Q	5	PCE-SVC,PRICE INDEX (2000=100),SA,SA-US
95	BASIC:PUXM.M	5	CPI-U: ALL ITEMS LESS MEDICAL CARE (82-84=100,SA)
96	BASIC:PUXHS.M	5	CPI-U: ALL ITEMS LESS SHELTER (82-84=100,SA)
97	BASIC:PUXF.M	5	CPI-U: ALL ITEMS LESS FOOD (82-84=100,SA)
98	BASIC:PUS.M	5	CPI-U: SERVICES (82-84=100,SA)
99	BASIC:PUCD.M	5	CPI-U: DURABLES (82-84=100,SA)
100	BASIC:PUC.M	5	CPI-U: COMMODITIES (82-84=100,SA)
101	BASIC:PUNEW.M	5	CPI-U: ALL ITEMS (82-84=100,SA)
102	BASIC:PWFS.A	5	PRODUCER PRICE INDEX: FINISHED GOODS (82=100,SA)
103	BASIC:PMCP.M	1	NAPM COMMODITY PRICES INDEX (PERCENT)
104	UOMO83	1	COMPONENT INDEX OF CONSUMER EXPECTATIONS, NSA, CONFBOARD AND U.MICH.
105	DRIINTL:JLEAD@US.Q	5	COMPOSITE CYCLICAL INDICATOR (1996) - LEADING, SA - U.S.
106	DRIINTL:JLAG@US.Q	5	COMPOSITE CYCLICAL INDICATOR (1996) - LAGGING, SA - U.S.
107	DRIINTL:JCOIN@US.Q	5	COMPOSITE CYCLICAL INDICATOR (1996) - COINCIDENT, SA - U.S.



108	FYBAAC-FYGT10.M	1	BAA SPREAD
109	USCEN:NC16&Z.M	0	CIVILIAN NONINSTITUTIONAL POP: 16 YEARS&OVER,SA-US
110	BASIC:FYFF.M	1	INTEREST RATE: FEDERAL FUNDS (EFFECTIVE) (% PER ANNUM,NSA)

Figure 8: Comparison of IRFs to a monetary policy shock in FAVAR, Different levels of  $INTER_3$ , Real Variables

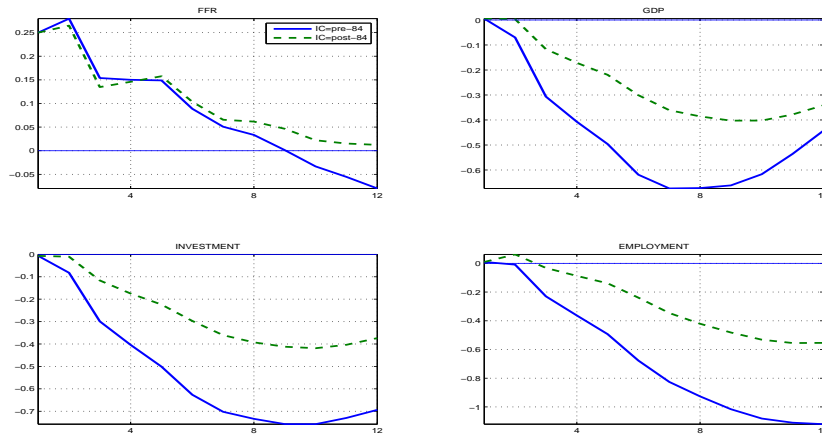


Figure 9: Difference between IRFs to a monetary policy shock with different levels of  $INTER_3$ , FAVAR Real Variables

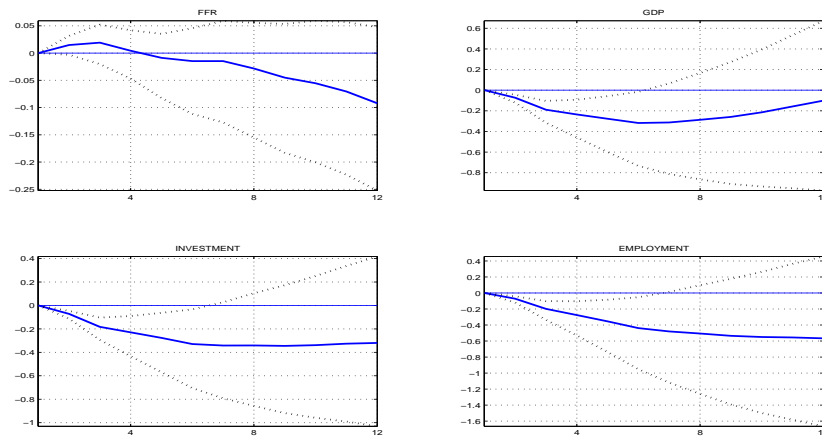


Figure 10: Comparison of IRFs to a monetary policy shock in FAVAR, Different levels of  $INTER_3$ , Financial Variables

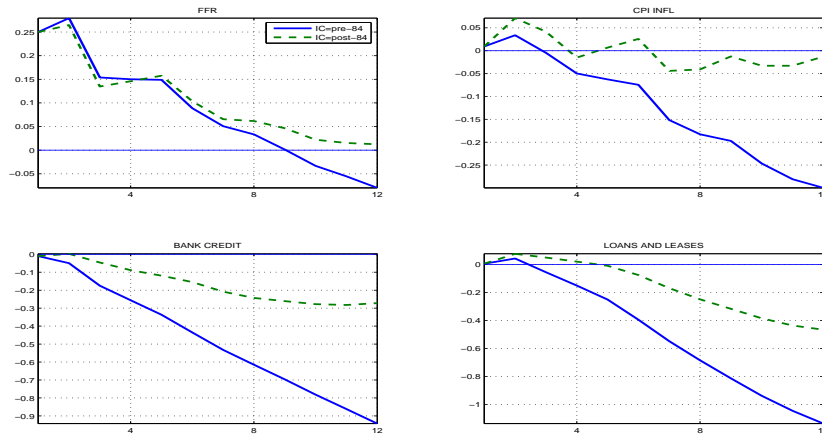


Figure 11: Difference between IRFs to a monetary policy shock with different levels of  $INTER_3$ , FAVAR Financial Variables

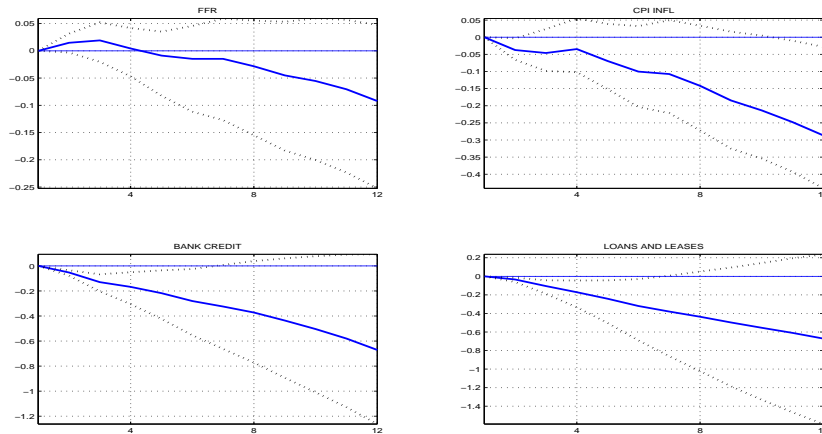


Figure 12: IRF FAVAR, Selected Variables, Low level of Interconnectedness

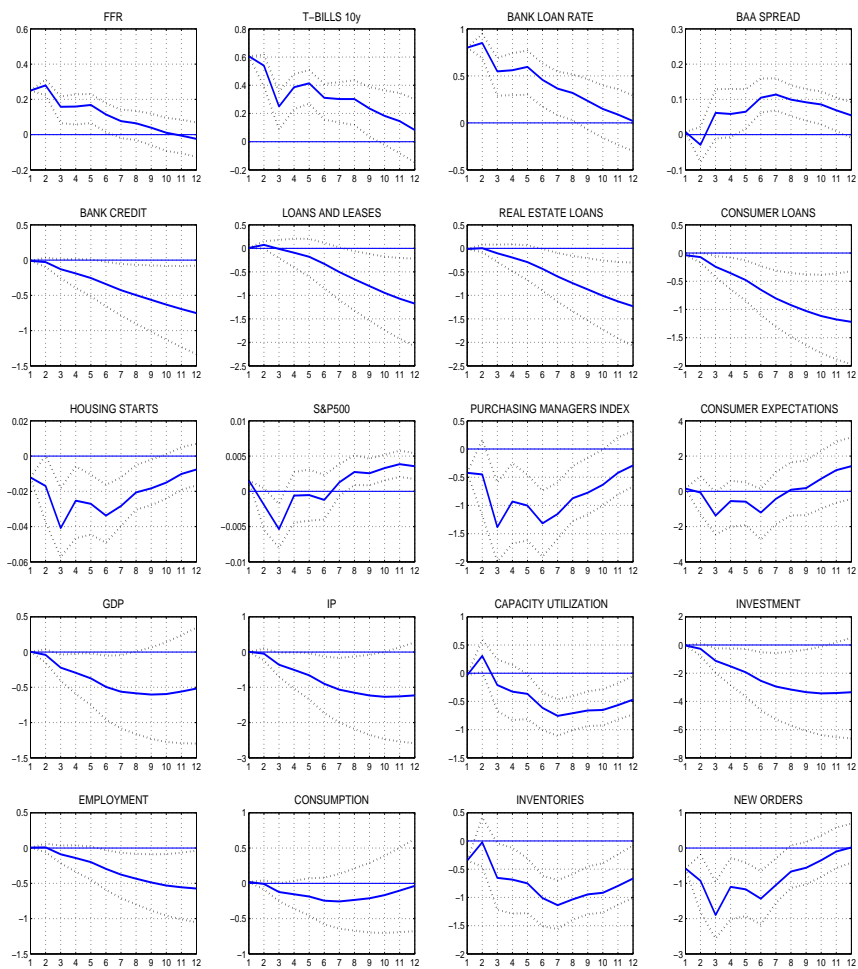


Figure 13: IRF FAVAR, Selected Variables, High level of Interconnectedness

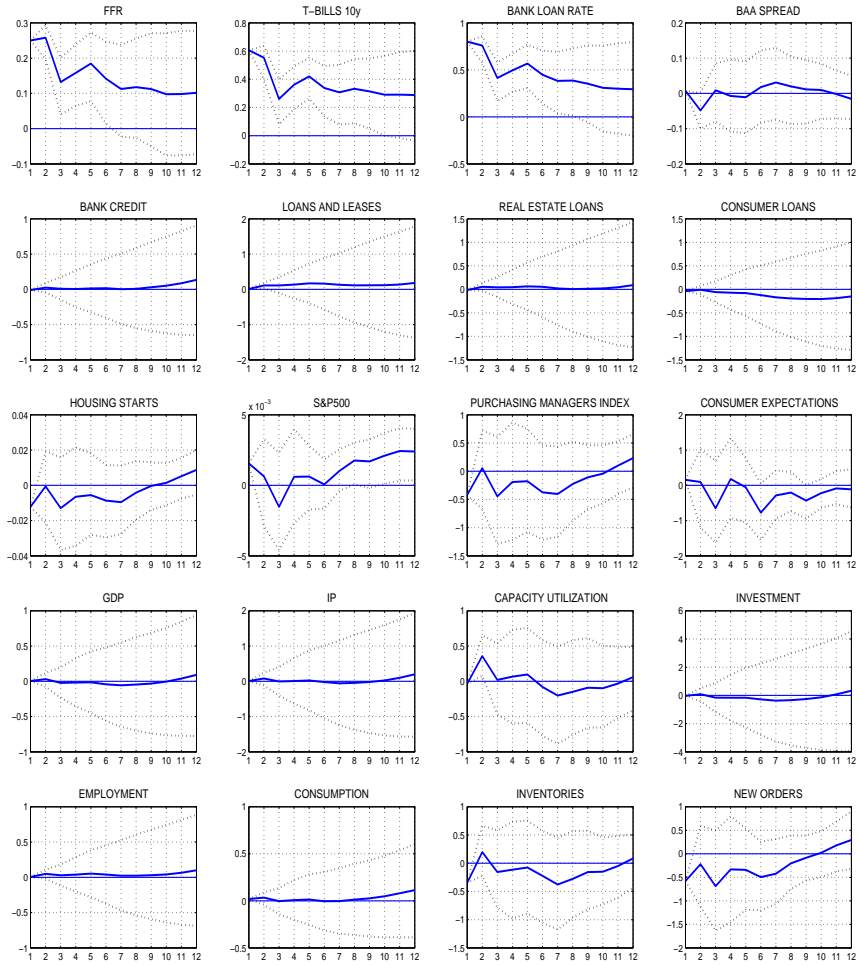


Figure 14: Comparison of IRFs to a monetary policy shock in different time periods (pre and post 1984), FAVAR Selected Variables

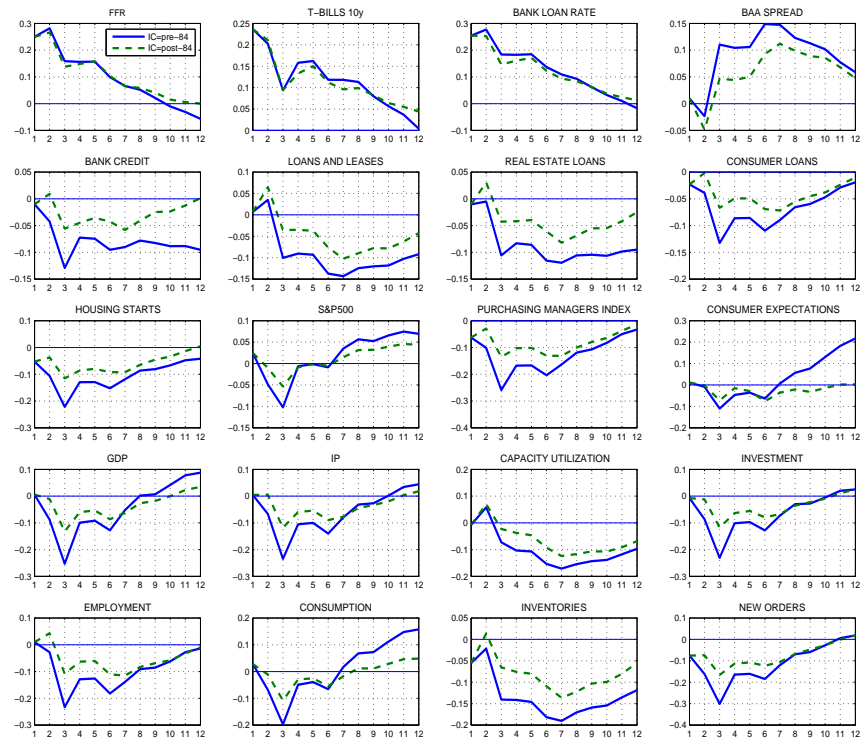


Figure 15: Difference between IRFs to a monetary policy shock in different time periods (pre and post 1984), FAVAR Selected Variables

