

— **Supplementary Material for** —  
**Disentangling the Channels of the 2007-2009 Recession**

Prepared for the Brookings Panel on Economic Activity, March 22-23, 2012

April 27, 2012  
(revised May 11, 2012)

James H. Stock

Department of Economics, Harvard University  
and the National Bureau of Economic Research

and

Mark W. Watson\*

Department of Economics and the Woodrow Wilson School, Princeton University  
and the National Bureau of Economic Research

## 1. Data

Table S1: Data Series Used ( $X_{it}$  variables in equation (1))

N	Series	Desc.	T	F	Start	End
<b>NIPA</b>						
1	GDP	Real Gross Domestic Product, 3 Decimal	5		1959:1	2011:2
2	Consumption	Real Personal Consumption Expenditures	5		1959:1	2011:2
3	Cons:Dur	Real Personal Consumption Expenditures:Durable Goods	5	Y	1959:1	2011:2
4	Cons:Svc	Real Personal Consumption Expenditures:Services	5	Y	1959:1	2011:2
5	Cons:NonDur	Real Personal Consumption Expenditures:Nondurable Goods	5	Y	1959:1	2011:2
6	Investment	Real Gross Private Domestic Investment, 3 Decimal	5		1959:1	2011:2
7	FixedInv	Real Private Fixed Investment, 3 Decimal	5		1959:1	2011:2
8	Inv:Equip&Software	Real Nonresidential Investment:Equipment & Software, 3 Decimal	5	Y	1959:1	2011:2
9	FixInv:NonRes	Real Private Nonresidential Fixed Investment, 3 Decimal	5	Y	1959:1	2011:2
10	FixedInv:Res	Real Private Residential Fixed Investment, 3 Decimal	5	Y	1959:1	2011:2
11	Inv:Inventories	Ch. Inv/GDP	1	Y	1959:1	2011:2
12	Gov.Spending	Real Government Consumption Expenditures & Gross Investment, 3 Decimal	5		1959:1	2011:2
13	Gov:Fed	Real Federal Consumption Expenditures & Gross Investment, 3 Decimal	5	Y	1959:1	2011:2
14	Real Gov Receipts	Government Current Receipts (Nominal)Defl by GDPCTPI	5	Y	1959:1	2011:2
15	Gov:State&Local	Real State & Local Consumption Expenditures & Gross Investment, 3 Decimal	5	Y	1959:1	2011:2
16	Exports	Real Exports of Goods & Services, 3 Decimal	5	Y	1959:1	2011:2
17	Imports	Real Imports of Goods & Services, 3 Decimal	5	Y	1959:1	2011:2
18	Disp-Income	Real Disposable Personal Income	5		1959:1	2011:2
19	Ouput:NFB	Nonfarm Business Sector:Output	5		1959:1	2011:2
20	Output:Bus	Business Sector:Output	5		1959:1	2011:2
21	Output:Manuf	Manufacturing Sector:Output	5		1987:1	2011:2
<b>Industrial Production</b>						
22	IP:Total index	IP:Total index	5		1959:1	2011:2
23	IP:Final products	Industrial Production:Final Products (Market Group)	5		1959:1	2011:2
24	IP:Consumer goods	IP:Consumer goods	5		1959:1	2011:2
25	IP:Materials	Industrial Production:Materials	5		1959:1	2011:2
26	IP:Dur gds materials	Industrial Production:Durable Materials	5	Y	1959:1	2011:2
27	IP:Nondur gds materials	Industrial Production:nondurable Materials	5	Y	1959:1	2011:2
28	IP:Dur Cons. Goods	Industrial Production:Durable Consumer Goods	5	Y	1959:1	2011:2
29	IP:Auto	IP:Automotive products	5	Y	1959:1	2011:2
30	IP:NonDur Cons God	Industrial Production:Nondurable Consumer Goods	5	Y	1959:1	2011:2
31	IP:Bus Equip	Industrial Production:Business Equipment	5	Y	1959:1	2011:2
32	IP:Energy Prds	IP:Consumer Energy Products	5	Y	1959:1	2011:2
33	Capu Tot	Capacity Utilization:Total Industry	1	Y	1967:1	2011:2
34	Capu Man.	Capu Man. (Fred post 1972, Older serious before 1972)	1	Y	1959:1	2011:2
<b>Employment and Unemployment</b>						
35	Emp:Nonfarm	Total Nonfarm Payrolls:All Employees	5		1959:1	2011:2
36	Emp:Private	All Employees:Total Private Industries	5		1959:1	2011:2
37	Emp:mfg	All Employees:Manufacturing	5		1959:1	2011:2
38	Emp:Services	All Employees:Service-Providing Industries	5		1959:1	2011:2
39	Emp:Goods	All Employees:Goods-Producing Industries	5		1959:1	2011:2
40	Emp:DurGoods	All Employees:Durable Goods Manufacturing	5	Y	1959:1	2011:2
41	Emp:Nondur Goods	All Employees:Nondurable Goods Manufacturing	5		1959:1	2011:2
42	Emp:Const	All Employees:Construction	5	Y	1959:1	2011:2
43	Emp:Edu&Health	All Employees:Education & Health Services	5	Y	1959:1	2011:2
44	Emp:Finance	All Employees:Financial Activities	5	Y	1959:1	2011:2

45	Emp:Infor	All Employees:Information Services	5	Y	1959:1	2011:2
46	Emp:Bus Serv	All Employees:Professional & Business Services	5	Y	1959:1	2011:2
47	Emp:Leisure	All Employees:Leisure & Hospitality	5	Y	1959:1	2011:2
48	Emp:OtherSvcs	All Employees:Other Services	5	Y	1959:1	2011:2
49	Emp:Mining/NatRes	All Employees:Natural Resources & Mining	5	Y	1959:1	2011:2
50	Emp:Trade&Trans	All Employees:Trade, Transportation & Utilities	5	Y	1959:1	2011:2
51	Emp:Gov	All Employees:Government	5		1959:1	2011:2
52	Emp:Retail	All Employees:Retail Trade	5	Y	1959:1	2011:2
53	Emp:Wholesal	All Employees:Wholesale Trade	5	Y	1959:1	2011:2
54	Emp:Gov(Fed)	Federal	5	Y	1959:1	2011:2
55	Emp:Gov (State)	State government	5	Y	1959:1	2011:2
56	Emp:Gov (Local)	Local government	5	Y	1959:1	2011:2
57	Emp:Total (HHSurve)	Emp Total (Household Survey)	5		1959:1	2011:2
58	LF Part Rate	LaborForce Participation Rate (16 Over) SA	2		1959:1	2011:2
59	Unemp Rate	Urate	2		1959:1	2011:2
60	Urate_ST	Urate Short Term (< 27 weeks)	2		1959:1	2011:2
61	Urate_LT	Urate Long Term (>= 27 weeks)	2		1959:1	2011:2
62	Urate:Age16-19	Unemployment Rate - 16-19 yrs	2	Y	1959:1	2011:2
63	Urate:Age>20 Men	Unemployment Rate - 20 yrs. & over, Men	2	Y	1959:1	2011:2
64	Urate:Age>20 Women	Unemployment Rate - 20 yrs. & over, Women	2	Y	1959:1	2011:2
65	U:Dur<5wks	Number Unemployed for Less than 5 Weeks	5	Y	1959:1	2011:2
66	U:Dur5-14wks	Number Unemployed for 5-14 Weeks	5	Y	1959:1	2011:2
67	U:dur>15-26wks	Civilians Unemployed for 15-26 Weeks	5	Y	1959:1	2011:2
68	U:Dur>27wks	Number Unemployed for 27 Weeks & over	5	Y	1959:1	2011:2
69	U:Job losers	Unemployment Level - Job Losers	5	Y	1967:1	2011:2
70	U:LF Reenty	Unemployment Level - Reentrants to Labor Force	5	Y	1967:1	2011:2
71	U:Job Leavers	Unemployment Level - Job Leavers	5	Y	1967:1	2011:2
72	U:New Entrants	Unemployment Level - New Entrants	5	Y	1967:1	2011:2
73	Emp:SlackWk	Employment Level - Part-Time for Economic Reasons, All Industries	5	Y	1959:1	2011:2
74	EmpHrs:Bus Sec	Business Sector:Hours of All Persons	5		1959:1	2011:2
75	EmpHrs:mfg	Manufacturing Sector:Hours of All Persons	5		1987:1	2011:2
76	EmpHrs:nfb	Nonfarm Business Sector:Hours of All Persons	5		1959:1	2011:2
77	AWH Man	Average Weekly Hours:Manufacturing	1	Y	1959:1	2011:2
78	AWH Privat	Average Weekly Hours:Total Private Industrie	2	Y	1964:1	2011:2
79	AWH Overtime	Average Weekly Hours:Overtime:Manufacturing	2	Y	1959:1	2011:2
80	HelpWnted	Index of Help-Wanted Advertising in Newspapers	1		1959:1	2009:3
<b>Housing Starts</b>						
81	Hstarts	Housing Starts:Total:New Privately Owned Housing Units Started	5		1959:1	2011:2
82	Hstarts >5units	Privately Owned Housing Starts:5-Unit Structures or More	5		1959:1	2011:2
83	Hpermits	New Private Housing Units Authorized by Building Permit	5	Y	1960:1	2011:2
84	Hstarts:MW	Housing Starts in Midwest Census Region	5	Y	1959:1	2011:2
85	Hstarts:NE	Housing Starts in Northeast Census Region	5	Y	1959:1	2011:2
86	Hstarts:S	Housing Starts in South Census Region	5	Y	1959:1	2011:2
87	Hstarts:W	Housing Starts in West Census Region	5	Y	1959:1	2011:2
88	Constr. Contracts	Construction contracts (mil. sq. ft.) (Copyright, McGraw-Hill)	4	Y	1963:1	2011:2
<b>Inventories, Orders, and Sales</b>						
89	MT Sales	Manufacturing and trade sales (mil. Chain 2005 \$)	5		1959:1	2011:2
90	Ret. Sale	Sales of retail stores (mil. Chain 2000 \$)	5	Y	1959:1	2011:2
91	Orders (DurMfg)	Mfrs' new orders durable goods industries (bil. chain 2000 \$)	5	Y	1959:1	2011:2
92	Orders(ConsGoods/Mat.)	Mfrs' new orders, consumer goods and materials (mil. 1982 \$)	5	Y	1959:1	2011:2
93	UnfOrders(DurGds)	Mfrs' unfilled orders durable goods indus. (bil. chain 2000 \$)	5	Y	1959:1	2011:2
94	Orders(NonDefCap)	Mfrs' new orders, nondefense capital goods (mil. 1982 \$)	5	Y	1959:1	2011:2
95	VendPerf	Index of supplier deliveries -- vendor performance (pct.)	1	Y	1959:1	2011:2
96	MT Invent	Manufacturing and trade inventories (bil. Chain 2005 \$)	5	Y	1959:1	2011:2
<b>Prices</b>						
97	PCED	Personal Consumption Expenditures:Chain-type Price Index	6		1959:1	2011:2
98	PCED_LFE	Personal Consumption Expenditures:Chain-type Price Index	6		1959:1	2011:2

		Less Food and Energy				
99	GDP Defl	Gross Domestic Product:Chain-type Price Index	6		1959:1	2011:2
100	GPDI Defl	Gross Private Domestic Investment:Chain-type Price Index	6	Y	1959:1	2011:2
101	BusSec Defl	Business Sector:Implicit Price Deflator	6	Y	1959:1	2011:2
102	PCED_Goods	Goods	6		1959:1	2011:2
103	PCED_DurGoods	Durable goods	6		1959:1	2011:2
104	PCED_Serv	Services	6		1959:1	2011:2
105	PCED_NDurGoods	Nondurable goods	6		1959:1	2011:2
106	PCED_HouseholdServ.	Household consumption expenditures (for services)	6		1959:1	2011:2
107	PCED_MotorVec	Motor vehicles and parts	6	Y	1959:1	2011:2
108	PCED_DurHousehold	Furnishings and durable household equipment	6	Y	1959:1	2011:2
109	PCED_Recreation	Recreational goods and vehicles	6	Y	1959:1	2011:2
110	PCED_OthDurGds	Other durable goods	6	Y	1959:1	2011:2
111	PCED_Food_Bev	Food and beverages purchased for off-premises consumption	6	Y	1959:1	2011:2
112	PCED_Clothing	Clothing and footwear	6	Y	1959:1	2011:2
113	PCED_Gas_Engry	Gasoline and other energy goods	6	Y	1959:1	2011:2
114	PCED_OthNDurGds	Other nondurable goods	6	Y	1959:1	2011:2
115	PCED_Housing-Utilities	Housing and utilities	6	Y	1959:1	2011:2
116	PCED_HealthCare	Health care	6	Y	1959:1	2011:2
117	PCED_TransSvg	Transportation services	6	Y	1959:1	2011:2
118	PCED_RecServices	Recreation services	6	Y	1959:1	2011:2
119	PCED_FoodServ_Acc.	Food services and accommodations	6	Y	1959:1	2011:2
120	PCED_FIRE	Financial services and insurance	6	Y	1959:1	2011:2
121	PCED_OtherServices	Other services	6	Y	1959:1	2011:2
122	CPI	Consumer Price Index For All Urban Consumers:All Items	6		1959:1	2011:2
123	CPI_LFE	Consumer Price Index for All Urban Consumers:All Items Less Food & Energy	6		1959:1	2011:2
124	PPI:FinGds	Producer Price Index:Finished Goods	6		1959:1	2011:2
125	PPI	Producer Price Index:All Commodities	6		1959:1	2011:2
126	PPI:FinConsGds	Producer Price Index:Finished Consumer Goods	6	Y	1959:1	2011:2
127	PPI:FinConsGds(Food)	Producer Price Index:Finished Consumer Foods	6	Y	1959:1	2011:2
128	PPI:IndCom	Producer Price Index:Industrial Commodities	6	Y	1959:1	2011:2
129	PPI:IntMat	Producer Price Index:Intermediate Materials:Supplies & Components	6	Y	1959:1	2011:2
130	Real P:SensMat	Index of Sensitive Mattrerials Prices (Discontinued)Defl by PCEPILFE	5	Y	1959:1	2004:1
131	Real Commod: spot price	SPOT MARKET PRICE INDEX:BLS & CRB:ALL COMMODITIES(1967=100)Defl by PCEPILFE	5		1959:1	2009:1
132	NAPM com price	NAPM COMMODITY PRICES INDEX (PERCENT)	1	Y	1959:1	2009:1
133	Real Price:NatGas	PPI:Natural GasDefl by PCEPILFE	5	Y	1967:1	2011:2
134	Real Price:Oil	PPI:Crude PetroleumDefl by PCEPILFE	5	Y	1959:1	2011:2
135	Real Crudeoil Price	Crude Oil:West Texas Intermediate (WTI) - Cushing OklahomaDefl by PCEPILFE	5		1986:1	2011:2
<b>Earnings and Productivity</b>						
136	Real AHE:PrivInd	Average Hourly Earnings:Total Private IndustriesDefl by PCEPILFE	5		1964:1	2011:2
137	Real AHE:Const	Average Hourly Earnings:ConstructionDefl by PCEPILFE	5		1959:1	2011:2
138	Real AHE:MFG	Average Hourly Earnings:ManufacturingDefl by PCEPILFE	5		1959:1	2011:2
139	CPH:Mfg	Manufacturing Sector:Real Compensation Per Hour	5	Y	1987:1	2011:2
140	CPH:NFB	Nonfarm Business Sector:Real Compensation Per Hour	5	Y	1959:1	2011:2
141	CPH:Bus	Business Sector:Real Compensation Per Hour	5	Y	1959:1	2011:2
142	OPH:mfg	Manufacturing Sector:Output Per Hour of All Persons	5	Y	1987:1	2011:2
143	OPH:nfb	Nonfarm Business Sector:Output Per Hour of All Persons	5	Y	1959:1	2011:2
144	OPH:Bus	Business Sector:Output Per Hour of All Persons	5		1959:1	2011:2
145	ULC:Bus	Business Sector:Unit Labor Cost	5		1959:1	2011:2
146	ULC:Mfg	Manufacturing Sector:Unit Labor Cost	5	Y	1987:1	2011:2
147	ULC:NFB	Nonfarm Business Sector:Unit Labor Cost	5	Y	1959:1	2011:2
148	UNLPay:nfb	Nonfarm Business Sector:Unit Nonlabor Payments	5	Y	1959:1	2011:2
<b>Interest Rates</b>						

149	FedFunds	Effective Federal Funds Rate	2	Y	1959:1	2011:2
150	TB-3Mth	3-Month Treasury Bill:Secondary Market Rate	2	Y	1959:1	2011:2
151	TM-6MTH	6-Month Treasury Bill:Secondary Market Rate	2		1959:1	2011:2
152	EuroDol3M	3-Month Eurodollar Deposit Rate (London)	2		1971:1	2011:2
153	TB-1YR	1-Year Treasury Constant Maturity Rate	2		1959:1	2011:2
154	TB-10YR	10-Year Treasury Constant Maturity Rate	2		1959:1	2011:2
155	Mort-30Yr	30-Year Conventional Mortgage Rate	2		1971:2	2011:2
156	AAA Bond	Moody's Seasoned Aaa Corporate Bond Yield	2		1959:1	2011:2
157	BAA Bond	Moody's Seasoned Baa Corporate Bond Yield	2		1959:1	2011:2
158	BAA_GS10	BAA-GS10 Spread	1	Y	1959:1	2011:2
159	MRTG_GS10	Mortg-GS10 Spread	1	Y	1971:2	2011:2
160	tb6m_tb3m	tb6m-tb3m	1	Y	1959:1	2011:2
161	GS1_tb3m	GS1_Tb3m	1	Y	1959:1	2011:2
162	GS10_tb3m	GS10_Tb3m	1	Y	1959:1	2011:2
163	CP_Tbill Spread	CP3FM-TB3MS	1	Y	1959:1	2011:2
164	Ted_spr	MED3-TB3MS (Version of TED Spread)	1	Y	1971:1	2011:2
165	gz_spread	GZ_Spread (Unadjusted)	1		1973:1	2010:3
166	gz_ebp	GZ Excess Bond Premium	1	Y	1973:1	2010:3
<b>Money and Credit</b>						
167	Real Mbase	Board of Governors Monetary Base, Adjusted for Changes in Reserve RequirementsDefl by PCEPILFE	5		1959:1	2011:2
168	Real InsMMF	Institutional Money Funds (Note - begin in 1980 .. Values earlier are too small)Defl by PCEPILFE	5		1980:1	2011:2
169	Real m1	M1 Money StockDefl by PCEPILFE	5		1959:1	2011:2
170	Real m2	M2SLDefl by PCEPILFE	5		1959:1	2011:2
171	Real mzm	MZM Money StockDefl by PCEPILFE	5		1959:1	2011:2
172	Real C&Lload	Commercial and Industrial Loans at All Commercial BanksDefl by PCEPILFE	5	Y	1959:1	2011:2
173	Real ConsLoans	Consumer (Individual) Loans at All Commercial Banks - Outlier Code because of change in data in April 2010 ... see FRB H8 ReleaseDefl by PCEPILFE	5	Y	1959:1	2011:2
174	Real NonRevCredit	Total Nonrevolving Credit OutstandingDefl by PCEPILFE	5	Y	1959:1	2011:2
175	Real LoansRealEst	Real Estate Loans at All Commercial BanksDefl by PCEPILFE	5	Y	1959:1	2011:2
176	Real RevolvCredit	Total Revolving Credit OutstandingDefl by PCEPILFE	5	Y	1968:1	2011:2
177	Real ConsuCred	Total Consumer Credit OutstandingDefl by PCEPILFE	5		1959:1	2011:2
178	FRBSLO_Consumers	FRB Senior Loans Officer Opions. Net Percentage of Domestic Respondents Reporting Increased Willingness to Make Consumer Installment Loans	1	Y	1970:1	2011:2
<b>Stock Prices, Wealth, Household Balance Sheets</b>						
179	Real HHW:TASA	Total Tangible Assets - Balance Sheet of Households and Nonprofits (FoF)Defl by JCXFE Seasonally Adjusted in Datain	5		1959:1	2011:2
180	S&P 500	S&P'S COMMON STOCK PRICE INDEX:COMPOSITE (1941-43=10)	5	Y	1959:1	2011:2
181	Real HHW:LiabSA	Total Liabilities - Balance Sheet of Households and Nonprofits (FoF)Defl by JCXFE Seasonally Adjusted in Datain	5	Y	1959:1	2011:2
182	liab_PDISA	Liabilities Relative to Person Disp Income Seasonally Adjusted in Datain	5		1959:1	2011:2
183	Real HHW:WSA	Total Net Worth - Balance Sheet of Households and Nonprofits (FoF)Defl by JCXFE Seasonally Adjusted in Datain	5	Y	1959:1	2011:2
184	W_PDISA	Networth Relative to Personal Disp Income Seasonally Adjusted in Datain	1		1959:1	2011:2
185	Real HHW:TA_RESA	TTABSHNO-REANSHNODEfl by JCXFE Seasonally Adjusted in Datain	5	Y	1959:1	2011:2
186	Real HHW:RESA	Real Estate - Assets - Balance Sheet of Households and Nonprofit Orgs (FoF)Defl by JCXFE Seasonally Adjusted in Datain	5	Y	1959:1	2011:2
187	DJIA	COMMON STOCK PRICES:DOW JONES INDUSTRIAL AVERAGE	5	Y	1959:1	2011:2
188	Real HHW:FinSA	Total Financial Assets - Assets - Balance Sheet of Households and Non Profits (FoF)Defl by JCXFE Seasonally Adjusted in	5	Y	1959:1	2011:2

		Datain				
189	VXO	VXO (Linked by N. Bloom) .. Average daily VIX from 2009 ->	1	Y	1962:3	2011:2
<b>Housing Prices</b>						
190	Real Hprice:OFHEO	House Price Index for the United StatesDefl by JCXFE	5	Y	1975:1	2011:2
191	Real CS_10	Case-Shiller 10 City AverageDefl by PCEPILFE	5	Y	1987:1	2011:2
192	Real CS_20	Case-Shiller 20 City AverageDefl by PCEPILFE	5	Y	2000:1	2011:2
<b>Exchange Rates</b>						
193	Ex rate:major	FRB Nominal Major Currencies Dollar Index (Linked to EXRUS in 1973:1)	5	Y	1959:1	2011:2
194	Ex rate:Euro	U.S. / Euro Foreign Exchange Rate	5	Y	1999:1	2011:2
195	Ex rate:Switz	FOREIGN EXCHANGE RATE:SWITZERLAND (SWISS FRANC PER U.S.\$) Fred, 1971 - EXRSW previous	5	Y	1959:1	2011:2
196	Ex rate:Japan	FOREIGN EXCHANGE RATE:JAPAN (YEN PER U.S.\$), Fred 1971- EXRJAN previous	5	Y	1959:1	2011:2
197	Ex rate:UK	FOREIGN EXCHANGE RATE:UNITED KINGDOM (CENTS PER POUND), Fred 1971->, EXRUK Previous	5	Y	1959:1	2011:2
198	EX rate:Canada	FOREIGN EXCHANGE RATE:CANADA (CANADIAN \$ PER U.S.\$) - Fred, 1971 -> EXRCAN previous	5	Y	1959:1	2011:2
<b>Other</b>						
199	Cons. Expectations	Consumer expectations NSA (Copyright, University of Michigan)	1	Y	1959:1	2011:2
200	PoilyUncertainty	Baker, Bloom, Davis Policy Uncertainty Index	2	Y	1985:1	2011:2

Notes: The column labeled **T** indicates the transformation applied to the series (1 = level, 2 = change, 3 = logarithm, 5 = first difference of logarithm, 6 = second difference of logarithm). The column labeled **F** indicates whether the series was used to estimate the factors (Y = yes, blank = no).

Table S2: Instruments

Name	Sample Period	Source Paper	Data Source	Notes
<b>Oil</b>				
Hamilton	1960:I-2011:II	Hamilton (2003)	BLS PPI	Quarterly Series computed using same method as Hamilton (aggregate is last month of quarter) and then oil price increase relative to max over previous 12 quarters (in logs)
Killian	1971:I-2004:III	Killian (2008) Restat	Lutz Killian Webpage	This is Killian's Opec Shortfall. We used demeaned value.
Ramey-Vine	1967:I-2009:IV	Ramey-Vine (2010) Macro Annual	Valerie Ramey Webpage	We used the residual ln(Adjusted Gasoline Price) regressed on four own lags and lags of ln(IP), ln(Hours), ln(wages), ln(CPI), and Fed Funds, including a constant and trend as described in Ramey-Vine paper. This produces monthly residuals. We used quarterly averages of the monthly values.
<b>Money</b>				
Romer&Romer	1969:I – 1996:IV	Romer and Romer (2004)	SpreadSheet from David Romer's webpage	Romer and Romer compute these as residuals from target FF (Narrative values) on Greenbook forecasts of output and inflation. We use quarterly averages of monthly values. Series is demeaned
Smet-Wouters	1959:I-2004:IV	Smets-Wouters (2007) interest rate shock	Replication files from Smets-Wouters and calculations carried out by King-Watson (2012)	
Sims-Zha	1960:II-2003:I	Sims and Zha AER (2006)	Supplied by Tao Zha for (preferered) model with includes MS varianaces (no TVP)	Quarterly averages of monthly values
GSS	1990:I-2004:IV	Gürkaynak, Sack, and Swanson (2005)	Supplied by Eric Swanson (replication files for paper) Spreadsheet: appendixA3_Jan202005.xlsx	We use their "Target" factor which measures surprise changes in target fed funds. We computed quarterly sums of their daily series.

<b>Productivity</b>				
Fernald	1959:I – 2011:II	Fernald (2009) and Basu-Kimball-Fernald (2004)	Fernald Spreadsheet on his webpage Spreadsheet: Quarterly_TFP.XLSX	Series dtfp_util Series is demeaned
Gali	1960:I-2011:II	Motivated by Gali (1999)	Computed internally in analysis	This is the innovation in the long-run forecast of output per hour (NFB)
Smet-Wouters	1959:I-2004:IV	Smets-Wouters (2007) interest rate shock	Replication files from SW and calculations carried out by King-Watson (2012)	
Uncertainty				
VIX	1962:III-2011:II	Bloom (2009)	MVOL series in dataset	Quarterly values are averages of monthly values; We use innovations from an AR(2) regression that includes a constant
BBD	1985:I-2011:II	Baker, Bloom, and Davis (2012)	Bloom webpage	Quarterly values are averages of monthly values; We use the logarithm of the series to compute innovations from an AR(2) regression that includes a constant after logs of the series.
<b>Spreads and Bank Loans</b>				
GZ	1973:I-2010:III	Gilchrist-Zakrajšek (2011) excess bond premium	Supplied by Egon Zakrajšek	We used residuals from an AR(2) regression including a constant
TedSpr	1971:I-2011:II		Med3_tb3m in FAC database	Quarterly average of monthly values We used residuals from an AR(2) regression including a constant
BCDZ Bank Loans	1992:I-2010:IV	Bassett, Chosak, Driscoll, and Zakrajšek (2011) exogenous shocks to bank lending standards	Series listed on page 35 of BCDZ paper (Dated September 29, 2011)	
<b>Fiscal</b>				
Ramey	1959:I – 2010:IV	Ramey News Shock (2011) QJE	Value relative to lagged value of Nominal GDP – computed in Ramey Spreadsheet	We used demeaned values



			Spreadsheet Name: Public_Data_Ramey_NBER_Fiscal.xlsx	
Fisher-Peters	1959:I- 2008:IV	Fisher and Peters (2010) – Excess returns to military contractors	From Ramey SpreadSheet Spreadsheet Name: Public_Data_Ramey_NBER_Fiscal.xlsx	
Romer&Romer	1959:I – 2007:IV	Romer and Romer (2010) AER Exogenous Tax changes relative to GDP	From David Romer Web page – series EXOGENRRAT Spreadsheet Name: Romer&RomerFiscalData.xlsx	We used demeaned value

## 2. Detailed Tables

Table S3: Subsample  $R^2$ 's of common component of quarterly macro variables,  
based on six static factors from the benchmark DFM estimated  
over 1959Q1 – 2007Q3. (Manuscript Table 1 extended)

		1959- 2007Q3	1984- 2007Q3	Computed over 15 quarters starting at NBER peak							
				60Q1	69Q4	73Q4	80Q1	81Q3	90Q3	01Q1	07Q4
1	GDP	0.73	0.62	0.81	0.79	0.83	0.79	0.85	0.73	0.64	0.64
2	Consumption	0.63	0.45	0.59	0.77	0.66	0.82	0.72	0.74	0.02	0.57
3	Cons:Dur	0.47	0.21	0.46	0.69	0.52	0.66	0.59	0.64	0.08	0.14
4	Cons:Svc	0.35	0.22	0.28	0.46	-0.06	0.62	0.47	0.47	-0.25	0.84
5	Cons:NonDur	0.34	0.25	0.30	0.19	0.58	0.49	0.10	0.64	-0.05	0.38
6	Investment	0.59	0.48	0.56	0.59	0.67	0.71	0.72	0.71	0.40	0.75
7	FixedInv	0.70	0.58	0.66	0.57	0.88	0.82	0.68	0.73	0.55	0.82
8	Inv:Equip&Software	0.62	0.43	0.75	0.74	0.80	0.79	0.67	0.44	0.60	0.79
9	FixInv:NonRes	0.63	0.57	0.64	0.77	0.90	0.58	0.57	0.50	0.69	0.86
10	FixedInv:Res	0.65	0.61	0.36	0.44	0.72	0.82	0.79	0.85	0.50	0.29
11	Inv:Inventories	0.56	0.53	0.67	0.07	0.62	0.67	0.66	0.64	0.49	0.67
12	Gov:Spending	0.05	0.18	0.03	-0.03	-0.24	-0.12	0.10	0.21	0.16	0.04
13	Gov:Fed	0.04	0.10	0.07	-0.04	-0.03	-0.07	0.16	0.17	0.19	0.10
14	Real Gov Receipts	0.39	0.20	0.55	0.68	0.50	0.46	0.45	0.09	0.15	0.65
15	Gov:State&Local	0.10	0.03	0.01	-0.21	0.06	0.41	0.32	-0.06	-0.23	0.30
16	Exports	0.10	0.24	0.06	0.18	0.22	0.70	0.75	-1.21	0.57	0.57
17	Imports	0.30	0.34	0.63	0.10	0.62	0.57	0.51	0.51	0.56	0.68
18	Disp-Income	0.24	0.09	0.65	0.27	0.29	0.48	0.24	0.16	-0.05	0.10
19	Ouput:NFB	0.75	0.63	0.82	0.75	0.83	0.82	0.87	0.75	0.57	0.69
20	Output:Bus	0.73	0.61	0.81	0.74	0.84	0.80	0.84	0.73	0.59	0.69
21	Output: Manuf	0.85	0.85	.	.	.	.	.	0.91	0.82	0.96
22	IP: Total index	0.87	0.79	0.90	0.86	0.94	0.93	0.94	0.89	0.76	0.95
23	IP: Final products	0.79	0.72	0.83	0.83	0.89	0.79	0.76	0.79	0.82	0.88
24	IP: Consumer goods	0.70	0.52	0.70	0.78	0.86	0.71	0.28	0.69	0.62	0.77
25	IP: Materials	0.72	0.66	0.81	0.74	0.89	0.90	0.91	0.79	0.58	0.91
26	IP: Dur gds materials	0.69	0.66	0.77	0.77	0.81	0.91	0.95	0.88	0.61	0.91
27	IP: Nondur gds materials	0.64	0.28	0.81	0.18	0.82	0.86	0.80	0.33	0.33	0.79
28	IP: Dur Cons. Goods	0.76	0.56	0.78	0.82	0.88	0.87	0.78	0.77	0.42	0.80
29	IP: Auto	0.58	0.29	0.59	0.61	0.70	0.64	0.39	0.66	0.13	0.57
30	IP:NonDur Cons God	0.25	0.11	0.22	0.30	0.68	-0.03	-0.25	-0.14	0.39	0.42
31	IP: Bus Equip	0.75	0.69	0.84	0.74	0.79	0.87	0.92	0.58	0.87	0.80
32	IP: Energy Prds	0.04	0.10	-0.04	-0.02	-0.12	0.09	0.06	0.05	0.24	-0.25
33	Capu Tot	0.72	0.65	.	0.78	0.91	0.86	0.85	-1.78	0.85	0.83
34	Capu Man.	0.76	0.60	0.86	0.92	0.90	0.84	0.83	-2.31	0.84	0.85
35	Emp:Nonfarm	0.92	0.91	0.93	0.94	0.93	0.95	0.98	0.93	0.91	0.96
36	Emp: Private	0.92	0.92	0.94	0.94	0.93	0.95	0.97	0.93	0.93	0.95
37	Emp: mfg	0.88	0.78	0.95	0.90	0.90	0.94	0.96	0.53	0.88	0.85
38	Emp:Services	0.80	0.80	0.82	0.68	0.69	0.89	0.93	0.89	0.78	0.93
39	Emp:Goods	0.90	0.86	0.94	0.92	0.90	0.94	0.94	0.92	0.89	0.87
40	Emp: DurGoods	0.88	0.81	0.92	0.88	0.91	0.95	0.96	0.78	0.89	0.86
41	Emp: Nondur Goods	0.63	0.37	0.82	0.74	0.72	0.73	0.84	-0.60	0.72	0.71
42	Emp: Const	0.63	0.71	0.52	-0.37	0.74	0.83	0.83	0.84	-0.10	0.81
43	Emp: Edu&Health	0.19	-0.12	0.63	0.30	0.59	0.58	0.62	-1.07	-0.45	0.24
44	Emp: Finance	0.33	0.32	0.05	-1.18	0.80	0.03	0.83	0.62	0.09	0.71
45	Emp: Infor	0.59	0.45	0.88	0.89	0.88	0.70	0.33	0.46	0.64	0.75
46	Emp: Bus Serv	0.67	0.67	0.84	0.68	0.71	0.70	0.83	0.66	0.69	0.87
47	Emp:Leisure	0.46	0.28	0.62	0.59	0.68	0.89	0.84	0.64	0.29	0.88
48	Emp:OtherSvcs	0.35	0.29	0.77	0.44	0.46	0.35	0.73	0.54	-0.48	0.57
49	Emp: Mining/NatRes	0.25	0.28	0.55	-0.01	-0.18	0.39	0.54	0.16	-0.60	0.45
50	Emp:Trade&Trans	0.81	0.82	0.76	0.61	0.79	0.94	0.92	0.90	0.86	0.93
51	Emp: Gov	0.27	-0.05	0.06	-0.16	0.25	0.55	0.48	-0.38	-0.28	-0.09
52	Emp:Retail	0.66	0.67	0.64	0.47	0.60	0.86	0.84	0.84	0.63	0.88
53	Emp:Wholesale	0.74	0.72	0.75	0.59	0.69	0.93	0.91	0.78	0.78	0.91
54	Emp: Gov(Fed)	0.15	0.15	0.12	0.01	0.08	0.18	-0.03	0.03	0.17	-0.16
55	Emp: Gov (State)	0.16	-0.01	0.19	0.03	0.41	0.53	0.51	0.17	0.04	0.10
56	Emp: Gov (Local)	0.31	-0.41	0.31	0.28	0.04	0.67	0.56	-0.22	-1.10	0.28

57	Emp: Total (HHSurve)	0.62	0.50	0.46	0.70	0.83	0.81	0.80	0.79	0.55	0.84
58	LF Part Rate	0.11	0.04	0.26	0.43	0.12	0.02	0.06	-0.06	0.09	0.40
59	Unemp Rate	0.84	0.75	0.77	0.88	0.95	0.91	0.88	0.76	0.79	0.89
60	Urate_ST	0.82	0.70	0.81	0.87	0.90	0.88	0.84	0.81	0.75	0.78
61	Urate_LT	0.61	0.58	0.55	0.62	0.68	0.74	0.71	0.44	0.51	0.64
62	Urate: Age16-19	0.50	0.37	0.36	0.67	0.77	0.72	0.70	0.65	0.40	0.61
63	Urate:Age>20 Men	0.80	0.70	0.68	0.80	0.93	0.90	0.88	0.74	0.76	0.86
64	Urate: Age>20 Women	0.68	0.54	0.64	0.77	0.87	0.76	0.86	0.49	0.69	0.87
65	U: Dur<5wks	0.49	0.26	0.54	0.69	0.67	0.66	0.58	0.35	0.31	0.44
66	U:Dur5-14wks	0.65	0.53	0.58	0.73	0.90	0.82	0.75	0.71	0.66	0.64
67	U: dur>15-26wks	0.57	0.45	0.70	0.77	0.76	0.55	0.73	0.46	0.70	0.59
68	U: Dur>27wks	0.67	0.60	0.59	0.83	0.81	0.76	0.76	0.61	0.64	0.35
69	U: Job losers	0.78	0.68	.	0.86	0.90	0.82	0.87	0.78	0.74	0.87
70	U: LF Reenty	0.34	0.27	.	0.60	0.52	0.48	0.43	0.44	0.35	0.48
71	U: Job Leavers	0.06	0.07	.	0.17	-0.19	0.23	0.00	0.07	0.11	-0.08
72	U: New Entrants	0.22	0.22	.	0.20	0.28	0.31	0.33	0.47	0.14	0.53
73	Emp:SlackWk	0.53	0.34	0.69	0.49	0.76	0.87	0.81	0.52	0.41	0.92
74	EmpHrs:Bus Sec	0.70	0.67	0.39	0.82	0.87	0.76	0.76	0.79	0.80	0.78
75	EmpHrs:mfg	0.68	0.68	.	.	.	.	.	0.68	0.82	0.89
76	EmpHrs:nfb	0.75	0.69	0.64	0.84	0.87	0.79	0.77	0.78	0.80	0.84
77	AWH Man	0.71	0.56	0.89	0.72	0.83	0.90	0.91	0.13	0.71	0.56
78	AWH Privat	0.47	0.38	.	0.41	0.63	0.67	0.59	0.53	0.63	0.25
79	AWH Overtime	0.62	0.44	0.73	0.81	0.77	0.91	0.88	0.56	0.60	0.79
80	HelpWnted	0.30	0.19	0.38	0.82	0.71	0.61	0.88	0.70	0.35	.
81	Hstarts	0.59	0.39	0.27	0.59	0.83	0.79	0.76	0.62	0.29	0.53
82	Hstarts >5units	0.29	0.05	0.28	0.42	0.66	0.43	0.28	0.21	-0.42	-0.08
83	Hpermits	0.61	0.38	-0.37	0.37	0.81	0.81	0.79	0.73	-0.16	0.69
84	Hstarts:MW	0.26	0.15	0.09	0.24	0.35	0.46	0.27	0.26	-0.43	0.27
85	Hstarts:NE	0.19	0.20	0.07	0.13	0.33	0.20	0.19	0.22	0.00	0.45
86	Hstarts:S	0.49	0.21	0.33	0.55	0.79	0.66	0.59	0.63	0.44	0.22
87	Hstarts:W	0.44	0.30	-0.19	0.20	0.54	0.81	0.71	0.44	0.09	0.20
88	Constr. Contracts	0.37	0.43	.	0.26	0.50	-0.90	0.54	0.61	-0.19	0.51
89	MT Sales	0.77	0.54	0.85	0.80	0.82	0.89	0.90	0.80	0.24	0.92
90	Ret. Sale	0.52	0.35	0.26	0.60	0.60	0.78	0.68	0.67	0.20	0.43
91	Orders (DurMfg)	0.65	0.45	0.39	0.76	0.87	0.73	0.69	0.72	0.48	0.86
92	Orders(ConsumerGoods/Mat.)	0.75	0.55	0.54	0.80	0.92	0.81	0.78	0.79	0.43	0.74
93	UnfOrders(DurGds)	0.52	0.27	0.30	0.73	0.78	0.17	0.33	0.09	0.67	0.08
94	Orders(NonDefCap)	0.31	0.24	0.08	0.35	0.58	0.58	0.50	0.20	0.47	0.64
95	VendPerf	0.54	0.06	0.54	0.69	0.72	0.30	0.36	-0.52	-0.16	-4.66
96	MT Invent	0.64	0.61	0.75	0.00	0.65	0.78	0.75	0.66	0.54	0.68
97	PCED	0.51	0.54	0.25	0.70	0.66	0.44	0.40	0.57	0.56	0.82
98	PCED_LFE	0.13	-0.12	0.09	0.31	0.51	0.18	0.06	-0.65	-0.26	0.15
99	GDP Defl	0.22	0.14	0.00	0.15	0.53	0.13	0.30	-0.80	0.57	0.39
100	GPDI Defl	0.09	-0.08	-0.10	0.08	0.28	0.50	0.55	0.00	0.03	-0.22
101	BusSec Defl	0.25	0.24	0.03	0.30	0.40	0.28	0.37	-0.69	0.38	0.47
102	PCED_Goods	0.53	0.56	0.33	0.76	0.67	0.40	0.32	0.69	0.58	0.69
103	PCED_DurGoods	0.13	-0.01	-0.03	0.15	0.32	0.15	-0.03	-0.09	0.04	0.10
104	PCED_Serv	0.06	-0.03	-0.06	0.29	0.25	0.07	0.07	-0.23	-0.03	0.23
105	PCED_NDurGoods	0.46	0.52	0.31	0.68	0.45	0.30	0.29	0.62	0.54	0.68
106	PCED_HouseholdServices	0.05	-0.03	0.01	0.30	0.27	0.05	0.06	-0.14	-0.03	0.02
107	PCED_MotorVec	0.08	0.01	0.00	0.09	0.25	0.04	-0.04	0.17	-0.23	0.13
108	PCED_DurHousehold	0.05	-0.01	-0.03	-0.06	0.33	0.13	-0.01	-0.10	0.21	0.04
109	PCED_Recreation	0.03	0.02	-0.05	0.00	0.08	0.37	0.28	0.00	0.00	0.07
110	PCED_OthDurGds	0.06	0.01	0.03	0.15	0.29	0.10	-0.04	-0.11	0.20	-0.04
111	PCED_Food_Bev	0.15	-0.04	0.30	0.27	0.31	-0.04	-0.03	-0.61	-0.61	-0.18
112	PCED_Clothing	0.06	0.03	0.08	-0.03	0.34	0.16	-0.05	-0.05	0.03	0.13
113	PCED_Gas_Engry	0.37	0.48	-0.42	-1.69	-0.63	0.25	0.23	0.55	0.48	0.71
114	PCED_OthNDurGds	0.10	-0.02	-0.15	0.41	0.37	0.04	-0.15	-0.05	0.13	-0.07
115	PCED_Housing-Utilities	0.05	0.07	-0.05	-0.07	0.14	-0.01	0.08	-0.02	0.13	-0.02
116	PCED_HealthCare	0.13	-0.13	0.17	0.40	0.64	0.15	0.11	-0.16	-0.19	-0.32
117	PCED_TransSvg	0.04	0.03	-0.23	0.08	0.07	0.04	0.06	0.05	-0.06	0.13
118	PCED_RecServices	0.11	0.01	0.00	0.50	0.38	0.23	0.03	-0.12	0.14	0.20
119	PCED_FoodServ_Acc.	0.13	-0.14	0.00	0.27	0.24	0.27	-0.04	0.11	-0.53	0.11
120	PCED_FIRE	0.01	0.00	-0.17	-0.01	0.00	0.02	0.03	0.03	-0.03	-0.07
121	PCED_OtherServices	0.05	0.03	-0.13	0.07	0.07	0.12	0.12	0.02	0.05	-0.08
122	CPI	0.43	0.56	0.22	0.84	0.40	0.18	0.18	0.61	0.65	0.67

123	CPI_LFE	0.23	-0.11	-0.33	0.12	0.61	0.27	0.25	0.08	-0.70	-0.08
124	PPI:FinGds	0.50	0.61	0.51	0.25	0.56	0.43	0.40	0.63	0.59	0.74
125	PPI	0.51	0.68	0.47	0.10	0.45	0.54	0.03	0.70	0.69	0.69
126	PPI:FinConsGds	0.48	0.62	0.45	0.05	0.50	0.41	0.37	0.61	0.61	0.71
127	PPI:FinConsGds(Food)	0.13	0.05	0.16	0.09	0.25	0.03	-0.35	-0.55	0.02	0.01
128	PPI:IndCom	0.57	0.64	-1.39	0.16	0.54	0.62	0.47	0.63	0.69	0.71
129	PPI:IntMat	0.68	0.72	-1.63	0.27	0.83	0.78	0.28	0.80	0.85	0.73
130	Real P:SensMat	0.52	0.29	-0.09	0.69	0.75	0.75	0.72	0.27	.	.
131	Real Commod: spot price	0.32	0.15	-0.44	0.59	0.59	0.48	0.60	0.10	0.14	.
132	NAPM com price	0.53	0.40	0.55	0.34	0.70	0.80	0.88	0.57	0.43	.
133	Real Price:NatGas	0.17	0.23	.	-8.96	-0.60	-0.90	-2.12	-0.67	0.25	0.22
134	Real Price:Oil	0.41	0.45	-17.46	-6.30	0.50	0.56	-0.04	0.56	0.56	0.66
135	Real Crudeoil Price	0.49	0.49	.	.	.	.	.	0.60	0.65	0.76
136	Real AHE:PrivInd	0.21	0.01	.	0.16	0.79	0.30	-0.15	0.54	-0.93	-2.92
137	Real AHE:Const	0.05	0.02	-0.06	-0.03	0.22	0.18	-0.03	0.41	-0.31	-0.23
138	Real AHE:MFG	0.21	-0.11	0.68	0.46	0.19	-0.01	-0.06	-0.04	-0.42	-0.74
139	CPH:Mfg	0.46	0.46	.	.	.	.	.	-0.01	0.37	0.36
140	CPH:NFB	0.37	0.41	0.28	0.35	0.35	0.22	-0.15	0.27	0.36	0.57
141	CPH:Bus	0.37	0.41	0.38	0.29	0.44	0.23	-0.06	0.32	0.36	0.54
142	OPH:mfg	0.29	0.29	.	.	.	.	.	0.15	0.39	0.70
143	OPH:nfb	0.50	0.39	0.62	0.48	0.23	0.53	0.61	0.39	0.39	-0.79
144	OPH:Bus	0.49	0.31	0.66	0.48	0.61	0.42	0.53	0.33	0.40	-1.25
145	ULC:Bus	0.40	0.18	0.52	0.38	0.39	0.60	0.58	0.48	0.36	-0.11
146	ULC:Mfg	0.39	0.39	.	.	.	.	.	0.27	0.24	0.54
147	ULC:NFB	0.44	0.19	0.60	0.44	0.37	0.66	0.66	0.43	0.35	-0.11
148	UNLPay:nfb	0.24	0.10	0.47	0.49	0.24	0.43	0.23	-1.78	0.22	-0.54
149	FedFunds	0.44	0.34	-0.01	0.47	0.57	0.48	0.41	0.72	0.14	-1.51
150	TB-3Mth	0.38	0.43	-0.22	0.42	0.18	0.44	0.37	0.78	0.39	-1.32
151	TM-6MTH	0.40	0.45	-0.14	0.41	0.16	0.50	0.45	0.78	0.43	-0.95
152	EuroDol3M	0.48	0.34	.	.	0.50	0.61	0.52	0.46	0.04	-0.69
153	TB-1YR	0.39	0.41	-0.11	0.39	0.00	0.52	0.45	0.72	0.32	-0.78
154	TB-10YR	0.28	0.24	0.11	0.39	-1.39	0.45	0.36	0.26	-0.20	-0.10
155	Mort-30Yr	0.41	0.16	.	.	-0.32	0.67	0.60	0.32	-0.92	-1.40
156	AAA Bond	0.33	0.30	-0.24	0.38	-0.54	0.42	0.38	0.29	0.05	-0.60
157	BAA Bond	0.36	0.24	0.11	0.46	-0.13	0.55	0.44	0.30	-0.23	0.26
158	BAA_GS10	0.61	0.66	-1.36	0.32	0.69	0.76	0.89	-2.51	0.87	0.75
159	MRTG_GS10	0.39	0.22	.	.	-0.54	0.66	0.61	0.02	0.07	0.17
160	tb6m_tb3m	0.20	-0.12	-0.07	0.36	0.30	0.30	0.10	0.29	-1.32	-0.50
161	GS1_tb3m	0.22	-0.05	0.18	0.21	0.40	0.39	0.42	0.63	-0.99	0.24
162	GS10_tb3m	0.53	0.34	0.71	0.75	0.83	0.65	0.35	0.18	0.47	-0.13
163	CP_Tbill Spread	0.53	0.15	0.45	0.45	0.75	0.67	0.72	0.09	0.07	0.54
164	Ted_spr	0.54	0.02	.	.	0.78	0.74	0.70	-0.05	-0.04	0.76
165	gz_spread	0.49	0.56	.	.	0.73	-2.91	-1.46	0.32	0.74	.
166	gz_ebp	0.48	0.48	.	.	0.89	0.11	0.49	0.12	0.65	.
167	Real Mbase	0.16	0.09	0.18	0.39	0.22	0.65	0.59	-0.18	-0.35	-0.03
168	Real InsMMF	0.34	0.19	.	.	.	.	0.44	0.40	0.40	-0.37
169	Real m1	0.34	0.32	-0.06	0.37	0.12	0.64	0.67	0.16	0.06	-0.55
170	Real m2	0.46	0.26	0.32	0.59	0.83	0.50	0.46	0.10	0.34	-1.25
171	Real mzm	0.41	0.31	0.57	0.32	0.15	0.47	0.39	0.29	0.22	-1.53
172	Real C&Lloand	0.44	0.54	0.48	0.47	0.55	-1.42	-1.07	0.70	0.62	0.46
173	Real ConsLoans	0.53	0.29	-0.54	0.82	0.93	0.77	0.69	0.72	0.20	-1.16
174	Real NonRevCredit	0.51	0.48	0.15	0.78	0.42	0.80	0.82	0.84	-0.79	-0.68
175	Real LoansRealEst	0.44	0.26	0.27	0.65	0.77	0.82	0.72	0.52	0.02	0.19
176	Real RevolvCredit	0.11	0.12	.	-0.32	0.32	0.48	0.63	-0.12	0.23	0.61
177	Real ConsuCred	0.57	0.41	0.22	0.70	0.89	0.85	0.83	0.86	-2.36	0.44
178	FRBSLO_Consumers	0.60	0.18	.	.	0.65	0.79	0.67	0.55	-1.49	0.47
179	Real HHW:TASA	0.40	0.52	-0.64	0.23	0.50	0.32	0.59	0.92	0.31	0.42
180	S&P 500	0.72	0.69	0.75	0.68	0.89	0.62	0.65	0.37	0.81	0.89
181	Real HHW:LiabSA	0.57	0.48	-0.19	0.73	0.90	0.76	0.70	0.79	0.18	0.77
182	liab_PDISA	0.22	0.20	0.00	0.13	0.17	0.64	0.35	0.00	0.31	0.35
183	Real HHW:WSA	0.61	0.60	0.51	0.74	0.83	-0.45	-0.11	-0.01	0.71	0.72
184	W_PDISA	0.16	0.14	-0.18	0.67	0.48	0.78	0.06	0.28	-0.46	0.51
185	Real HHW:TA_RESA	0.42	0.35	0.51	0.42	-1.04	0.78	0.74	0.61	-0.53	0.81
186	Real HHW:RESA	0.37	0.52	-0.76	0.17	0.56	0.14	0.50	0.91	0.31	0.39
187	DJIA	0.67	0.60	0.71	0.73	0.74	0.74	0.73	0.15	0.79	0.96
188	Real HHW:FinSA	0.62	0.62	0.59	0.78	0.78	-0.26	-0.01	-0.12	0.73	0.81

189	VXO	0.47	0.50	.	0.38	0.74	-0.78	-0.69	0.40	0.75	0.89
190	Real Hprice:OFHEO	0.49	0.44	.	.	.	0.59	-0.01	0.60	0.42	0.57
191	Real CS_10	0.67	0.67	.	.	.	.	.	0.69	0.72	0.66
192	Real CS_20	0.80	0.80	.	.	.	.	.	.	0.84	0.52
193	Ex rate: major	0.83	0.89	-2.57	0.74	0.74	0.80	0.88	0.93	0.73	0.90
194	Ex rate: Euro	0.83	0.83	.	.	.	.	.	.	0.83	0.88
195	Ex rate: Switz	0.69	0.76	-2.64	0.47	0.68	0.65	0.66	0.78	0.72	0.60
196	Ex rate: Japan	0.53	0.57	-5.47	0.59	0.64	0.17	0.78	0.36	0.20	-0.97
197	Ex rate: UK	0.56	0.66	-10.05	0.41	0.46	0.48	0.61	0.75	0.79	0.64
198	EX rate: Canada	0.18	0.22	0.22	0.03	0.01	0.12	0.38	0.01	0.23	0.53
199	Cons. Expectations	0.50	0.49	-0.40	0.15	0.87	0.89	0.89	0.63	-0.60	0.65
200	PoilcyUncertainty	0.42	0.42	.	.	.	.	.	0.48	0.46	0.31

Table S4:  $p$ -value of the test of no break in the factor loadings, 2007Q4 – 2011Q2 using the Andrews (2003) end-of-sample stability. (Detailed results for manuscript table 3)

	Series	$p$ -value fr testing for a break in 2007Q4 relative to:	
		1959-2007Q3	1984Q1-2007Q3
1	GDP	0.08	0.10
2	Consumption	0.20	0.48
3	Cons:Dur	0.27	0.46
4	Cons:Svc	0.86	1.00
5	Cons:NonDur	0.59	0.80
6	Investment	0.65	0.79
7	FixedInv	0.08	0.42
8	Inv:Equip&Software	0.08	0.33
9	FixInv:NonRes	0.42	0.64
10	FixedInv:Res	0.12	0.36
11	Inv:Inventories	0.25	0.36
12	Gov.Spending	0.97	1.00
13	Gov:Fed	1.00	1.00
14	Real Gov Receipts	0.50	0.51
15	Gov:State&Local	0.88	0.88
16	Exports	0.40	0.21
17	Imports	0.44	0.30
18	Disp-Income	0.17	0.28
19	Ouput:NFB	0.09	0.22
20	Output:Bus	0.13	0.25
21	Output: Manuf	0.63	0.63
22	IP: Total index	0.78	0.69
23	IP: Final products	0.29	0.28
24	IP: Consumer goods	0.32	0.07
25	IP: Materials	0.79	0.74
26	IP: Dur gds materials	0.53	0.14
27	IP: Nondur gds materials	0.23	0.17
28	IP: Dur Cons. Goods	0.18	0.54
29	IP: Auto	0.16	0.36
30	IP:NonDur Cons God	0.45	0.31
31	IP: Bus Equip	0.54	0.70
32	IP: Energy Prds	0.56	0.52
33	Capu Tot	0.48	0.30
34	Capu Man.	0.32	0.32
35	Emp:Nonfarm	0.21	0.47
36	Emp: Private	0.20	0.20
37	Emp: mfg	0.00	0.09
38	Emp:Services	0.66	0.89
39	Emp:Goods	0.01	0.00
40	Emp: DurGoods	0.02	0.00
41	Emp: Nondur Goods	0.16	0.27
42	Emp: Const	0.17	0.53
43	Emp: Edu&Health	0.84	0.91
44	Emp: Finance	0.10	0.33
45	Emp: Infor	0.27	0.23
46	Emp: Bus Serv	0.26	0.63
47	Emp:Leisure	0.91	1.00
48	Emp:OtherSvcs	0.32	0.65
49	Emp: Mining/NatRes	0.28	0.69
50	Emp:Trade&Trans	0.33	0.33
51	Emp: Gov	0.73	0.60
52	Emp:Retail	0.46	0.79

53	Emp:Wholesal	0.30	0.74
54	Emp: Gov(Fed)	0.35	0.88
55	Emp: Gov (State)	0.82	0.62
56	Emp: Gov (Local)	0.28	0.60
57	Emp: Total (HHSurve)	0.42	0.67
58	LF Part Rate	0.92	0.89
59	Unemp Rate	0.08	0.00
60	Urate_ST	0.07	0.17
61	Urate_LT	0.03	0.00
62	Urate: Age16-19	0.16	0.15
63	Urate:Age>20 Men	0.09	0.01
64	Urate: Age>20 Women	0.66	0.54
65	U: Dur<5wks	0.17	0.69
66	U:Dur5-14wks	0.35	0.41
67	U:dur>15-26wks	0.02	0.02
68	U: Dur>27wks	0.24	0.30
69	U: Job losers	0.41	0.31
70	U: LF Reenty	0.58	0.67
71	U: Job Leavers	0.41	0.21
72	U: New Entrants	0.93	0.91
73	Emp:SlackWk	0.98	0.74
74	EmpHrs:Bus Sec	0.03	0.32
75	EmpHrs:mfg	0.47	0.47
76	EmpHrs:nfb	0.02	0.31
77	AWH Man	0.17	0.19
78	AWH Privat	0.09	0.27
79	AWH Overtime	0.89	0.94
80	HelpWnted	0.07	0.03
81	Hstarts	0.16	0.54
82	Hstarts >5units	0.00	0.01
83	Hpermits	0.23	0.26
84	Hstarts:MW	0.60	0.62
85	Hstarts:NE	0.02	0.11
86	Hstarts:S	0.11	0.53
87	Hstarts:W	0.59	0.78
88	Constr. Contracts	0.26	0.33
89	MT Sales	0.74	0.57
90	Ret. Sale	0.43	0.42
91	Orders (DurMfg)	0.59	0.52
92	Orders(ConsumerGoods/Mat.)	0.02	0.04
93	UnfOrders(DurGds)	0.75	0.78
94	Orders(NonDefCap)	0.07	0.48
95	VendPerf	0.16	0.35
96	MT Invent	0.47	0.85
97	PCED	0.00	0.23
98	PCED_LFE	0.83	0.68
99	GDP Defl	0.78	0.32
100	GPDI Defl	0.02	0.00
101	BusSec Defl	0.69	0.38
102	PCED_Goods	0.00	0.07
103	PCED_DurGoods	0.96	0.99
104	PCED_Serv	0.55	0.59
105	PCED_NDurGoods	0.00	0.30
106	PCED_HouseholdServices	0.46	0.70
107	PCED_MotorVec	0.17	0.31
108	PCED_DurHousehold	0.23	0.01
109	PCED_Recreation	0.82	0.99
110	PCED_OthDurGds	0.81	0.31
111	PCED_Food_Bev	0.20	0.09

112	PCED_Clothing	0.40	0.89
113	PCED_Gas_Engry	0.13	0.35
114	PCED_OthNDurGds	0.79	0.95
115	PCED_Housing-Utilities	0.20	0.48
116	PCED_HealthCare	0.35	0.23
117	PCED_TransSvg	0.94	0.48
118	PCED_RecServices	0.23	0.63
119	PCED_FoodServ_Acc.	1.00	0.48
120	PCED_FIRE	0.78	0.58
121	PCED_OtherServices	0.94	0.90
122	CPI	0.03	0.06
123	CPI_LFE	0.61	0.99
124	PPI:FinGds	0.05	0.05
125	PPI	0.00	0.00
126	PPI:FinConsGds	0.05	0.04
127	PPI:FinConsGds(Food)	0.31	0.60
128	PPI:IndCom	0.00	0.27
129	PPI:IntMat	0.00	0.00
130	Real P:SensMat	0.00	0.00
131	Real Commod: spot price	0.24	0.02
132	NAPM com price	0.00	0.00
133	Real Price:NatGas	0.32	0.86
134	Real Price:Oil	0.15	0.09
135	Real Crudeoil Price	0.31	0.31
136	Real AHE:PrivInd	0.40	0.95
137	Real AHE:Const	0.98	1.00
138	Real AHE:MFG	0.59	0.93
139	CPH:Mfg	0.51	0.51
140	CPH:NFB	0.36	0.57
141	CPH:Bus	0.46	0.77
142	OPH:mfg	0.75	0.75
143	OPH:nfb	0.02	0.07
144	OPH:Bus	0.00	0.04
145	ULC:Bus	0.10	0.40
146	ULC:Mfg	0.31	0.31
147	ULC:NFB	0.09	0.37
148	UNLPay:nfb	0.16	0.33
149	FedFunds	0.08	0.38
150	TB-3Mth	0.12	0.17
151	TM-6MTH	0.13	0.06
152	EuroDol3M	0.10	0.01
153	TB-1YR	0.17	0.07
154	TB-10YR	0.51	0.64
155	Mort-30Yr	0.60	0.86
156	AAA Bond	0.31	0.17
157	BAA Bond	0.10	0.01
158	BAA_GS10	0.17	0.35
159	MRTG_GS10	0.31	0.70
160	tb6m_tb3m	0.59	0.48
161	GS1_tb3m	0.65	0.25
162	GS10_tb3m	0.12	0.52
163	CP_Tbill Spread	0.67	0.80
164	Ted_spr	0.46	0.27
165	gz_spread	0.05	0.24
166	gz_ebp	0.11	0.33
167	Real Mbase	0.00	0.00
168	Real InsMMF	0.38	0.54
169	Real m1	0.00	0.00
170	Real m2	0.00	0.84



171	Real mzm	0.04	0.30
172	Real C&Lloand	0.03	0.58
173	Real ConsLoans	0.07	0.91
174	Real NonRevCredit	0.22	0.70
175	Real LoansRealEst	0.08	0.41
176	Real RevolvCredit	0.63	0.98
177	Real ConsuCred	0.23	0.72
178	FRBSLO_Consumers	0.18	0.86
179	Real HHW:TASA	0.01	0.37
180	S&P 500	0.79	0.81
181	Real HHW:LiabSA	0.34	0.38
182	liab_PDISA	0.15	0.17
183	Real HHW:WSA	0.08	0.59
184	W_PDISA	0.30	0.40
185	Real HHW:TA_RESA	0.93	0.74
186	Real HHW:RESA	0.01	0.30
187	DJIA	0.99	0.95
188	Real HHW:FinSA	0.28	0.63
189	VXO	0.27	0.60
190	Real Hprice:OFHEO	0.03	0.02
191	Real CS_10	0.41	0.41
192	Real CS_20	1.00	1.00
193	Ex rate: major	0.30	0.84
194	Ex rate: Euro	1.00	1.00
195	Ex rate: Switz	0.77	0.96
196	Ex rate: Japan	0.27	0.70
197	Ex rate: UK	0.34	0.73
198	EX rate: Canada	0.11	0.59
199	Cons. Expectations	0.06	0.46
200	PoilyUncertainty	0.61	0.61

#### 4. Detailed Figures

The file SupplementaryFigures.zip contains detailed figures. These are in “EMF” format. The Table below describes the figures.

In the table “xxxx” indicates the series label taken from the first row of the data file bpea\_fac\_1.xlsx.

In the table “yyyy” indicates the label for the instrument, where the list of labels is given in the program sfactor\_1.gss in the replication files.

<b>File Name</b>	<b>Description</b>
<b><i>Fit of Factor Model (extended version of manuscript figure 2)</i></b>	
xxxxx_rffit_fs.emf	Plot of transformed series and fitted value from factor model over full sample period.
xxxxx_rffit_ps.emf	Plot of series and fitted value from factor model over end-of-sample period.
xxxxx_rffit4_fs.emf	Plot of 4-quarter changes in series and fitted value from factor model over full sample period.
xxxxx_rffit4_ps.emf	Plot of 4-quarter changes in series and fitted value from factor model over end-of-sample period.
<b><i>Results using structural shocks</i></b>	
Struc_decomp_y_yyyy.emf	Plot of transformed selected series, actual values in black, component corresponding to structural shock in red. Full sample.
Struc_decomp_y_ps_yyyy.emf	Plot of transformed selected series, actual values in black, component corresponding to structural shock in red. End of sample.
Struc_decomp_y4_yyyy.emf	Plot of 4-quarter changes of selected series, actual values in black, component corresponding to structural shock in red. Full sample.
Struc_decomp_y4_ps_yyyy.emf	Plot of 4-quarter changes of selected series, actual values in black, component corresponding to structural shock in red. End of sample.
Z_Shock_yyyy.emf	Plot of instrument (black and identified shock (blue))
Struc_irf_y_yyyy.emf	IRF for selected series of structural shock (for levels of series). For inflation IRFs are for level of inflation.

### 3. Tables using $k = 5$ factors

Table S5: Version of manuscript Table 1 with 5-factor model

	1959- 2007Q3	1984- 2007Q3	Computed over 15 quarters starting at NBER peak							
			60Q1	69Q4	73Q4	80Q1	81Q3	90Q3	01Q1	07Q4
GDP	0.72	0.64	0.78	0.75	0.81	0.77	0.85	0.78	0.61	0.57
Consumption	0.62	0.41	0.53	0.76	0.69	0.81	0.64	0.71	0.04	0.67
Consumption – services	0.34	0.19	0.27	0.44	-0.01	0.62	0.46	0.45	-0.12	0.83
Nonres. fixed investment	0.63	0.57	0.64	0.78	0.89	0.58	0.56	0.53	0.70	0.88
Industrial production - total	0.86	0.78	0.85	0.86	0.95	0.94	0.93	0.85	0.78	0.96
IP - automotive	0.58	0.28	0.61	0.59	0.70	0.65	0.33	0.68	0.09	0.56
Nonfarm employment	0.92	0.91	0.93	0.94	0.92	0.95	0.98	0.94	0.90	0.95
Unemployment rate	0.84	0.76	0.74	0.86	0.95	0.90	0.87	0.75	0.80	0.88
Short-term unemployment rate	0.82	0.70	0.82	0.87	0.90	0.89	0.85	0.82	0.75	0.77
Long-term unemployment rate	0.58	0.59	0.49	0.59	0.68	0.69	0.65	0.46	0.54	0.63
Housing starts	0.59	0.39	0.27	0.60	0.83	0.79	0.76	0.62	0.29	0.52
Real house prices (OFHEO)	0.48	0.45	.	.	.	0.57	0.16	0.67	0.37	0.51
Inflation (PCE)	0.52	0.55	0.23	0.71	0.67	0.46	0.41	0.57	0.58	0.82
Gas & energy inflation (PCE)	0.37	0.49	-0.38	-1.66	-0.68	0.23	0.27	0.56	0.49	0.70
Federal funds rate	0.45	0.34	-0.04	0.47	0.58	0.48	0.41	0.72	0.14	-1.67
Real monetary base	0.15	0.08	0.17	0.43	0.24	0.66	0.51	-0.30	-0.37	-0.01
Real commercial & industrial loans	0.44	0.54	0.47	0.49	0.56	-1.57	-1.23	0.66	0.62	0.43
TED spread	0.51	-0.10	.	.	0.79	0.69	0.57	-0.58	0.33	0.83
Gilchrist-Zakrajšek (2011) spread (EBP)	0.38	0.35	.	.	0.81	0.16	0.72	-1.78	0.52	.
S&P 500	0.64	0.62	0.61	0.57	0.80	0.51	0.62	0.53	0.69	0.59
VIX	0.41	0.40	.	0.35	0.77	-0.37	-0.21	0.19	0.72	0.80
SLOOS	0.59	0.15	.	.	0.65	0.79	0.70	0.50	-1.59	0.51
HH Wealth/Disp. Income	0.16	0.14	-0.19	0.67	0.49	0.76	-0.01	0.30	-0.41	0.49
HH Liabilities	0.56	0.46	-0.13	0.72	0.89	0.76	0.68	0.79	0.16	0.75

Table S6: Version of manuscript Table 2 with 5-factor model

Category	N	1959- 2007Q3	1984- 2007Q3	Computed over 15 quarters starting at NBER peak							
				60Q1	69Q4	73Q4	80Q1	81Q3	90Q3	01Q1	07Q4
NIPA	21	0.55	0.41	0.53	0.45	0.62	0.62	0.56	0.59	0.43	0.63
Industrial production	13	0.70	0.54	0.72	0.73	0.86	0.81	0.74	0.68	0.65	0.82
Employment & Unemp	46	0.61	0.49	0.60	0.67	0.75	0.73	0.78	0.55	0.66	0.77
Housing starts	8	0.29	0.22	0.10	0.37	0.60	0.43	0.27	0.42	-0.21	0.36
Inventories, orders, & sales	8	0.54	0.34	0.36	0.68	0.70	0.73	0.67	0.64	0.47	0.64
Prices	39	0.13	0.05	-0.05	0.12	0.36	0.19	0.08	0.01	0.13	0.16
Earnings & productivity	13	0.36	0.29	0.47	0.39	0.30	0.28	0.06	0.35	0.32	-0.20
Interest rates	18	0.39	0.26	-0.05	0.38	0.26	0.50	0.45	0.07	0.25	-0.81
Money & credit	12	0.44	0.27	0.28	0.49	0.56	0.65	0.52	0.47	0.07	-0.21
Stock prices & wealth	11	0.43	0.44	0.03	0.57	0.63	0.51	0.46	0.30	0.30	0.51
Housing prices	3	0.58	0.58	.	.	.	0.57	0.16	0.58	0.76	0.51
Exchange rates	6	0.24	0.27	-5.45	0.45	0.36	0.26	0.28	0.38	0.08	-0.41
Other	2	0.41	0.41	-0.36	-0.10	0.84	0.88	0.85	0.48	-0.46	0.32

Table S7: Version of Table 3 with 5-factor model

Category	N	Rejection rates testing for a break in 2007Q4 relative to:	
		1959-2007Q3	1984Q1-2007Q3
NIPA	21	0.14	0.05
Industrial production	13	0.00	0.00
Employment & Unemployment	46	0.17	0.20
Housing starts	8	0.25	0.00
Inventories, orders, & sales	8	0.13	0.13
Prices	39	0.31	0.23
Earnings and Productivity	13	0.15	0.15
Interest rates	18	0.11	0.11
Money & credit	12	0.58	0.17
Stock prices & wealth	11	0.36	0.00
Housing prices	3	0.00	0.00
Exchange rates	6	0.33	0.00
Other	2	0.00	0.00

Table S8: Version of Table 4 with 5-factor model

Date	GDP	Consumption	Investment	Employment	Productivity	Housing Starts	Oil Price	Fed Funds	Ted spread	VIX	Wealth (FoF)
2007Q1	-0.8	-1.0	-0.3	-0.5	-1.2	0.3	1.6	0.4	0.3	-0.4	-0.3
2007Q2	0.2	0.2	0.4	0.0	0.0	0.8	0.6	0.5	-0.3	-0.8	0.3
2007Q3	-0.1	-0.6	0.3	-0.2	0.2	-1.0	0.1	0.0	1.2	1.2	-1.2
2007Q4	0.1	-0.8	0.7	1.0	-0.6	-1.7	0.9	1.3	1.4	0.8	-1.5
2008Q1	0.2	-0.6	0.7	0.7	-0.1	-1.3	0.6	0.5	1.3	1.7	-2.0
2008Q2	-1.1	-1.6	-0.1	-0.6	-2.0	1.0	3.1	0.9	0.2	-0.4	-1.0
2008Q3	-1.2	-2.1	-0.5	-0.5	-1.1	-3.3	0.4	0.3	2.8	1.7	-1.8
2008Q4	1.9	1.1	0.5	-0.6	5.6	-7.9	-8.6	-2.6	5.3	5.5	-1.5
2009Q1	-0.8	-2.8	0.8	-0.2	-1.1	-3.9	1.8	1.4	4.4	3.0	-4.0
2009Q2	1.6	1.6	1.8	2.5	-0.2	3.3	2.2	1.8	-2.7	-1.5	0.1
2009Q3	1.0	1.0	1.4	2.3	-1.2	3.9	3.4	2.0	-3.0	-2.0	0.2
2009Q4	-1.5	-0.9	-1.9	-1.8	-0.8	-1.0	-0.9	-0.9	0.5	-1.0	1.5
2010Q1	0.6	0.0	1.0	0.9	0.0	-0.6	0.7	1.7	0.7	-0.8	-0.1
2010Q2	0.8	0.3	0.7	0.4	1.4	-2.0	-1.7	0.2	1.5	1.1	-0.6
2010Q3	0.6	-0.1	0.8	0.3	0.8	-1.5	-0.5	0.6	1.5	0.8	-0.9
2010Q4	0.1	-0.1	0.5	0.0	-0.2	0.5	0.9	0.9	0.1	-0.8	0.0
2011Q1	0.7	-0.1	1.6	1.2	-0.6	1.1	2.5	2.2	0.0	-0.8	-1.0
2011Q2	-0.4	-0.4	-0.4	-0.5	-0.3	0.0	0.2	-0.3	0.1	0.1	0.0

Table S9: Version of Table 9 with 5-factor model

<b>Trough date</b>	<b>Source</b>	<b>GDP</b>	<b>Nonfarm Employment</b>	<b>Output per Hour (nonfarm business)</b>
1961Q1	Cyclical	1.3	-0.8	2.1
	Trend	7.5	4.9	4.8
	Total	8.9	4.1	6.9
1970Q4	Cyclical	2.2	-0.3	2.7
	Trend	6.9	4.7	4.0
	Total	9.0	4.4	6.7
1975Q1	Cyclical	2.9	-2.1	5.3
	Trend	6.6	4.5	3.7
	Total	9.5	2.4	9.1
1980Q3	Cyclical	1.0	-1.7	2.9
	Trend	6.3	4.2	3.5
	Total	7.3	2.5	6.4
1982Q4	Cyclical	6.0	1.8	4.6
	Trend	6.2	4.1	3.5
	Total	12.2	5.8	8.1
1991Q1	Cyclical	-0.1	-2.6	2.5
	Trend	5.9	3.3	3.8
	Total	5.7	0.7	6.3
2001Q4	Cyclical	3.1	0.7	2.6
	Trend	5.1	2.1	4.3
	Total	8.2	2.8	6.9
2009Q2	Cyclical	4.1	-1.7	6.5
	Trend	4.4	1.2	4.5
	Total	8.5	-0.5	10.9
<b>Averages</b>				
1960-1982	Cyclical	3.0	-0.4	3.6
	Trend	6.8	4.5	4.0
	Total	9.8	4.1	7.6
	Actual <sup>a</sup>	11.0	5.9	7.3
1960-2001	Cyclical	2.6	-0.6	3.3
	Trend	6.4	3.9	4.0
	Total	8.9	3.4	7.3
	Actual <sup>a</sup>	9.2	4.0	7.2
<b>Differences</b>				
2009Q2 - average, 1960-1982	Cyclical	1.1	-1.3	2.9
	Trend	-2.4	-3.3	0.5
	Total	-1.3	-4.6	3.4

#### 4. Tables using $k = 7$ factors

Table S10: Version of manuscript Table 1 with 7-factor model

	1959- 2007Q3	1984- 2007Q3	Computed over 15 quarters starting at NBER peak							
			60Q1	69Q4	73Q4	80Q1	81Q3	90Q3	01Q1	07Q4
GDP	0.77	0.63	0.85	0.78	0.89	0.83	0.88	0.68	0.51	0.70
Consumption	0.64	0.45	0.59	0.77	0.66	0.82	0.72	0.74	0.06	0.55
Consumption – services	0.34	0.21	0.28	0.46	-0.07	0.62	0.46	0.47	-0.23	0.82
Nonres. fixed investment	0.63	0.57	0.64	0.77	0.90	0.58	0.57	0.51	0.72	0.87
Industrial production - total	0.87	0.83	0.90	0.87	0.94	0.93	0.94	0.90	0.82	0.95
IP - automotive	0.60	0.30	0.61	0.61	0.73	0.65	0.34	0.65	-0.21	0.59
Nonfarm employment	0.93	0.92	0.92	0.94	0.93	0.94	0.98	0.94	0.92	0.97
Unemployment rate	0.84	0.75	0.76	0.88	0.95	0.91	0.88	0.75	0.80	0.90
Short-term unemployment rate	0.82	0.71	0.81	0.87	0.90	0.89	0.85	0.79	0.76	0.78
Long-term unemployment rate	0.61	0.60	0.56	0.68	0.68	0.73	0.71	0.45	0.52	0.63
Housing starts	0.60	0.36	0.29	0.63	0.84	0.77	0.74	0.64	0.11	0.50
Real house prices (OFHEO)	0.57	0.50	.	.	.	0.68	0.32	0.55	0.52	0.55
Inflation (PCE)	0.53	0.54	0.21	0.67	0.70	0.54	0.48	0.56	0.60	0.82
Gas & energy inflation (PCE)	0.43	0.52	-0.34	-1.18	-0.47	0.48	0.39	0.57	0.57	0.71
Federal funds rate	0.51	0.43	-0.55	0.38	0.65	0.56	0.54	0.76	0.51	-1.75
Real monetary base	0.16	0.09	0.18	0.38	0.22	0.64	0.57	-0.16	-0.35	-0.02
Real commercial & industrial loans	0.44	0.54	0.49	0.45	0.55	-1.46	-1.08	0.70	0.63	0.46
TED spread	0.55	0.00	.	.	0.79	0.76	0.65	-0.06	-0.16	0.80
Gilchrist-Zakrajšek (2011) spread (EBP)	0.49	0.49	.	.	0.90	0.08	0.43	0.16	0.66	.
S&P 500	0.73	0.70	0.74	0.67	0.89	0.63	0.68	0.42	0.82	0.88
VIX	0.48	0.52	.	0.36	0.70	-0.62	-0.60	0.42	0.77	0.90
SLOOS	0.62	0.26	.	.	0.67	0.80	0.71	0.58	-1.33	0.46
HH Wealth/Disp. Income	0.16	0.16	-0.21	0.57	0.50	0.66	0.17	0.34	-0.49	0.50
HH Liabilities	0.59	0.51	-0.25	0.76	0.90	0.76	0.68	0.79	0.27	0.76

Table S11: Version of manuscript Table 2 with 7-factor model

Category	N	1959- 2007Q3	1984- 2007Q3	Computed over 15 quarters starting at NBER peak							
				60Q1	69Q4	73Q4	80Q1	81Q3	90Q3	01Q1	07Q4
NIPA	21	0.60	0.44	0.58	0.46	0.64	0.70	0.60	0.63	0.41	0.66
Industrial production	13	0.73	0.62	0.79	0.74	0.86	0.84	0.80	0.65	0.67	0.81
Employment & Unemp	46	0.63	0.54	0.65	0.71	0.76	0.75	0.81	0.61	0.65	0.78
Housing starts	8	0.41	0.20	0.18	0.42	0.54	0.45	0.47	0.44	-0.17	0.28
Inventories, orders, & sales	8	0.55	0.36	0.40	0.71	0.72	0.78	0.68	0.64	0.44	0.67
Prices	39	0.20	0.06	0.02	0.19	0.38	0.20	0.13	0.02	0.14	0.14
Earnings & productivity	13	0.53	0.41	0.62	0.49	0.44	0.31	0.52	0.39	0.43	0.32
Interest rates	18	0.46	0.28	-0.31	0.30	0.26	0.57	0.52	0.31	0.05	-0.40
Money & credit	12	0.44	0.30	0.24	0.45	0.55	0.68	0.68	0.29	0.03	-0.48
Stock prices & wealth	11	0.48	0.55	0.00	0.57	0.70	0.63	0.58	0.42	0.40	0.76
Housing prices	3	0.69	0.69	.	.	.	0.68	0.32	0.55	0.76	0.55
Exchange rates	6	0.58	0.67	-1.67	0.60	0.65	0.54	0.73	0.78	0.59	0.53
Other	2	0.43	0.43	-0.33	0.50	0.83	0.93	0.91	0.50	-0.39	0.30

Table S12: Version of Table 3 with 7-factor model

Category	N	Rejection rates testing for a break in 2007Q4 relative to:	
		1959-2007Q3	1984Q1-2007Q3
NIPA	21	0.05	0.00
Industrial production	13	0.00	0.23
Employment & Unemployment	46	0.13	0.17
Housing starts	8	0.25	0.13
Inventories, orders, & sales	8	0.13	0.13
Prices	39	0.23	0.21
Earnings and Productivity	13	0.15	0.00
Interest rates	18	0.00	0.33
Money & credit	12	0.42	0.17
Stock prices & wealth	11	0.18	0.00
Housing prices	3	0.33	0.33
Exchange rates	6	0.00	0.00
Other	2	0.00	0.00

Table S13: Version of Table 4 with 7-factor model

Date	GDP	Consumption	Investment	Employment	Productivity	Housing Starts	Oil Price	Fed Funds	Ted spread	VIX	Wealth (FoF)
2007Q1	-0.8	-1.0	-0.3	-0.5	-1.2	0.3	1.6	0.4	0.3	-0.4	-0.3
2007Q2	0.2	0.2	0.4	0.0	0.0	0.8	0.6	0.5	-0.3	-0.8	0.3
2007Q3	-0.1	-0.6	0.3	-0.2	0.2	-1.0	0.1	0.0	1.2	1.2	-1.2
2007Q4	0.1	-0.8	0.7	1.0	-0.6	-1.7	0.9	1.3	1.4	0.8	-1.5
2008Q1	0.2	-0.6	0.7	0.7	-0.1	-1.3	0.6	0.5	1.3	1.7	-2.0
2008Q2	-1.1	-1.6	-0.1	-0.6	-2.0	1.0	3.1	0.9	0.2	-0.4	-1.0
2008Q3	-1.2	-2.1	-0.5	-0.5	-1.1	-3.3	0.4	0.3	2.8	1.7	-1.8
2008Q4	1.9	1.1	0.5	-0.6	5.6	-7.9	-8.6	-2.6	5.3	5.5	-1.5
2009Q1	-0.8	-2.8	0.8	-0.2	-1.1	-3.9	1.8	1.4	4.4	3.0	-4.0
2009Q2	1.6	1.6	1.8	2.5	-0.2	3.3	2.2	1.8	-2.7	-1.5	0.1
2009Q3	1.0	1.0	1.4	2.3	-1.2	3.9	3.4	2.0	-3.0	-2.0	0.2
2009Q4	-1.5	-0.9	-1.9	-1.8	-0.8	-1.0	-0.9	-0.9	0.5	-1.0	1.5
2010Q1	0.6	0.0	1.0	0.9	0.0	-0.6	0.7	1.7	0.7	-0.8	-0.1
2010Q2	0.8	0.3	0.7	0.4	1.4	-2.0	-1.7	0.2	1.5	1.1	-0.6
2010Q3	0.6	-0.1	0.8	0.3	0.8	-1.5	-0.5	0.6	1.5	0.8	-0.9
2010Q4	0.1	-0.1	0.5	0.0	-0.2	0.5	0.9	0.9	0.1	-0.8	0.0
2011Q1	0.7	-0.1	1.6	1.2	-0.6	1.1	2.5	2.2	0.0	-0.8	-1.0
2011Q2	-0.4	-0.4	-0.4	-0.5	-0.3	0.0	0.2	-0.3	0.1	0.1	0.0

Table S14: Version of Table 9 with 7-factor model

<b>Trough date</b>	<b>Source</b>	<b>GDP</b>	<b>Nonfarm Employment</b>	<b>Output per Hour (nonfarm business)</b>
1961Q1	Cyclical	1.3	-0.8	2.1
	Trend	7.5	4.9	4.8
	Total	8.9	4.1	6.9
1970Q4	Cyclical	2.2	-0.3	2.7
	Trend	6.9	4.7	4.0
	Total	9.0	4.4	6.7
1975Q1	Cyclical	2.9	-2.1	5.3
	Trend	6.6	4.5	3.7
	Total	9.5	2.4	9.1
1980Q3	Cyclical	1.0	-1.7	2.9
	Trend	6.3	4.2	3.5
	Total	7.3	2.5	6.4
1982Q4	Cyclical	6.0	1.8	4.6
	Trend	6.2	4.1	3.5
	Total	12.2	5.8	8.1
1991Q1	Cyclical	-0.1	-2.6	2.5
	Trend	5.9	3.3	3.8
	Total	5.7	0.7	6.3
2001Q4	Cyclical	3.1	0.7	2.6
	Trend	5.1	2.1	4.3
	Total	8.2	2.8	6.9
2009Q2	Cyclical	4.1	-1.7	6.5
	Trend	4.4	1.2	4.5
	Total	8.5	-0.5	10.9
<b>Averages</b>				
1960-1982	Cyclical	3.1	-0.4	3.7
	Trend	6.8	4.5	4.0
	Total	9.9	4.2	7.7
	Actual <sup>a</sup>	11.0	5.9	7.3
1960-2001	Cyclical	2.6	-0.6	3.3
	Trend	6.4	3.9	4.0
	Total	8.9	3.4	7.3
	Actual <sup>a</sup>	9.2	4.0	7.2
<b>Differences</b>				
2009Q2 - average, 1960-1982	Cyclical	1.0	-1.3	2.8
	Trend	-2.4	-3.3	0.5
	Total	-1.4	-4.6	3.3



## 5. Standard Errors for Table 10

S15: Table 10 with SEs in parentheses

Series	Component	Trend Growth Rates			Difference, 2005-1965
		1965	1985	2005	
GDP		3.7 (0.5)	3.1 (0.4)	2.5 (0.5)	-1.2 (0.8)
	GDP/Employment	1.6 (0.4)	1.3 (0.3)	1.5 (0.3)	-0.1 (0.5)
	Employment/Population	0.3 (0.3)	0.4 (0.3)	-0.2 (0.3)	-0.5 (0.5)
	Population	1.7 (0.1)	1.4 (0.1)	1.1 (0.1)	-0.6 (0.1)
GDP/Employment		1.6 (0.4)	1.3 (0.3)	1.5 (0.3)	-0.1 (0.5)
	GDP/Output(NFB)	-0.2 (0.2)	-0.3 (0.2)	-0.2 (0.2)	0.0 (0.3)
	Output(NFB)/Hours(NFB)	2.3 (0.3)	1.8 (0.3)	2.2 (0.3)	-0.1 (0.5)
	Hours(NFB)/Employment(NFB)	-0.4 (0.2)	-0.3 (0.1)	-0.2 (0.2)	0.2 (0.2)
	Employment(NFB)/Employment (NonFarm)	0.0 (0.3)	0.1 (0.2)	-0.3 (0.2)	-0.3 (0.4)
Employment/Population		0.3 (0.3)	0.4 (0.3)	-0.2 (0.3)	-0.5 (0.5)
	Employment/LaborForce	0.0 (0.3)	0.1 (0.2)	0.0 (0.2)	0.0 (0.4)
	LaborForce/Population	0.3 (0.1)	0.4 (0.1)	-0.1 (0.1)	-0.5 (0.2)
LaborForce/Population		0.3 (0.1)	0.4 (0.1)	-0.1 (0.1)	-0.5 (0.2)
	Female	0.5 (0.1)	0.4 (0.1)	0.0 (0.1)	-0.5 (0.1)
	Male	-0.2 (0.1)	-0.1 (0.0)	-0.2 (0.1)	0.1 (0.1)
LaborForce		1.7 (0.1)	1.4 (0.1)	1.1 (0.1)	-0.6 (0.1)
	Female(Prime-age)	0.3 (0.0)	0.5 (0.0)	0.2 (0.0)	-0.1 (0.1)
	Male(Prime-age)	0.3 (0.0)	0.5 (0.0)	0.2 (0.0)	-0.1 (0.1)
	Female(Non-prime-age)	0.6 (0.1)	0.2 (0.0)	0.3 (0.1)	-0.3 (0.1)
	Male(Non-prime-age)	0.5 (0.1)	0.2 (0.0)	0.3 (0.1)	-0.2 (0.1)