Appendix

The column TCODE denotes the following data transformation for a series x: (1) no transformation; (2) Δx_t ; (3) $\Delta^2 x_t$; (4) $\log(x_t)$; (5) $\Delta \log(x_t)$; (6) $\Delta^2 \log(x_t)$; (7) $\Delta(x_t/x_{t-1}-1.0)$. The FRED column gives mnemonics in FRED followed by a short description. The comparable series in Global Insight is given in the column GSI.

Some series require adjustments to the raw data available in FRED. We tag these variables with an asterisk to indicate that they been adjusted and thus differ from the series from the source. A summary of the adjustments is detailed in the paper https://research.stlouisfed.org/wp/2015/2015- 012.pdf

Group 1: Output and income

	id	tcode	fred	description	gsi	gsi:description
1	1	5	RPI	Real Personal Income	M_14386177	PI
2	2	5	W875RX1	Real personal income ex transfer receipts	$M_{145256755}$	PI less transfers
3	6	5	INDPRO	IP Index	$M_116460980$	IP: total
4	7	5	IPFPNSS	IP: Final Products and Nonindustrial Supplies	$M_116460981$	IP: products
5	8	5	IPFINAL	IP: Final Products (Market Group)	$M_{116461268}$	IP: final prod
6	9	5	IPCONGD	IP: Consumer Goods	$M_{116460982}$	IP: cons gds
7	10	5	IPDCONGD	IP: Durable Consumer Goods	$M_116460983$	IP: cons dble
8	11	5	IPNCONGD	IP: Nondurable Consumer Goods	$M_116460988$	IP: cons nondble
9	12	5	IPBUSEQ	IP: Business Equipment	$M_116460995$	IP: bus eqpt
10	13	5	IPMAT	IP: Materials	$M_{116461002}$	IP: matls
11	14	5	IPDMAT	IP: Durable Materials	$M_{116461004}$	IP: dble matls
12	15	5	IPNMAT	IP: Nondurable Materials	$M_{116461008}$	IP: nondble matls
13	16	5	IPMANSICS	IP: Manufacturing (SIC)	$M_{116461013}$	IP: mfg
14	17	5	IPB51222s	IP: Residential Utilities	$M_{116461276}$	IP: res util
15	18	5	IPFUELS	IP: Fuels	M_116461275	IP: fuels
16	19	1	NAPMPI	ISM Manufacturing: Production Index	$\mathbf{M}_110157212$	NAPM prodn
17	20	$\overline{2}$	CUMFNS	Capacity Utilization: Manufacturing	$M_{116461602}$	Cap util

Group 2: Labor market

	id	tcode	fred	description	gsi	gsi:description
1	21*	2	HWI	Help-Wanted Index for United States		Help wanted indx
2	22*	2	HWIURATIO	Ratio of Help Wanted/No. Unemployed	$M_110156531$	Help wanted/unemp
3	23	5	CLF16OV	Civilian Labor Force	$M_{110156467}$	Emp CPS total
4	24	5	CE16OV	Civilian Employment	$M_{110156498}$	Emp CPS nonag
5	25	2	UNRATE	Civilian Unemployment Rate	$M_{110156541}$	U: all
6	26	2	UEMPMEAN	Average Duration of Unemployment (Weeks)	$M_{110156528}$	U: mean duration
7	27	5	UEMPLT5	Civilians Unemployed - Less Than 5 Weeks	$M_{110156527}$	U < 5 wks
8	28	5	UEMP5TO14	Civilians Unemployed for 5-14 Weeks	$M_{110156523}$	U 5-14 wks
9	29	5	UEMP15OV	Civilians Unemployed - 15 Weeks & Over	$M_110156524$	U 15+ wks
10	30	5	UEMP $15T26$	Civilians Unemployed for 15-26 Weeks	$M_110156525$	U $15-26$ wks
11	31	5	UEMP27OV	Civilians Unemployed for 27 Weeks and Over	$M_{110156526}$	U 27+ wks
12	32*	5	CLAIMSx	Initial Claims	$M_{15186204}$	UI claims
13	33	5	PAYEMS	All Employees: Total nonfarm	$M_123109146$	Emp: total
14	34	5	USGOOD	All Employees: Goods-Producing Industries	$M_123109172$	Emp: gds prod
15	35	5	CES1021000001	All Employees: Mining and Logging: Mining	$M_123109244$	Emp: mining
16	36	5	USCONS	All Employees: Construction	$M_123109331$	Emp: const
17	37	5	MANEMP	All Employees: Manufacturing	$M_{123109542}$	Emp: mfg
18	38	5	DMANEMP	All Employees: Durable goods	$M_{123109573}$	Emp: dble gds
19	39	5	NDMANEMP	All Employees: Nondurable goods	$M_{123110741}$	Emp: nondbles
20	40	5	SRVPRD	All Employees: Service-Providing Industries	$M_123109193$	Emp: services
21	41	5	USTPU	All Employees: Trade, Transportation & Utilities	$M_{123111543}$	Emp: TTU
22	42	5	USWTRADE	All Employees: Wholesale Trade	$M_{123111563}$	Emp: wholesale
23	43	5	USTRADE	All Employees: Retail Trade	$M_{123111867}$	Emp: retail
24	44	5	USFIRE	All Employees: Financial Activities	$M_{123112777}$	Emp: FIRE
25	45	5	USGOVT	All Employees: Government	$M_123114411$	Emp: Govt
26	46	1	CES0600000007	Avg Weekly Hours: Goods-Producing	$M_140687274$	Avg hrs
27	47	2	AWOTMAN	Avg Weekly Overtime Hours: Manufacturing	$M_{123109554}$	Overtime: mfg
28	48	1	AWHMAN	Avg Weekly Hours: Manufacturing	M_14386098	Avg hrs: mfg
29	49	1	NAPMEI	ISM Manufacturing: Employment Index	M_110157206	NAPM empl
30	127	6	CES06000000008	Avg Hourly Earnings: Goods-Producing	M_123109182	AHE: goods
31	128	6	CES2000000008	Avg Hourly Earnings: Construction	$M_123109341$	AHE: const
32	129	6	CES3000000008	Avg Hourly Earnings: Manufacturing	$M_123109552$	AHE: mfg

Group 3: Housing

				Group 5: nousing		
	id	tcode	fred	description	gsi	gsi:description
1	50	4	HOUST	Housing Starts: Total New Privately Owned	M_110155536	Starts: nonfarm
2	51	4	HOUSTNE	Housing Starts, Northeast	$M_110155538$	Starts: NE
3	52	4	HOUSTMW	Housing Starts, Midwest	$M_110155537$	Starts: MW
4	53	4	HOUSTS	Housing Starts, South	$M_{110155543}$	Starts: South
5	54	4	HOUSTW	Housing Starts, West	$M_110155544$	Starts: West
6	55	4	PERMIT	New Private Housing Permits (SAAR)	$M_110155532$	BP: total
7	56	4	PERMITNE	New Private Housing Permits, Northeast (SAAR)	$M_110155531$	BP: NE
8	57	4	PERMITMW	New Private Housing Permits, Midwest (SAAR)	$M_{110155530}$	BP: MW
9	58	4	PERMITS	New Private Housing Permits, South (SAAR)	$M_{110155533}$	BP: South
10	59	4	PERMITW	New Private Housing Permits, West (SAAR)	$M_{110155534}$	BP: West

Group 4: Consumption, orders, and inventories

	id	tcode	fred	description	gsi	gsi:description
1	3	5	DPCERA3M086SBEA	Real personal consumption expenditures	M_123008274	Real Consumption
2	4*	5	CMRMTSPLx	Real Manu. and Trade Industries Sales	$M_110156998$	M&T sales
3	5*	5	RETAILx	Retail and Food Services Sales	M_130439509	Retail sales
4	60	1	NAPM	ISM: PMI Composite Index	M_110157208	PMI
5	61	1	NAPMNOI	ISM: New Orders Index	M_110157210	NAPM new ordrs
6	62	1	NAPMSDI	ISM : Supplier Deliveries Index	M_110157205	NAPM vendor del
7	63	1	NAPMII	ISM: Inventories Index	M_110157211	NAPM Invent
8	64	5	ACOGNO	New Orders for Consumer Goods	M_14385863	Orders: cons gds
9	65*	5	AMDMNOx	New Orders for Durable Goods	$M_{14386110}$	Orders: dble gds
10	66*	5	ANDENOx	New Orders for Nondefense Capital Goods	$M_{178554409}$	Orders: cap gds
11	67*	5	AMDMUOx	Unfilled Orders for Durable Goods	$M_{14385946}$	Unf orders: dble
12	68*	5	BUSINVx	Total Business Inventories	$M_{15192014}$	M&T invent
13	69*	2	ISRATIOx	Total Business: Inventories to Sales Ratio	$M_{15191529}$	M&T invent/sales
14	130*	2	UMCSENTx	Consumer Sentiment Index	hhsntn	Consumer expect

Group 5: Money and credit

	id	tcode	fred	description	gsi	gsi:description
1	70	6	M1SL	M1 Money Stock	M_110154984	M1
2	71	6	M2SL	M2 Money Stock	$M_110154985$	M2
3	72	5	M2REAL	Real M2 Money Stock	$M_110154985$	M2 (real)
4	73	6	BOGMBASE	Monetary Base	$M_110154995$	MB
5	74	6	TOTRESNS	Total Reserves of Depository Institutions	$M_110155011$	Reserves tot
6	75	7	NONBORRES	Reserves Of Depository Institutions	$M_{110155009}$	Reserves nonbor
7	76	6	BUSLOANS	Commercial and Industrial Loans	BUSLOANS	C&I loan plus
8	77	6	REALLN	Real Estate Loans at All Commercial Banks	BUSLOANS	DC&I loans
9	78	6	NONREVSL	Total Nonrevolving Credit	$M_{110154564}$	Cons credit
10	79*	2	CONSPI	Nonrevolving consumer credit to Personal Income	$M_{110154569}$	Inst cred/PI
11	131	6	MZMSL	MZM Money Stock	N.A.	N.A.
12	132	6	DTCOLNVHFNM	Consumer Motor Vehicle Loans Outstanding	N.A.	N.A.
13	133	6	DTCTHFNM	Total Consumer Loans and Leases Outstanding	N.A.	N.A.
14	134	6	INVEST	Securities in Bank Credit at All Commercial Banks	N.A.	N.A.

Group 6: Interest and exchange rates

	id	tcode	fred	description	gsi	gsi:description
1	84	2	FEDFUNDS	Effective Federal Funds Rate	$M_{-}110155157$	Fed Funds
2	85*	2	CP3Mx	3-Month AA Financial Commercial Paper Rate	CPF3M	Comm paper
3	86	2	TB3MS	3-Month Treasury Bill:	$M_110155165$	3 mo T-bill
4	87	2	TB6MS	6-Month Treasury Bill:	$M_110155166$	6 mo T-bill
5	88	2	GS1	1-Year Treasury Rate	$M_110155168$	1 yr T-bond
6	89	2	GS5	5-Year Treasury Rate	$M_110155174$	5 yr T-bond
7	90	2	GS10	10-Year Treasury Rate	$M_110155169$	10 yr T-bond
8	91	2	AAA	Moody's Seasoned Aaa Corporate Bond Yield		Aaa bond
9	92	2	BAA	Moody's Seasoned Baa Corporate Bond Yield		Baa bond
10	93*	1	COMPAPFFx	3-Month Commercial Paper Minus FEDFUNDS		CP-FF spread
11	94	1	TB3SMFFM	3-Month Treasury C Minus FEDFUNDS		3 mo-FF spread
12	95	1	TB6SMFFM	6-Month Treasury C Minus FEDFUNDS		6 mo-FF spread
13	96	1	T1YFFM	1-Year Treasury C Minus FEDFUNDS		1 yr-FF spread
14	97	1	T5YFFM	5-Year Treasury C Minus FEDFUNDS		5 yr-FF spread
15	98	1	T10YFFM	10-Year Treasury C Minus FEDFUNDS		10 yr-FF spread
16	99	1	AAAFFM	Moody's Aaa Corporate Bond Minus FEDFUNDS		Aaa-FF spread
17	100	1	BAAFFM	Moody's Baa Corporate Bond Minus FEDFUNDS		Baa-FF spread
18	101	5	TWEXAFEGSMTHx	Trade Weighted U.S. Dollar Index		Ex rate: avg
19	102*	5	EXSZUSx	Switzerland / U.S. Foreign Exchange Rate	$M_110154768$	Ex rate: Switz
20	103*	5	EXJPUSx	Japan / U.S. Foreign Exchange Rate	$M_110154755$	Ex rate: Japan
21	104*	5	EXUSUKx	U.S. / U.K. Foreign Exchange Rate	$M_{110154772}$	Ex rate: UK
22	105*	5	EXCAUSx	Canada / U.S. Foreign Exchange Rate	M_110154744	EX rate: Canada

Group 7: Prices

			<u> </u>		
id	tcode	fred	description	gsi	gsi:description
106	6	WPSFD49207	PPI: Finished Goods	M110157517	PPI: fin gds
107	6	WPSFD49502	PPI: Finished Consumer Goods	M110157508	PPI: cons gds
108	6	WPSID61	PPI: Intermediate Materials	$M_{110157527}$	PPI: int matls
109	6	WPSID62	PPI: Crude Materials	$M_110157500$	PPI: crude matls
110*	6	OILPRICEx	Crude Oil, spliced WTI and Cushing	$M_{110157273}$	Spot market price
111	6	PPICMM	PPI: Metals and metal products:	M_110157335	PPI: nonferrous
112	1	NAPMPRI	ISM Manufacturing: Prices Index	$M_{110157204}$	NAPM com price
113	6	CPIAUCSL	CPI : All Items	M_110157323	CPI-U: all
114	6	CPIAPPSL	CPI : Apparel	$M_{110157299}$	CPI-U: apparel
115	6	CPITRNSL	CPI: Transportation	$M_{110157302}$	CPI-U: transp
116	6	CPIMEDSL	CPI : Medical Care	$M_{110157304}$	CPI-U: medical
117	6	CUSR0000SAC	CPI : Commodities	$M_{110157314}$	CPI-U: comm.
118	6	CUUR0000SAD	CPI : Durables	$M_{110157315}$	CPI-U: dbles
119	6	CUSR0000SAS	CPI : Services	$M_110157325$	CPI-U: services
120	6	CPIULFSL	CPI : All Items Less Food	$M_{110157328}$	CPI-U: ex food
121	6	CUUR0000SA0L2	CPI : All items less shelter	$M_{110157329}$	CPI-U: ex shelter
122	6	CUSR0000SA0L5	CPI : All items less medical care	$M_{110157330}$	CPI-U: ex med
123	6	PCEPI	Personal Cons. Expend.: Chain Index	gmdc	PCE defl
124	6	DDURRG3M086SBEA	Personal Cons. Exp: Durable goods	gmdcd	PCE defl: dlbes
125	6	DNDGRG3M086SBEA	Personal Cons. Exp: Nondurable goods	gmdcn	PCE defl: nondble
126	6	DSERRG3M086SBEA	Personal Cons. Exp: Services	gmdcs	PCE defl: service
	106 107 108 109 110* 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125	106 6 107 6 108 6 109 6 110* 6 111 6 112 1 113 6 114 6 115 6 116 6 117 6 118 6 119 6 120 6 121 6 122 6 123 6 124 6 125 6	106 6 WPSFD49207 107 6 WPSFD49502 108 6 WPSID61 109 6 WPSID62 110* 6 OILPRICEX 111 6 PPICMM 112 1 NAPMPRI 113 6 CPIAUCSL 114 6 CPIAPPSL 115 6 CPITRNSL 116 6 CPIMEDSL 117 6 CUSR0000SAC 118 6 CUUR0000SAD 119 6 CUSR0000SAS 120 6 CPIULFSL 121 6 CUSR0000SA0L2 122 6 CUSR0000SA0L5 123 6 PCEPI 124 6 DDURRG3M086SBEA 125 6 DNDGRG3M086SBEA	106 6 WPSFD49207 PPI: Finished Goods 107 6 WPSFD49502 PPI: Finished Consumer Goods 108 6 WPSID61 PPI: Intermediate Materials 109 6 WPSID62 PPI: Crude Materials 110* 6 OILPRICEX Crude Oil, spliced WTI and Cushing 111 6 PPICMM PPI: Metals and metal products: 112 1 NAPMPRI ISM Manufacturing: Prices Index 113 6 CPIAUCSL CPI: All Items 114 6 CPIAPPSL CPI: Apparel 115 6 CPITRNSL CPI: Transportation 116 6 CPIMEDSL CPI: Medical Care 117 6 CUSR0000SAC CPI: Durables 118 6 CUUR0000SAD CPI: Durables 119 6 CUSR0000SAS CPI: All Items Less Food 121 6 CUUR0000SAOL2 CPI: All items less medical care 122 6 CUSR0000SAOL5 CPI: All items less medical care	106

Group 8: Stock market

	id	tcode	fred	description	gsi	gsi:description
1	80*	5	S&P 500	S&P's Common Stock Price Index: Composite	M_110155044	S&P 500
2	81*	5	S&P: indust	S&P's Common Stock Price Index: Industrials	$M_110155047$	S&P: indust
3	82*	2	S&P div yield	S&P's Composite Common Stock: Dividend Yield		S&P div yield
4	83*	5	S&P PE ratio	S&P's Composite Common Stock: Price-Earnings Ratio		S&P PE ratio
5	135*	1	VXOCLSx	VXO		