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	$M_110157212$	NAPM prodn
17	20	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	UEMP15T26	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	CES0600000008	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. Housing								
	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

1 106 6 WPSFD49207 PPI: Finished Goods M110157517 2 107 6 WPSFD49502 PPI: Finished Consumer Goods M110157508 3 108 6 WPSID61 PPI: Intermediate Materials M_110157527 4 109 6 WPSID62 PPI: Crude Materials M_110157500 5 110* 6 OILPRICEx Crude Oil, spliced WTI and Cushing M_110157273 6 111 6 PPICMM PPI: Metals and metal products: M_110157335 7 112 1 NAPMPRI ISM Manufacturing: Prices Index M_110157324 8 113 6 CPIAUCSL CPI: All Items M_110157323 9 114 6 CPIAPPSL CPI: Apparel M_110157302 10 115 6 CPITRNSL CPI: Transportation M_110157304 11 116 6 CPIMEDSL CPI: Medical Care M_110157314 12 117 6 CUSR0000SAD CPI: Durables	gsi:description PPI: fin gds PPI: cons gds PPI: int matls PPI: crude matls Spot market price PPI: nonferrous NAPM com price CPI-U: all
2 107 6 WPSFD49502 PPI: Finished Consumer Goods M110157508 3 108 6 WPSID61 PPI: Intermediate Materials M_110157527 4 109 6 WPSID62 PPI: Crude Materials M_110157500 5 110* 6 OILPRICEX Crude Oil, spliced WTI and Cushing M_110157273 6 111 6 PPICMM PPI: Metals and metal products: M_110157335 7 112 1 NAPMPRI ISM Manufacturing: Prices Index M_110157304 8 113 6 CPIAUCSL CPI : All Items M_110157329 9 114 6 CPIAPPSL CPI : Apparel M_110157302 10 115 6 CPITRNSL CPI : Transportation M_110157304 11 116 6 CPIMEDSL CPI : Medical Care M_110157314 12 117 6 CUSR0000SAC CPI : Commodities M_110157315 13 118 6 CUSR0000SAD CPI : Durables M_110157315	PPI: cons gds PPI: int matls PPI: crude matls Spot market price PPI: nonferrous NAPM com price CPI-U: all
3 108 6 WPSID61 PPI: Intermediate Materials M_110157527 4 109 6 WPSID62 PPI: Crude Materials M_110157500 5 110* 6 OILPRICEX Crude Oil, spliced WTI and Cushing M_110157273 6 111 6 PPICMM PPI: Metals and metal products: M_110157335 7 112 1 NAPMPRI ISM Manufacturing: Prices Index M_110157204 8 113 6 CPIAUCSL CPI: All Items M_110157323 9 114 6 CPIAPPSL CPI: Apparel M_110157309 10 115 6 CPITRNSL CPI: Transportation M_110157304 11 116 6 CPIMEDSL CPI: Medical Care M_110157314 12 117 6 CUSR0000SAC CPI: Commodities M_110157315 13 118 6 CUSR0000SAD CPI: Durables M_110157315	PPI: int matls PPI: crude matls Spot market price PPI: nonferrous NAPM com price CPI-U: all
4 109 6 WPSID62 PPI: Crude Materials M_110157500 5 110* 6 OILPRICEX Crude Oil, spliced WTI and Cushing M_110157273 6 111 6 PPICMM PPI: Metals and metal products: M_110157335 7 112 1 NAPMPRI ISM Manufacturing: Prices Index M_110157204 8 113 6 CPIAUCSL CPI : All Items M_110157323 9 114 6 CPIAPPSL CPI : Apparel M_110157299 10 115 6 CPITRNSL CPI : Transportation M_110157302 11 116 6 CPIMEDSL CPI : Medical Care M_110157304 12 117 6 CUSR0000SAC CPI : Commodities M_110157314 13 118 6 CUSR0000SAD CPI : Durables M_110157315	PPI: crude matls Spot market price PPI: nonferrous NAPM com price CPI-U: all
5 110* 6 OILPRICEX Crude Oil, spliced WTI and Cushing M_110157273 6 111 6 PPICMM PPI: Metals and metal products: M_110157335 7 112 1 NAPMPRI ISM Manufacturing: Prices Index M_110157204 8 113 6 CPIAUCSL CPI : All Items M_110157323 9 114 6 CPIAPPSL CPI : Apparel M_110157299 10 115 6 CPITRNSL CPI : Transportation M_110157302 11 116 6 CPIMEDSL CPI : Medical Care M_110157304 12 117 6 CUSR0000SAC CPI : Commodities M_110157314 13 118 6 CUSR0000SAD CPI : Durables M_110157315	Spot market price PPI: nonferrous NAPM com price CPI-U: all
6 111 6 PPICMM PPI: Metals and metal products: M_110157335 7 112 1 NAPMPRI ISM Manufacturing: Prices Index M_110157204 8 113 6 CPIAUCSL CPI: All Items M_110157323 9 114 6 CPIAPPSL CPI: Apparel M_110157299 10 115 6 CPITRNSL CPI: Transportation M_110157302 11 116 6 CPIMEDSL CPI: Medical Care M_110157304 12 117 6 CUSR0000SAC CPI: Commodities M_110157314 13 118 6 CUSR0000SAD CPI: Durables M_110157315	PPI: nonferrous NAPM com price CPI-U: all
7 112 1 NAPMPRI ISM Manufacturing: Prices Index M_110157204 1 8 113 6 CPIAUCSL CPI : All Items M_110157323 0 9 114 6 CPIAPPSL CPI : Apparel M_110157399 0 10 115 6 CPITRNSL CPI : Transportation M_110157302 0 11 116 6 CPIMEDSL CPI : Medical Care M_110157304 0 12 117 6 CUSR0000SAC CPI : Commodities M_110157314 0 13 118 6 CUSR0000SAD CPI : Durables M_110157315 0	NAPM com price CPI-U: all
8 113 6 CPIAUCSL CPI : All Items M_110157323 9 114 6 CPIAPPSL CPI : Apparel M_110157299 10 115 6 CPITRNSL CPI : Transportation M_110157302 11 116 6 CPIMEDSL CPI : Medical Care M_110157304 12 117 6 CUSR0000SAC CPI : Commodities M_110157314 13 118 6 CUSR0000SAD CPI : Durables M_110157315	CPI-U: all
9 114 6 CPIAPPSL CPI : Apparel M_110157299 10 115 6 CPITRNSL CPI : Transportation M_110157302 11 116 6 CPIMEDSL CPI : Medical Care M_110157304 12 117 6 CUSR0000SAC CPI : Commodities M_110157314 13 118 6 CUSR0000SAD CPI : Durables M_110157315	
10 115 6 CPITRNSL CPI : Transportation M_110157302 11 116 6 CPIMEDSL CPI : Medical Care M_110157304 12 117 6 CUSR0000SAC CPI : Commodities M_110157314 13 118 6 CUSR0000SAD CPI : Durables M_110157315	
11 116 6 CPIMEDSL CPI : Medical Care M_110157304 12 117 6 CUSR0000SAC CPI : Commodities M_110157314 13 118 6 CUSR0000SAD CPI : Durables M_110157315	CPI-U: apparel
12 117 6 CUSR0000SAC CPI : Commodities M_110157314 6 13 118 6 CUSR0000SAD CPI : Durables M_110157315	CPI-U: transp
13 118 6 CUSR0000SAD CPI : Durables M_110157315	CPI-U: medical
	CPI-U: comm.
14 110 6 CUCD 0000 AC CDI . Complete M 110157995	CPI-U: dbles
14 119 0 CUSR00005A5 CF1: Services M_110137525	CPI-U: services
$15 120 \qquad \qquad 6 \text{CPIULFSL} \qquad \qquad \text{CPI: All Items Less Food} \qquad \qquad \text{M_}110157328 \qquad \qquad$	CPI-U: ex food
$16 121 \qquad \qquad 6 \text{CUSR0000SA0L2} \qquad \qquad \text{CPI: All items less shelter} \qquad \qquad \text{M_110157329} \qquad \qquad \\$	CPI-U: ex shelter
$17 122 \qquad \qquad 6 \text{CUSR0000SA0L5} \qquad \qquad \text{CPI: All items less medical care} \qquad \qquad \text{M_110157330} \qquad \qquad$	CPI-U: ex med
18 123 6 PCEPI Personal Cons. Expend.: Chain Index gmdc	PCE defl
19 124 6 DDURRG3M086SBEA Personal Cons. Exp: Durable goods gmdcd	PCE defl: dlbes
20 125 6 DNDGRG3M086SBEA Personal Cons. Exp: Nondurable goods gmdcn	PCE defl: nondble
21 126 6 DSERRG3M086SBEA Personal Cons. Exp: Services gmdcs	PCE defl: service

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		