## **Appendix**

FRED-QD is a quarterly frequency companion to FRED-MD. It is designed to emulate the dataset used in "Disentangling the Channels of the 2007-2009 Recession" by Stock and Watson (2012, NBER WP No. 18094) but also contains several additional series. The columns denote the following: (i) ID denotes the series number, (ii) SW ID denotes the series number in SW (2012), (iii) TCODE denotes one of the following data transformations for a series x: (1) no transformation; (2)  $\Delta x_t$ ; (3)  $\Delta^2 x_t$ ; (4)  $\log(x_t)$ ; (5)  $\Delta \log(x_t)$ ; (6)  $\Delta^2 \log(x_t)$ . (7)  $\Delta(x_t/x_{t-1} - 1.0)$ , (iv) SW FACTORS denotes whether a series was used in SW (2012) when constructing factors (i.e. 1 is yes and 0 is no), (v) FRED MNEMONIC denotes the mnemonic we use for the dataset, (vi) SW MNEMONIC denotes the mnemonic used in SW (2012), and (vii) DESCRIPTION gives a brief definition of the series. The series are loosely grouped based on SW (2012).

Details on construction of the data will be forthcoming but a few general comments are in order. First, if the FRED mnemonic does not end in "x" then the series comes directly from the FRED database (e.g. PCECC96; real PCE). Otherwise, the series is a modified variant of a series from FRED (e.g. PCDGx; nominal PCE durables is manually deflated using its own price index). The exception to this rule is the S&P data which is taken from public sources. Lastly, monthly frequency series are aggregated to a quarterly frequency using averages.

Group 1: NIPA

	=	CW ID	a COST	SW	EDED MNEWONIC	OINOMENM MAN	DESCRIPTION
,	<u>a</u>  .	OI WG	LOODE	FACIONS		SW MINEMONIC	DESCRIPTION CONTRACTOR
_	_	_	ഹ	0	GDPC1	GDP	Real Gross Domestic Product, 3 Decimal (Billions of Chained 2017 Dollars)
2	7	2	ಬ	0	PCECC96	Consumption	Real Personal Consumption Expenditures (Billions of Chained 2017 Dollars)
က	3	3	က	Π	PCDGx	Cons:Dur	Real personal consumption expenditures: Durable goods (Billions of Chained
							2017 Dollars), deflated using its own price index
4	4	4	ಸಂ	1	$PCESV_X$	Cons:Svc	Real Personal Consumption Expenditures: Services (Billions of 2017 Dollars),
							deflated using its own price index
ည	ಬ	ರ	က	1	PCNDx	Cons:NonDur	Real Personal Consumption Expenditures: Nondurable Goods (Billions of 2017
							Dollars), deflated using its own price index
9	9	9	က	0	GPDIC1	Investment	Real Gross Private Domestic Investment, 3 decimal (Billions of Chained 2017 Dollars)
7	7	7	ಬ	0	FPIx	FixedInv	Real private fixed investment (Billions of Chained 2017 Dollars), deflated
							using its own price index
$\infty$	$\infty$	$\infty$	ಬ	1	Y033RC1Q027SBEAx	3Ax Inv:Equip&Software	Real Gross Private Domestic Investment: Fixed Investment: Nonresidential:
							Equipment (Billions of Chained 2017 Dollars), deflated using its own price index
6	6	6	ಬ	П	$PNFI_{x}$	FixInv:NonRes	Real private fixed investment: Nonresidential (Billions of Chained 2017
							Dollars), deflated using its own price index
10	10	10	ಬ	1	PRFIx	FixedInv:Res	Real private fixed investment: Residential (Billions of Chained 2017 Dollars),
							deflated using its own price index
11	11	11	1	1	A014RE1Q156NBEA	Inv:Inventories	Shares of gross domestic product: Gross private domestic investment: Change
							in private inventories (Percent)
12	12	12	က	0	GCEC1	Gov.Spending	Real Government Consumption Expenditures & Gross Investment (Billions of Chained 2017 Dollars)
13	13	13	_	-	A893BL10225SBFA	Gov. Fed	Real Government Consumption Expenditures and Gross Investment: Federal
2	2	9	4	4			(Percent Change from Preceding Period)
14	14	14	ಬ	1	FGRECPTx	Real Gov Receipts	Real Federal Government Current Receipts (Billions of Chained 2017 Dollars),
							deflated using its own price index
15	15	15	ည	1	SLCEx	Gov:State&Local	Real government state and local consumption expenditures (Billions of
							Chained 2017 Dollars), deflated using its own price index
16	16	16	ಬ	1	EXPGSC1	Exports	Real Exports of Goods & Services, 3 Decimal (Billions of Chained 2017
							Dollars)
17	17	17	ಬ	-	IMPGSC1	Imports	Real Imports of Goods & Services, 3 Decimal (Billions of Chained 2017
G	9	G	ì.	c	900100		Dollars) P - 1 P:
2 5	$\infty$	<u>x</u>	ဂေ	<b>O</b>	DPIC96	Disp-Income	Keal Disposable Personal Income (billions of Chamed 2017 Dollars)
ΙS	Τ'n	LS	င	0	OUINEB	Ouput:INF B	Noniarm Business Sector: Real Output (Index 2017=100)
20	20	20	က	0	OUTBS	Output:Bus	Business Sector: Real Output (Index 2017=100)
21	21	21	ಬ	0	OUTMS	Output:Manuf	Manufacturing Sector: Real Output (Index 2017=100)
22	190	n.a.	2	0	B020RE1Q156NBEA		Shares of gross domestic product: Exports of goods and services (Percent)
23	191	n.a.	2	0	B021RE1Q156NBEA		Shares of gross domestic product: Imports of goods and services (Percent)

Group 2: Industrial Production

	DESCRIPTION	Industrial Production Index (Index 2017=100)	Industrial Production: Final Products (Market Group) (Index 2017=100)	Industrial Production: Consumer Goods (Index 2017=100)	Industrial Production: Materials (Index 2017=100)	Industrial Production: Durable Materials (Index 2017=100)	Industrial Production: Nondurable Materials (Index 2017=100)	Industrial Production: Durable Consumer Goods (Index 2017=100)	Industrial Production: Durable Goods: Automotive products (Index 2017=100)	Industrial Production: Nondurable Consumer Goods (Index 2017=100)	Industrial Production: Business Equipment (Index 2017=100)	Industrial Production: Consumer energy products (Index 2017=100)	Capacity Utilization: Total Industry (Percent of Capacity)	Capacity Utilization: Manufacturing (SIC) (Percent of Capacity)	Industrial Production: Manufacturing (SIC) (Index 2017=100)	Industrial Production: Residential Utilities (Index 2017=100)	Industrial Production: Fuels (Index 2017=100)
	SW MNEMONIC	IP:Total index	IP:Final products	IP:Consumer goods	IP:Materials	IP:Dur gds materials	IP:Nondur gds materials	IP:Dur Cons. Goods	IP:Auto	IP:NonDur Cons God	IP:Bus Equip	IP:Energy Prds	Capu Tot	Capu Man.			
	FRED MNEMONIC	INDPRO	IPFINAL	IPCONGD	IPMAT	IPDMAT	IPNMAT	IPDCONGD	IPB51110SQ	IPNCONGD	IPBUSEQ	IPB51220SQ	TCU	CUMFNS	<b>IPMANSICS</b>	IPB51222S	IPFUELS
SW	FACTORS	0	0	0	0	П	П	П	1	1	1	П	1	1	0	0	0
	TCODE	ಬ	ಬ	ಬ	ಬ	ಬ	ಬ	ಬ	ಬ	ಬ	ಬ	ಬ	1	1	ಬ	ಬ	ಬ
	SW ID	22	23	24	25	26	27	28	29	30	31	32	33	34	n.a.	n.a.	n.a.
	ID	22	23	24	25	26	27	28			31			34	194	195	196
			2	က	4	ಬ	9	7	$\infty$	6	10	11	12	13	14	15	16

Group 3: Employment and Unemployment

10         SW           1         SW         TCODE         FACTORS         FRED MNEMONIC         SMNEMONIC           2         36         5         0         USPRIN         Emp:Nonfarm           2         36         5         0         USPRIN         Emp:Nonfarm           4         38         36         5         0         USPRIN         Emp:Nonfarm           4         38         38         5         0         USGOOD         Emp:Private           5         40         40         40         5         1         DMANEMP         Emp:Private           8         42         42         5         1         DMANEMP         Emp:Private           11         41         41         5         0         USGOOD         Emp:DurGoods           11         42         5         1         USCONS         Emp:DurGoods           11         44	THE CHITTING AND THE CONTROLLED TO THE CONTROL T	DESCRIPTION	All Employees: Total nonfarm (Thousands of Persons)	All Employees: Total Private Industries (Thousands of Persons)	All Employees: Manufacturing (Thousands of Persons)	All Employees: Service-Providing Industries (Thousands of Persons)	All Employees: Goods-Producing Industries (Thousands of Persons)	All Employees: Durable goods (Thousands of Persons)	All Employees: Nondurable goods (Thousands of Persons)	All Employees: Construction (Thousands of Persons)	All Employees: Education & Health Services (Thousands of Persons)	All Employees: Financial Activities (Thousands of Persons)	All Employees: Information Services (Thousands of Persons)	All Employees: Professional & Business Services (Thousands of Persons)	All Employees: Leisure & Hospitality (Thousands of Persons)	All Employees: Other Services (Thousands of Persons)	All Employees: Mining and logging (Thousands of Persons)	All Employees: Trade, Transportation & Utilities (Thousands of Persons)	All Employees: Government (Thousands of Persons)	All Employees: Retail Trade (Thousands of Persons)	All Employees: Wholesale Trade (Thousands of Persons)	All Employees: Government: Federal (Thousands of Persons)	All Employees: Government: State Government (Thousands of Persons)	All Employees: Government: Local Government (Thousands of Persons)	Civilian Employment (Thousands of Persons)	Civilian Labor Force Participation Rate (Percent)	Civilian Unemployment Rate (Percent)	Unemployment Rate less than 27 weeks (Percent)	Unemployment Rate for more than 27 weeks (Percent)	Unemployment Rate - 16 to 19 years (Percent)	Unemployment Rate - 20 years and over, Men (Percent)	Unemployment Rate - 20 years and over, Women (Percent)	Number of Civilians Unemployed - Less Than 5 Weeks (Thousands of Persons)	Number of Civilians Unemployed for 5 to 14 Weeks (Thousands of Persons)	Number of Civilians Unemployed for 15 to 26 Weeks (Thousands of Persons)	Number of Civilians Unemployed for 27 Weeks and Over (Thousands of Persons)	Unemployment Level - Job Losers (Thousands of Persons)	Unemployment Level - Reentrants to Labor Force (Thousands of Persons)	Unemployment Level - Job Leavers (Thousands of Persons)	Unemployment Level - New Entrants (Thousands of Persons)
SW           35         35         50         0           36         36         5         0           37         37         5         0           38         38         5         0           40         40         5         0           41         41         5         0           42         42         5         0           43         43         5         1           44         44         5         1           45         45         5         1           46         46         5         1           47         47         5         1           48         48         5         1           50         50         5         1           50         50         5         1           50         50         5         1           51         54         5         1           52         55         5         1           52         55         5         1           60         60         5         1           61         61         5 </td <td>One Obediebe mo</td> <td>SW MNEMONIC</td> <td>Emp:Nonfarm</td> <td>Emp:Private</td> <td>Emp:mfg</td> <td>Emp:Services</td> <td>Emp:Goods</td> <td>Emp:DurGoods</td> <td>Emp:Nondur Goods</td> <td>Emp:Const</td> <td>Emp:Edu&amp;Health</td> <td>Emp:Finance</td> <td>Emp:Infor</td> <td>Emp:Bus Serv</td> <td>Emp:Leisure</td> <td>Emp:OtherSvcs</td> <td>Emp:Mining/NatRes</td> <td>Emp:Trade&amp;Trans</td> <td>Emp:Gov</td> <td>Emp:Retail</td> <td>Emp:Wholesal</td> <td><math>\operatorname{Emp:Gov}(\operatorname{Fed})</math></td> <td>Emp:Gov (State)</td> <td>Emp:Gov (Local)</td> <td>Emp:Total (HHSurve)</td> <td>LF Part Rate</td> <td>Unemp Rate</td> <td><math>Vrate\_ST</math></td> <td><math>Vrate\_LT</math></td> <td>Vrate:Age16-19</td> <td>Vrate:Age&gt;20 Men</td> <td>Urate:Age&gt;20 Women</td> <td>U:Dur &lt; 5wks</td> <td>U:Dur5-14wks</td> <td>U:dur&gt;15-26wks</td> <td>U:Dur&gt;27wks</td> <td>U:Job losers</td> <td>U:LF Reenty</td> <td>U:Job Leavers</td> <td>U:New Entrants</td>	One Obediebe mo	SW MNEMONIC	Emp:Nonfarm	Emp:Private	Emp:mfg	Emp:Services	Emp:Goods	Emp:DurGoods	Emp:Nondur Goods	Emp:Const	Emp:Edu&Health	Emp:Finance	Emp:Infor	Emp:Bus Serv	Emp:Leisure	Emp:OtherSvcs	Emp:Mining/NatRes	Emp:Trade&Trans	Emp:Gov	Emp:Retail	Emp:Wholesal	$\operatorname{Emp:Gov}(\operatorname{Fed})$	Emp:Gov (State)	Emp:Gov (Local)	Emp:Total (HHSurve)	LF Part Rate	Unemp Rate	$Vrate\_ST$	$Vrate\_LT$	Vrate:Age16-19	Vrate:Age>20 Men	Urate:Age>20 Women	U:Dur < 5wks	U:Dur5-14wks	U:dur>15-26wks	U:Dur>27wks	U:Job losers	U:LF Reenty	U:Job Leavers	U:New Entrants
35     35       36     36       37     37       38     38       39     39       40     40       41     41       42     42       43     43       44     44       45     45       46     46       47     47       48     48       49     49       50     50       51     51       52     52       53     53       54     54       55     55       50     50       60     60       61     61       62     62       63     63       64     64       65     65       66     66       67     67       68     68       69     69       69     69       70     70       71     71	ביייים אימויייי מם מם	FRED MNEMONIC	PAYEMS	USPRIV	MANEMP	SRVPRD	USGOOD	DMANEMP	NDMANEMP	USCONS	USEHS	USFIRE	USINFO	USPBS	USLAH	USSERV	USMINE	$\Omega$	$\Omega$	USTRADE	USWTRADE	CES9091000001	CES9092000001	CES9093000001	CE16OV	CIVPART	UNRATE	UNRATESTx	UNRATELTx	LNS14000012	LNS14000025	LNS14000026	UEMPLT5	VEMP5TO14	VEMP15T26	UEMP27OV	LNS13023621	LNS13023557	LNS13023705	LNS13023569
35     35       36     36       37     37       38     38       39     39       40     40       41     41       42     42       43     43       44     44       45     45       46     46       47     47       48     48       49     49       50     50       51     51       52     52       53     53       54     54       55     55       50     50       60     60       61     61       62     62       63     63       64     64       65     65       66     66       67     67       68     68       69     69       69     69       70     70       71     71	SW	FACTORS	0	0	0	0	0	1	0	1	1	1	1	1	1	1	П	1	0	1	1	П			0	0	0	0	0	1	1	1	1	1	1	1	1	1	П	-
U 23 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3			ഹ	က	က	က	ಬ	ಬ	ಬ	ಬ	က	ಬ	က	က	က	ಬ	22	ಸಂ	က	က	က	ಬ	ಬ	ಬ	က	2	2	2	2	2	2	2	က	ಬ	ಬ	ಬ	က	က	ಬ	က
	ći či	SW ID	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	20	51	52	53	54	55	26	22	28	59	09	61	62	63	64	65	99	29	89	69	20	71	72
	£		1 35	2 36	3 37	4 38	5 39	6 40	7 41	8 42		10 44	11 45			_,,	15 49		17  51			_			23 57	24 58						30 64		32 66		34 68	35 69	36 70	37 71	38 72

Group 3: Employment and Unemployment, continued

1D         SW ID         TCODE         FACTORS         FRED MNEMONIC         SW MNEMONIC         DESCRIPTION           40         74         74         5         1         LNS12032194         Employment Level - Part-Time for Economic Reasons, All Industries (Thousands of Persons)           41         75         75         5         0         HOAMS         EmpHrs:Bus Sec         Business Sector: Hours of All Persons (Index 2017=100)           42         76         76         5         0         HOAMS         EmpHrs:nfp         Nonfarm Business Sector: Hours of All Persons (Index 2017=100)           43         77         77         1         AWHMAN         AWH Man         Average Weekly Hours of Production and Nonsupervisory Employees: Manufacturing (Hours)           44         78         78         2         1         AWHNONAG         AWH Privat         Average Weekly Hours of Production and Nonsupervisory Employees: Manufacturing (Hours)           46         79         2         1         AWUTANAN         AWH Overtime         Average Weekly Hours of Production and Nonsupervisory Employees: Manufacturing (Hours)           46         80         80         1         0         UEMPMEAN         Average (Mean) Duration of Unemployment (Weeks)           41         79         2         0         UEMPMEATIOx					SW			
73         73         5         1         LNS12032194         Emp:SlackWk           74         74         5         0         HOABS         EmpHrs:Bus Sec           75         75         5         0         HOANS         EmpHrs:mfg           76         76         5         0         HOANBS         EmpHrs:mfg           77         77         1         1         AWHMAN         AWH Man           78         78         2         1         AWHNONAG         AWH Privat           79         79         2         1         AWOTMAN         AWH Overtime           80         80         1         0         HWIX         HelpWnted           197         n.a.         2         0         UEMPMEAN           220         n.a.         0         CES0600000007           220         n.a.         0         CLAIMSx				TCODE	FACTORS		SW MNEMONIC	DESCRIPTION
74         74         5         0         HOABS         EmpHrs:Bus Sec           75         75         5         0         HOAMS         EmpHrs:mfg           76         76         5         0         HOANBS         EmpHrs:mfg           77         77         1         1         AWHMAN         AWH Man           78         78         2         1         AWHNONAG         AWH Privat           79         79         2         1         AWOTMAN         AWH Overtime           80         80         1         0         HWIX         HelpWnted           197         n.a.         2         0         UEMPMEAN         HelpWnted           220         n.a.         2         0         CES0600000007         CES0600000007           221         n.a.         5         0         CLAIMSx         CLAIMSx	39	73	73	ಬ	П	LNS12032194	Emp:SlackWk	Employment Level - Part-Time for Economic Reasons, All Industries (Thousands of Persons)
75         75         5         0         HOAMS         EmpHrs:mfg           76         76         5         0         HOANBS         EmpHrs:mfg           77         77         1         1         AWHMAN         AWH Man           78         78         2         1         AWHNONAG         AWH Privat           79         79         2         1         AWOTMAN         AWH Overtime           80         80         1         0         HWIX         HelpWnted           197         n.a.         2         0         UEMPMEAN         HelpWnted           220         n.a.         2         0         CES0600000007         CES0600000007           221         n.a.         5         0         CLAIMSx         CLAIMSx	40	74	74	2	0	HOABS	EmpHrs:Bus Sec	Business Sector: Hours of All Persons (Index 2017=100)
76         76         5         0         HOANBS         EmpHrs:nfb           77         77         1         1         AWHMAN         AWH Man           78         78         2         1         AWHNONAG         AWH Privat           79         79         2         1         AWOTMAN         AWH Overtime           80         80         1         0         HWIX         HelpWnted           197         n.a.         2         0         UEMPMEAN         HelpWnted           220         n.a.         2         0         CES0600000007         CES0600000007           221         n.a.         5         0         CLAHMSx	41	72	22	ಬ	0	HOAMS	EmpHrs:mfg	Manufacturing Sector: Hours of All Persons (Index 2017=100)
77         77         1         1         AWHMAN         AWH Man           78         78         2         1         AWHNONAG         AWH Privat           79         79         2         1         AWOTMAN         AWH Overtime           80         80         1         0         HWIX         HelpWnted           197         n.a.         2         0         UEMPMEAN           198         n.a.         0         CES0600000007           220         n.a.         5         0         CLAIMSx	42	92	92	ಸಂ	0	HOANBS	EmpHrs:nfb	Nonfarm Business Sector: Hours of All Persons (Index 2017=100)
78         78         2         1         AWHNONAG         AWH Privat           79         79         2         1         AWOTMAN         AWH Overtime           80         80         1         0         HWIX         HelpWnted           197         n.a.         2         0         UEMPMEAN         HelpWnted           220         n.a.         2         0         CES0600000007         HWIURATIOx           221         n.a.         5         0         CLAIMSx	43	22	22	Н	П	AWHMAN	AWH Man	Average Weekly Hours of Production and Nonsupervisory Employees: Manufacturing (Hours)
79         79         2         1         AWOTMAN         AWH Overtime           80         80         1         0         HWIX         HelpWnted           197         n.a.         2         0         UEMPMEAN         HelpWnted           198         n.a.         2         0         CES060000007         CES060000007           220         n.a.         5         0         CLAIMSx	44	28	28	7	П	AWHNONAG	AWH Privat	Average Weekly Hours Of Production And Nonsupervisory Employees: Total private (Hours)
80 80 1 0 HWIx HelpWnted 197 n.a. 2 0 UEMPMEAN 198 n.a. 2 0 CES060000007 220 n.a. 2 0 HWIURATIOx 221 n.a. 5 0 CLAIMSx	45	79	62	7	П	AWOTMAN	AWH Overtime	Average Weekly Overtime Hours of Production and Nonsupervisory Employees: Manufacturing (Hours)
197       n.a.       2       0       UEMPMEAN         198       n.a.       2       0       CES060000007         220       n.a.       2       0       HWIURATIOx         221       n.a.       5       0       CLAIMSx	46	80	80	П	0	HWIx	HelpWnted	Help-Wanted Index
198 n.a. 2 0 CES060000007 220 n.a. 2 0 HWIURATIOx 221 n.a. 5 0 CLAIMSx	47	197	n.a.	2	0	UEMPMEAN		Average (Mean) Duration of Unemployment (Weeks)
n.a. 2 0 HWIURATIOx n.a. 5 0 CLAIMSx	48	198	n.a.	2	0	CES0600000007		Average Weekly Hours of Production and Nonsupervisory Employees: Goods-Producing
n.a. 5 0 CLAIMSx	49	220	n.a.	2	0	HWIURATIOx		Ratio of Help Wanted/No. Unemployed
	20	221	n.a.	5	0	CLAIMSx		Initial Claims

Group 4: Housing

	DESCRIPTION	Housing Starts: Total: New Privately Owned Housing Units Started (Thousands of Units)	Privately Owned Housing Starts: 5-Unit Structures or More (Thousands of Units)	New Private Housing Units Authorized by Building Permits (Thousands of Units)	Housing Starts in Midwest Census Region (Thousands of Units)	Housing Starts in Northeast Census Region (Thousands of Units)	Housing Starts in South Census Region (Thousands of Units)	Housing Starts in West Census Region (Thousands of Units)	HEO All-Transactions House Price Index for the United States (Index 1980 Q1=100)	S&P/Case-Shiller 10-City Composite Home Price Index (Index January 2000 =	100)	$\ensuremath{\mathrm{S\&P/Case}}\xspace$ Shiller 20-City Composite Home Price Index (Index January 2000 =	100)	New Private Housing Units Authorized by Building Permits in the Northeast	Census Region (Thousands, SAAR)	New Private Housing Units Authorized by Building Permits in the Midwest	Census Region (Thousands, SAAR)	New Private Housing Units Authorized by Building Permits in the South Census	Region (Thousands, SAAR)	New Private Housing Units Authorized by Building Permits in the West Census	Region (Thousands, SAAR)
	SW MNEMONIC	Hstarts	Hstarts 55 units	Hpermits	Hstarts:MW	Hstarts:NE	Hstarts:S	Hstarts:W	Real Hprice:OFHEO	Real $CS_10$		Real CS_20									
	FRED MNEMONIC	HOUST	HOUST5F	PERMIT	HOUSTMW	HOUSTNE	HOUSTS	MLSOLE	USSTHPI	SPCS10RSA		SPCS20RSA		PERMITNE		PERMITMW		PERMITS		PERMITW	
SW	FACTORS	0	0	1	1	1	1	1	1	1		1		0		0		0		0	
	SW ID TCODE	ಬ	ಸಂ	5	5	5	5	5	5	5		ည		5		5		5		5	
	SW ID	81	82	83	84	82	98	87	190	191		192		n.a.		n.a.		n.a.		n.a.	
	ID	81	85	83	84	82	98	87	179	180		181		227		228		229		230	
		-	2	3	4	ಬ	9	_	$\infty$	6		10		Π		12		13		14	

Group 5: Inventories, Orders, and Sales

				AS			
		SW ID	TCODE	FACTORS	ID SW ID TCODE FACTORS FRED MNEMONIC	SW MNEMONIC	DESCRIPTION
	88	68	ಸಾ	0	CMRMTSPLx	MT Sales	Real Manufacturing and Trade Industries Sales (Millions of Chained 2017 Dollars)
2	88	06	ಬ	П	RSAFSx	Ret. Sale	Real Rétail and Food Services Sales (Millions of Chained 2017 Dollars), deflated by Core PCE
က	06	91	ಸಂ	П	AMDMNOx	Orders (DurMfg)	Real Manufacturers' New Orders: Durable Goods (Millions of 2017 Dollars), deflated by Core PCE
4	91	92	ಬ	П	ACOGNOx	${\rm Orders}({\rm ConsGoods/Mat.})$	Real Value of Manufacturers' New Orders for Consumer Goods Industries (Millions of 2017 Dollars), deflated by Core PCE
က	92	93	ಬ	П	$AMDMUO_{X}$	$\operatorname{UnfOrders}(\operatorname{DurGds})$	Real Value of Manufacturers' Unfilled Orders for Durable Goods Industries (Millions of 2017 Dollars), deflated by Core PCE
9	93	94	ಬ	П	ANDENOx	Orders(NonDefCap)	Real Value of Manufacturers' New Orders for Capital Goods: Nondefense Capital Goods Industries (Millions of 2017 Dollars), deflated by Core PCE
7	94	96	ಒ	1	INVCQRMTSPL	MT Invent	Real Manufacturing and Trade Inventories (Millions of 2017 Dollars)
$\infty$	222	n.a.	ಬ	0	BUSINVx		Total Business Inventories (Millions of Dollars)
6	223	n.a.	2	0	ISRATIOx		Total Business: Inventories to Sales Ratio

Group 6: Prices

				SW			
	П	SW ID	TCODE	FACTORS		SW MNEMONIC	DESCRIPTION
<u> </u>	92	26	9	0	PCECTPI	PCED	Personal Consumption Expenditures: Chain-type Price Index (Index 2017=100)
2	96	86	9	0	PCEPILFE	PCED_LFE	Personal Consumption Expenditures Excluding Food and Energy
							(Chain-Type Price Index) (Index 2017=100)
က	26	66	9	0	GDPCTPI	GDP Defl	Gross Domestic Product: Chain-type Price Index (Index 2017=100)
4	86	100	9	1	GPDICTPI	GPDI Defl	Gross Private Domestic Investment: Chain-type Price Index (Index 2017—100)
r	9	101	c	,	מתתו	G	D G I J D. G (I 1 0017 100)
ဂ	66 ,	101	0 (	<b>-</b>	IPUBS	Bussec Den	business sector: Implicit Frice Denator (Index 2017=100)
1 0:	100	102	9 (	0 0	DGDSRG3Q086SBEA	PCED_Goods	Personal consumption expenditures: Goods (chain-type price index)
_	101	103	0	0	DDUKKG3Q086SBEA	PCED_DurGoods	Personal consumption expenditures: Durable goods (chain-type price index)
	901	701	c	C	4 H H H H H H H H H H H H H H H H H H H	2 4 4 5 4	$\frac{1}{1}$
0 0	103	105	9	0 0	DSERRG3Q086SBEA	FCED_Serv PCED_NDurGoods	rersonal consumption expenditures: pervices (chain-type price index) Personal consumption expenditures: Nondurable goods (chain-type price
							index)
10	104	106	9	0	DHCERG3Q086SBEA	PCED_HouseholdServ.	Personal consumption expenditures: Services: Household consumption
	,	1	c	Ŧ			expenditures (chain-type price index)
11	105	107	9	_	DMOTRG3Q086SBEA	$PCED\_MotorVec$	Personal consumption expenditures: Durable goods: Motor vehicles and
12	106	108	9	П	DFDHRG3Q086SBEA	PCED_DurHousehold	parts (chain-type price index) Personal consumption expenditures: Durable goods: Furnishings and
							durable household equipment (chain-type price index)
13	107	109	9	1	DREQRG3Q086SBEA	PCED_Recreation	Personal consumption expenditures: Durable goods: Recreational goods
							and vehicles (chain-type price index)
14	108	110	9	1	DODGRG3Q086SBEA	PCED_OthDurGds	Personal consumption expenditures: Durable goods: Other durable goods
			,	,			(chain-type price index)
15	109	1111	9	Н	m DFXARG3Q086SBEA	PCED_Food_Bev	Personal consumption expenditures: Nondurable goods: Food and
							Deverages purchased for our-premises consumption (chain-type price index)
16	110	112	9	1	DCLORG3Q086SBEA	PCED_Clothing	Personal consumption expenditures: Nondurable goods: Clothing and
							footwear (chain-type price index)
17	111	113	9	П	DGOERG3Q086SBEA	PCED_Gas_Enrgy	Personal consumption expenditures: Nondurable goods: Gasoline and
	,	;	(	,			other energy goods (chain-type price index)
$\frac{18}{8}$	112	114	9	П	DONGRG3Q086SBEA	PCED_OthNDurGds	Personal consumption expenditures: Nondurable goods: Other
	1	,	(	,			nondurable goods (chain-type price index)
19	113	115	9	-	DHUTRG3Q086SBEA	PCED_Housing-Utilities	Personal consumption expenditures: Services: Housing and utilities (chain-tyne mice index)
20	114	116	9	1	DHLCRG3Q086SBEA	PCED_HealthCare	Personal consumption expenditures: Services: Health care (chain-type
							price index)
21	115	117	9		${ m DTRSRG3Q086SBEA}$	PCED_TransSvg	Personal consumption expenditures: Transportation services (chain-type price index)
							(

Group 6: Prices, continued

			SW			
Π	SW ID	TCODE	FACTORS	FRED MNEMONIC	SW MNEMONIC	DESCRIPTION
22 116	3 118	9	1	DRCARG3Q086SBEA	PCED_RecServices	Personal consumption expenditures: Recreation services (chain-type
23 117	, 119	9	П	DFSARG3Q086SBEA	PCED_FoodServ_Acc.	price index) Personal consumption expenditures: Services: Food services and
				•		accommodations (chain-type price index)
24 118	3 120	9	П	DIFSRG3Q086SBEA	PCED_FIRE	Personal consumption expenditures: Financial services and insurance
95 119	191	9	-	DOTSBG30086SBEA	PCED OtherServices	(chain-type price index)  Personal consumption expanditures: Other services (chain-type price
		>	4			index)
26 120	122	9	0	CPIAUCSL	CPI	Consumer Price Index for All Urban Consumers: All Items (Index
		(	(			1982-84=100)
27 121	123	9	0	CPILFESL	CPLLFE	Consumer Price Index for All Urban Consumers: All Items Less Food &
28 122	124	9	0	WPSFD49207	PPI:FinGds	Energy (Index 1982-84=100) Producer Price Index by Commodity for Final Demand: Finished Goods
						(Index  1982=100)
29 123	125	9	0	PPIACO	PPI	Producer Price Index for All Commodities (Index 1982=100)
30 124	126	9	П	WPSFD $49502$	$\operatorname{PPI:FinConsGds}$	Producer Price Index by Commodity for Final Demand: Personal
						Consumption Goods (Finished Consumer Goods) (Index 1982=100)
31 125	127	9	1	WPSFD $4111$	PPI:FinConsGds(Food)	Producer Price Index by Commodity for Finished Consumer Foods (Index 1982—100)
32 126	128	9	П	PPIIDC	PPI:IndCom	Producer Price Index by Commodity Industrial Commodities (Index
						1982=100)
33 127	7 129	9	П	WPSID61	PPI:IntMat	Producer Price Index by Commodity Intermediate Materials: Supplies &
						Components (Index $1982=100$ )
34 128	3 133	ಒ	Н	$\rm WPU0531$	Real Price:NatGas	Producer Price Index by Commodity for Fuels and Related Products and
						Power: Natural Gas (Index 1982=100)
35 129	134	2		$\rm WPU0561$	Real Price:Oil	Producer Price Index by Commodity for Fuels and Related Products and
						Power: Crude Petroleum (Domestic Production) (Index 1982=100)
36 130	135	ಬ	0	OILPRICEx	Real Crudeoil Price	Real Crude Oil Prices: West Texas Intermediate (WTI) - Cushing,
						Oklahoma (2017 Dollars per Barrel), deflated by Core PCE
37 205	n.a.	9	0	WPSID62		Producer Price Index: Crude Materials for Further Processing (Index
						1982 = 100)
38 206	n.a.	9	0	PPICMM		Producer Price Index: Commodities: Metals and metal products: Primary
						nonferrous metals (Index 1982=100)
39 207	, n.a.	9	0	CPIAPPSL		Consumer Price Index for All Urban Consumers: Apparel (Index
						1982-84=100)
40 208	3 n.a.	9	0	CPITRNSL		Consumer Price Index for All Urban Consumers: Transportation (Index 1989, 84–100)
41 900	e F	9	_	CPIMEDSL		1502-01—100) Consumer Price Index for All Hrban Consumers: Medical Care (Index
		>	Þ			The following for the constant constant constant constant $382-84=100$ )

Group 6: Prices, continued

	DESCRIPTION	Consumer Price Index for All Urban Consumers: Commodities (Index	1982-84=100) Consumer Price Index for All Urban Consumers: Durables (Index 1982 84-100)	Consumer Price Index for All Urban Consumers: Services (Index 1982-84-100)	Consumer Price Index for All Urban Consumers: All Items Less Food	(undex 1902-04=100) Consumer Price Index for All Urban Consumers: All items less shelter	Consumer Price Index for All Urban Consumers: All items less medical	Care (undex 1902-04=100) CPI for All Urban Consumers: Owners' equivalent rent of residences (Index Dec 1989-100)	(1110CA 1202—130)
	SW MNEMONIC								
	FRED MNEMONIC SW MNEMONIC DESCRIPTION	CUSR0000SAC	CUSR0000SAD	${ m CUSR0000SAS}$	CPIULFSL	${\tt CUSR0000SA0L2}$	${\tt CUSR0000SA0L5}$	CUSR0000SEHC	
MS	SW ID TCODE FACTORS	0	0	0	0	0	0	0	
	TCODE	9	9	9	9	9	9	9	
		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
	ID	210	211	212	213	214	215	233	
		42	43	44	45	46	47	48	

Group 7: Earnings and Productivity

				$^{ m SW}$			
	ID s	SW ID TCODE	TCODE	FACTORS	FRED MNEMONIC	SW MNEMONIC	DESCRIPTION
-	131	136	ಬ	0	AHETPIx	Real AHE:PrivInd	Real AHE:PrivInd Real Average Hourly Earnings of Production and Nonsupervisory Employees: Total
							Private (2017 Dollars per Hour), deflated by Core PCE
2	132	137	ಬ	0	$\rm CES2000000008x$	Real AHE:Const	Real Average Hourly Earnings of Production and Nonsupervisory Employees:
							Construction (2017 Dollars per Hour), deflated by Core PCE
က	133	138	ಬ	0	$\rm CES3000000008x$	3x Real AHE:MFG	Real Average Hourly Earnings of Production and Nonsupervisory Employees:
							Manufacturing (2017 Dollars per Hour), deflated by Core PCE
4	134	139	ಬ	1	COMPRMS	CPH:Mfg	Manufacturing Sector: Real Compensation Per Hour (Index 2017=100)
2	135	140	ಬ	1	COMPRNFB	CPH:NFB	Nonfarm Business Sector: Real Compensation Per Hour (Index 2017=100)
9	136	141	ಬ	1	RCPHBS	CPH:Bus	Business Sector: Real Compensation Per Hour (Index 2017=100)
2	137	142	ಬ	1	OPHMFG	OPH:mfg	Manufacturing Sector: Real Output Per Hour of All Persons (Index 2017=100)
∞	138	143	ಬ	1	OPHNFB	OPH:nfb	Nonfarm Business Sector: Real Output Per Hour of All Persons (Index 2017=100)
6	139	144	ಬ	0	OPHPBS	OPH:Bus	Business Sector: Real Output Per Hour of All Persons (Index 2017=100)
10	140	145	2	0	ULCBS	ULC:Bus	Business Sector: Unit Labor Cost (Index 2017=100)
11	141	146	2	П	ULCMFG	ULC:Mfg	Manufacturing Sector: Unit Labor Cost (Index 2017=100)
12	142	147	2	1	ULCNFB	ULC:NFB	Nonfarm Business Sector: Unit Labor Cost (Index 2017=100)
13	143	148	ಬ	1	UNLPNBS	UNLPay:nfb	Nonfarm Business Sector: Unit Nonlabor Payments (Index 2017=100)
14	216	n.a.	9	0	CES0600000008		Average Hourly Earnings of Production and Nonsupervisory Employees:
							Goods-Producing (Dollars per Hour)

Group 8: Interest Rates

				SW			
I	ID S	SW ID	TCODE	FACTORS	FRED MNEMONIC	SW MNEMONIC	DESCRIPTION
$\frac{1}{1}$	44	149	2	П	FEDFUNDS	FedFunds	Effective Federal Funds Rate (Percent)
2  1	45	150	2	П	TB3MS	TB-3Mth	3-Month Treasury Bill: Secondary Market Rate (Percent)
3 1,	.46	151	2	0	TB6MS	$_{ m LM-6MTH}$	6-Month Treasury Bill: Secondary Market Rate (Percent)
4 1,	147	153	2	0	GS1	TB-1YR	1-Year Treasury Constant Maturity Rate (Percent)
$\frac{5}{1}$	148	154	2	0	GS10	TB-10YR	10-Year Treasury Constant Maturity Rate (Percent)
6 1,	49	155	2	0	MORTGAGE30US	Mort-30 Yr	30-Year Conventional Mortgage Rate© (Percent)
7 1	150	156	2	0	AAA	AAA Bond	Moody's Seasoned Aaa Corporate Bond Yield(©) (Percent)
8 1	.51	157	2	0	BAA	BAA Bond	Moody's Seasoned Baa Corporate Bond Yield© (Percent)
9 1	52	158	1	П	${ m BAA10YM}$	$BAA_GS10$	Moody's Seasoned Baa Corporate Bond Yield Relative to Yield on 10-Year Treasury
							Constant Maturity (Percent)
10 1	153	159	П	$\vdash$	MORTG10YRx	$MRTG\_GS10$	30-Year Conventional Mortgage Rate Relative to 10-Year Treasury Constant Maturity
							(Percent)
11 1	54	160	1	П	${ m TB6M3Mx}$	$tb6m\_tb3m$	6-Month Treasury Bill Minus 3-Month Treasury Bill, secondary market (Percent)
12 1	155	161	П	Н	GS1TB3Mx	$GS1\_tb3m$	1-Year Treasury Constant Maturity Minus 3-Month Treasury Bill, secondary market
							(Percent)
13 1	156	162	П	П	m GS10TB3Mx	$GS10_{-}tb3m$	10-Year Treasury Constant Maturity Minus 3-Month Treasury Bill, secondary market
							(Percent)
14 1	157	163	П	1	CPF3MTB3Mx	CP_Tbill Spread	3-Month Commercial Paper Minus 3-Month Treasury Bill, secondary market (Percent)
15 20	201	n.a.	2	0	GS5		5-Year Treasury Constant Maturity Rate
16 20	202	n.a.	1	0	${ m TB3SMFFM}$		3-Month Treasury Constant Maturity Minus Federal Funds Rate
17 20	203	n.a.	1	0	$_{ m T5YFFM}$		5-Year Treasury Constant Maturity Minus Federal Funds Rate
18 20	204	n.a.	1	0	AAAFFM		Moody's Seasoned Aaa Corporate Bond Minus Federal Funds Rate
19 2:	225	n.a.	2	0	CP3M		3-Month AA Financial Commercial Paper Rate
20 2:	226	n.a.	1	0	COMPAPFF		3-Month Commercial Paper Minus Federal Funds Rate

Group 9: Money and Credit

ID	SW ID	) TCODE	FACTORS	FRED MNEMONIC	SW MNEMONIC	DESCRIPTION
1 158	8 167	ಬ	0	BOGMBASEREALx	Real Mbase	Monetary Base (Millions of 1982-84 Dollars), deflated by CPI
3 160	000000000000000000000000000000000000	ಬ	0	M1REAL	Real m1	Real M1 Money Stock (Billions of 1982-84 Dollars), deflated by CPI
4 16.	1 170	ಬ	0	M2REAL	Real m2	Real M2 Money Stock (Billions of 1982-84 Dollars), deflated by CPI
5 163	3 172	ಬ	1	BUSLOANSx	Real C&Lloand	Real Commercial and Industrial Loans, All Commercial Banks (Billions of 2017
						U.S. Dollars), deflated by Core PCE
6 164	4 173	ಬ	1	CONSUMERX	Real ConsLoans	Real Consumer Loans at All Commercial Banks (Billions of 2017 U.S. Dollars),
						deflated by Core PCE
7 165	5 174	က	1	$NONREVSL_{x}$	Real NonRevCredit	Total Real Nonrevolving Credit Owned and Securitized, Outstanding (Billions of 2017
						Dollars), deflated by Core PCE
8 166	5 175	ಬ	1	REALLNx	Real LoansRealEst	Real Real Estate Loans, All Commercial Banks (Billions of 2017 U.S. Dollars),
						deflated by Core PCE
9 167	7 176	ಬ	1	REVOLSLx	Real RevolvCredit	Total Real Revolving Credit Owned and Securitized, Outstanding (Billions of
						2017 Dollars), deflated by Core PCE
10 168	3 177	20	0	$ ext{TOTALSLx}$	Real ConsuCred	Total Consumer Credit Outstanding (Billions of 2017 Dollars), deflated by Core PCE
11 169	9 178		1	DRIWCIL	FRBSLO_Consumers	FRB Senior Loans Officer Opions. Net Percentage of Domestic Respondents
						Reporting Increased Willingness to Make Consumer Installment Loans
12 199	9 n.a.	9	0	TOTRESNS		Total Reserves of Depository Institutions (Billions of Dollars)
13 200	0 n.a.	7	0	NONBORRES		Reserves Of Depository Institutions, Nonborrowed (Millions of Dollars)
14 217	7 n.a.	9	0	DTCOLNVHFNM		Consumer Motor Vehicle Loans Outstanding Owned by Finance Companies
						(Millions of Dollars)
15 218	s n.a.	9	0	DTCTHFNM		Total Consumer Loans and Leases Outstanding Owned and Securitized by
						Finance Companies (Millions of Dollars)
16 219	9 n.a.	9	0	INVEST		Securities in Bank Credit at All Commercial Banks (Billions of Dollars)

Group 10: Household Balance Sheets

Group 11: Exchange Rates

	DESCRIPTION	Trade Weighted U.S. Dollar Index: Advanced Foreign Currencies (Index Jan 2006=100)	U.S. / Euro Foreign Exchange Rate (U.S. Dollars to One Euro)	Switzerland / U.S. Foreign Exchange Rate	Japan / U.S. Foreign Exchange Rate	U.S. / U.K. Foreign Exchange Rate	EX rate:Canada Canada / U.S. Foreign Exchange Rate
	SW MNEMONIC DESCRIPTION	x Ex rate:major	Ex rate:Euro	Ex rate:Switz	Ex rate:Japan	Ex rate:UK	EX rate:Canada
	FRED MNEMONIC	TWEXAFEGSMTHX	EXUSEU	$ m EXSZUS_{x}$	$EXJPUS_{x}$	EXUSUKx	EXCAUSx
SW	FACTORS	1	П	П	П	1	1
	ID SW ID TCODE	5	2	5	5	2	ಬ
	SW ID	193	194	195	196	197	198
	П	182	183	184	185	186	187

Group 12: Other

AS	FACTORS FRED MNEMONIC SW MNEMONIC DESCRIPTION	1 UMCSENTx Cons. Expectations University of Michigan: Consumer Sentiment (Index 1st Quarter 1966=100)	1 USEPUINDXM PolicyUncertainty Economic Policy Uncertainty Index for United States
$^{ m RM}$		1	1
	TCODE	1	2
	SW ID	199	189 200
		88	83

Group 13: Stock Markets

	DESCRIPTION	CBOE Volatility Index: VIX	Nikkei Stock Average	NASDAQ Composite (Index Feb 5, 1971=100)	S&P's Common Stock Price Index: Composite	S&P's Composite Common Stock: Dividend Yield	S&P's Composite Common Stock: Price-Earnings Ratio
	SW MNEMONIC	VIX					
	DE FACTORS FRED MNEMONIC SW MNEMONIC DESCRIPTION	VIXCLSx	NIKKEI225	NASDAQCOM	S&P~500	S&P: div yield	S&P PE ratio
$^{ m SW}$	FACTORS		0	0	0	0	0
	TCODE	П	2	2	2	2	2
	SW ID	189	n.a.	n.a.	180	n.a.	n.a.
		178	231	232	245	247	248
			2	33	4	ಬ	9

Group 14: Non-Household Balance Sheets

	DESCRIPTION	Federal Debt: Total Public Debt as Percent of GDP (Percent)	Real Federal Debt: Total Public Debt (Millions of 2017 Dollars), deflated by PCE	Real Nonfinancial Corporate Business Sector Liabilities (Billions of 2017 Dollars),	Deflated by Implicit Price Deflator for Business Sector IPDBS	Nonfinancial Corporate Business Sector Liabilities to Disposable Business	Income (Percent)	Real Nonfinancial Corporate Business Sector Assets (Billions of 2017 Dollars),	Deflated by Implicit Price Deflator for Business Sector IPDBS	Real Nonfinancial Corporate Business Sector Net Worth (Billions of 2017 Dollars),	Deflated by Implicit Price Deflator for Business Sector IPDBS	Nonfinancial Corporate Business Sector Net Worth to Disposable Business Income	(Percent)	Real Nonfinancial Noncorporate Business Sector Liabilities (Billions of 2017	Dollars), Deflated by Implicit Price Deflator for Business Sector IPDBS	Nonfinancial Noncorporate Business Sector Liabilities to Disposable Business	Income (Percent)	Real Nonfinancial Noncorporate Business Sector Assets (Billions of 2017 Dollars),	Deflated by Implicit Price Deflator for Business Sector IPDBS	Real Nonfinancial Noncorporate Business Sector Net Worth (Billions of 2017	Dollars), Deflated by Implicit Price Deflator for Business Sector IPDBS	Nonfinancial Noncorporate Business Sector Net Worth to Disposable Business	Income (Percent)	Real Disposable Business Income, Billions of 2017 Dollars (Corporate cash flow	with IVA minus taxes on corporate income, deflated by Implicit Price Deflator for	Business Sector IPDBS)
	FRED MNEMONIC SW MNEMONIC DESCRIPTION	GFDEGDQ188S	GFDEBTNx	TLBSNNCBx		TLBSNNCBBDIx		${ m TTAABSNNCBx}$		$TNWMVBSNNCB_{x}$		TNWMVBSNNCBBDIx		TLBSNNBx		TLBSNNBBDIx		TABSNNBx		TNWBSNNBx		${ m TNWBSNNBBDIx}$		CNCFx		
SW	FACTORS	0	0	0		0		0		0		0		0		0		0		0		0		0		
	TCODE F	2	2	5		П		ಬ		ಬ		2		5		1		ಬ		ಬ		2		ಬ		
	SW ID	n.a.	n.a.	n.a.		n.a.		n.a.		n.a.		n.a.		n.a.		n.a.		n.a.		n.a.		n.a.		n.a.		
		192	193	234		235		236		237		238		239		240		241		242		243		244		
		П	2	က		4		ಬ		9		7		$\infty$		6		10		11		12		13		