

U.S. Expansion: Getting Better With Age Or Overly Stimulated?

- Jim O'Sullivan, Chief U.S. Economist



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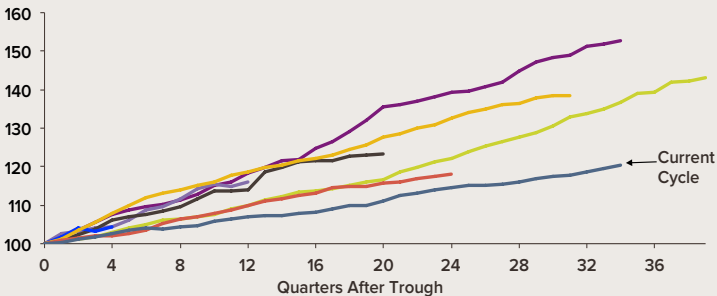
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1a. GDP Growth Has Been Weak By Past Standards

Real GDP During Recoveries, Trough=100

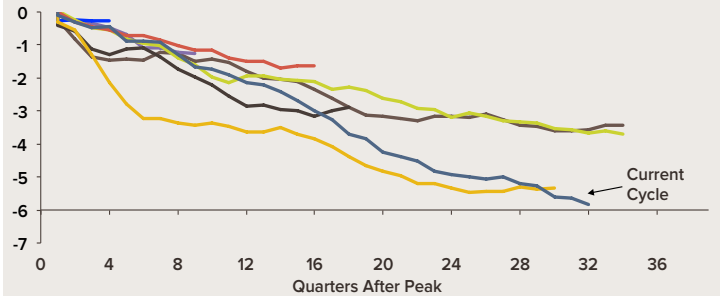
— 1961-69 — 1970-73 — 1975-80 — 1980-81 — 1982-90 — 1991-2001 — 2001-07 — 2009-



1b. ...Yet Unemployment Rate Has Been Falling Rapidly

Change In Unemployment Rate From Peak During Recoveries, Percentage Points

— 1961-69 — 1970-73 — 1975-80 — 1980-81 — 1982-90 — 1991-2001 — 2001-07 — 2009-





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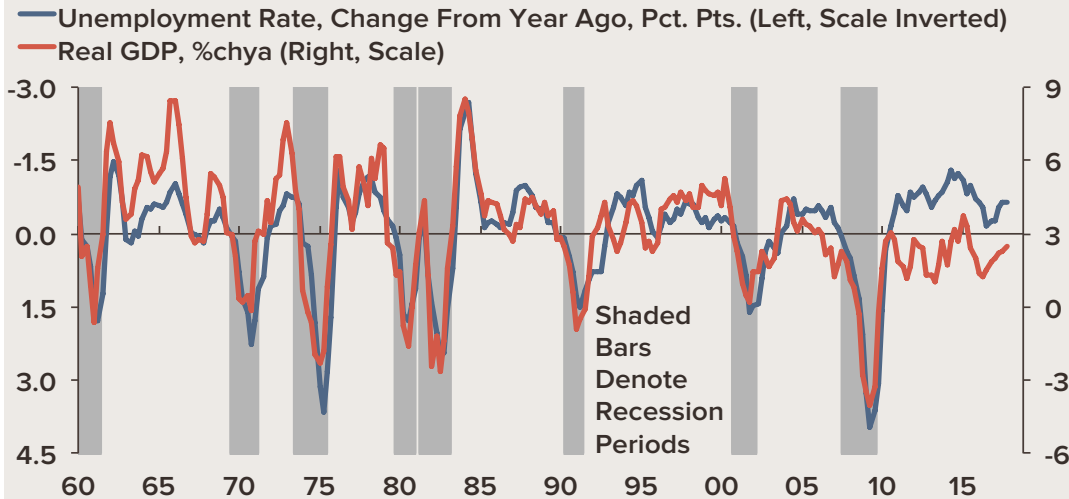
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2. Potential Growth Rate Has Been Below 2% In Recent Years





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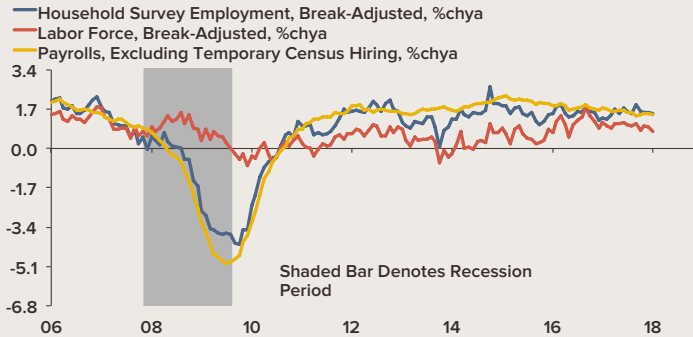
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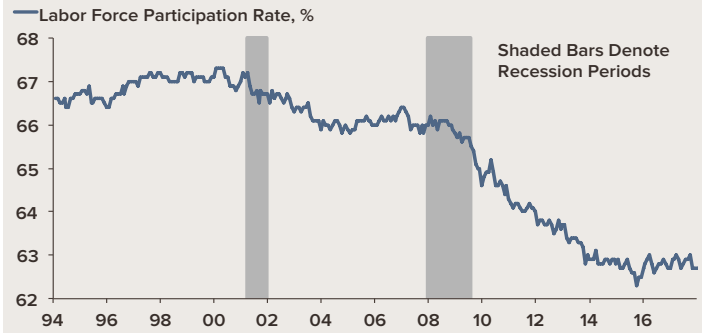
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3a. Employment Growth Is Outpacing Labor Force Growth



3b. Participation Rate Has Stopped Falling—Likely Temporarily





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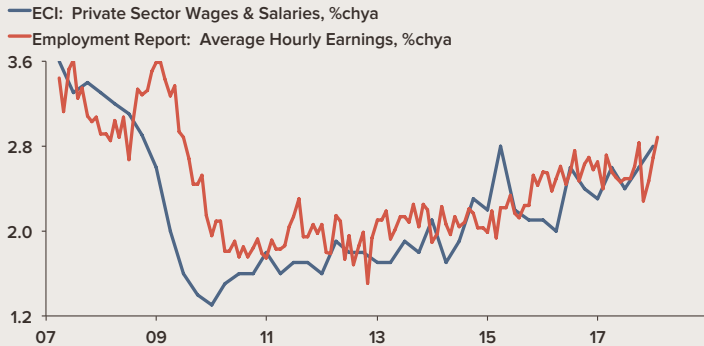
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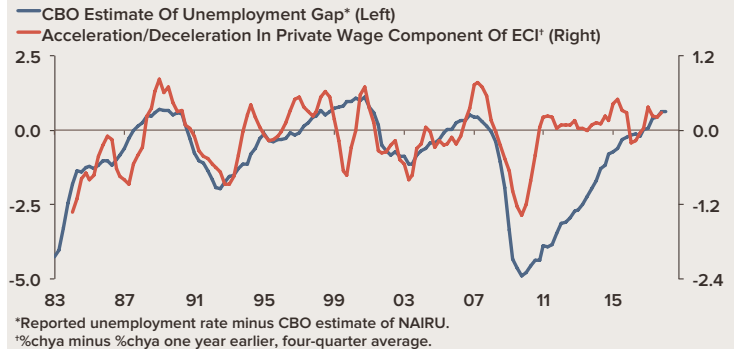
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4a. Through The Volatility, Wage Gains Have Started To Edge Up



4b. ...Consistent With The NAIRU Framework





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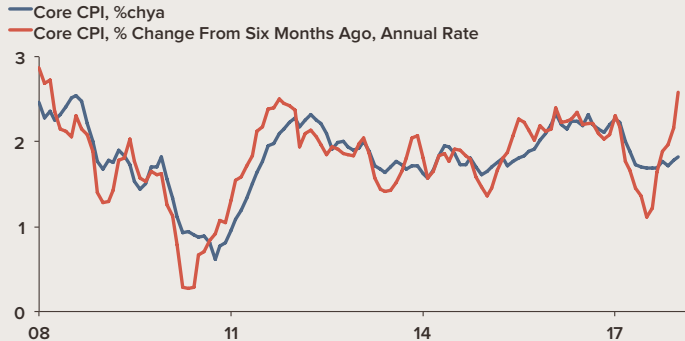
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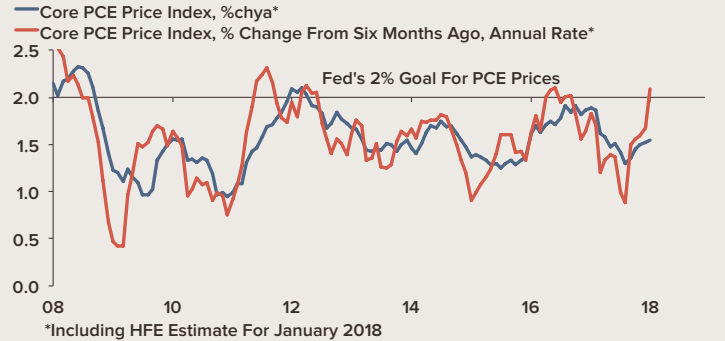
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5a. Core CPI Picking Up?



5b. ...Core PCE Measure As Well?





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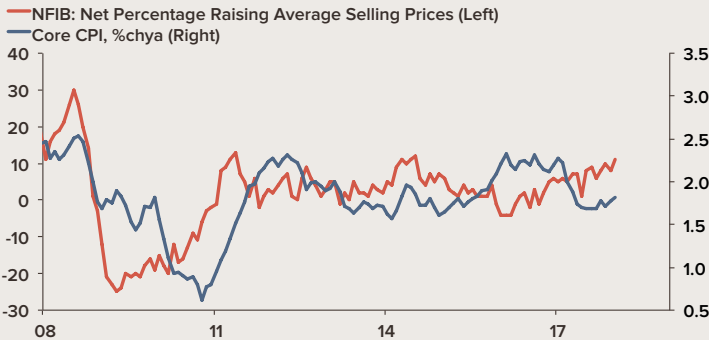
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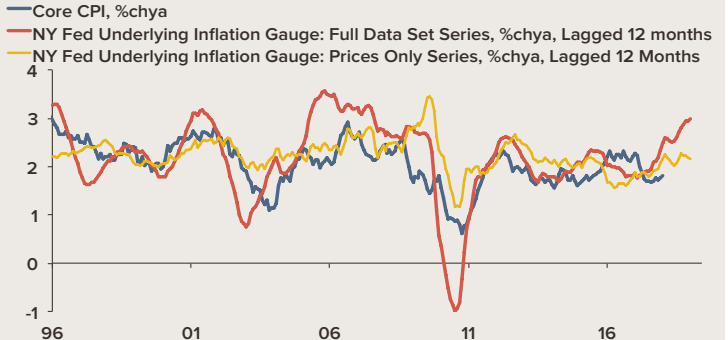
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6a. NFIB Inflation Series Starting To Edge Up



6b. Underlying Inflation Gauge Data Are Signaling A Pick-Up





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7. HFE's U.S. Economic & Financial Forecasts

%ch From Previous Period, Annual Rate, Except Where Noted; Forecasts In Bold

	2017				2018				Calendar Average			Q4/Q4		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2017	2018	2019	2017	2018	2019
Real GDP	1.2	3.1	3.2	2.6	2.5	3.7	3.0	2.8	2.3	2.9	2.6	2.5	3.0	2.3
CPI	3.0	0.1	2.1	3.3	3.5	1.8	2.1	2.5	2.1	2.5	2.6	2.1	2.5	2.8
Core CPI	2.2	0.8	1.8	2.2	2.8	2.0	2.4	2.5	1.8	2.2	2.6	1.7	2.4	2.8
Core PCE Prices	1.8	0.9	1.3	1.9	2.3	1.6	2.0	2.1	1.5	1.8	2.2	1.5	2.0	2.4
Unemployment (% level)	4.7	4.3	4.3	4.1	4.0	3.8	3.6	3.4	4.4	3.7	3.2	4.1	3.4	3.2
Federal Budget Balance (\$B, FY)									-666	-775	-1100			
% Of GDP									-3.5	-3.9	-5.2			
												End Of Year		
Fed Funds Target (% EOP)	0.88	1.13	1.13	1.38	1.63	1.88	2.13	2.38	1.0	1.8	2.8	1.38	2.38	3.38
10-Year Treasury (% EOP)	2.4	2.3	2.3	2.4	2.8	2.9	3.0	3.2	2.4	2.9	3.5	2.4	3.2	3.7
30-Year Treasury (% EOP)	3.0	2.8	2.9	2.7	3.1	3.2	3.3	3.5	2.9	3.2	3.7	2.7	3.5	3.9
S&P 500 (level, EOP)	2363	2423	2519	2674	2800	2750	2700	2650	2440	2728	2585	2674	2650	2520



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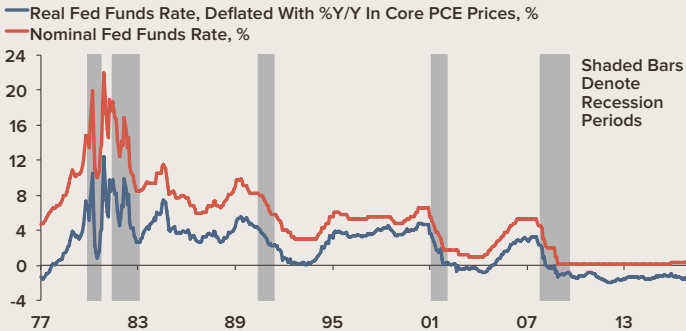
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8a. Fed Officials' Estimates For Appropriate Fed Funds Rate

% At Year-End, as of Dec 2017 FOMC Meeting

	2017	2018	2019	2020	Longer Run
Median Estimate	1.375	2.125	2.688	3.063	2.75
Mean Estimate	1.344	2.016	2.695	3.016	2.783

8c. Recent Recessions Have Been Preceded By Fed Tightening



8b. Fed Officials' Economic Projections

Median, %ch Q4/Q4, Unless Noted, as of Dec 2017 FOMC Meeting

	2017	2018	2019	2020	Longer Run
Real GDP	2.5	2.5	2.1	2.0	1.8
Unemployment Rate*	4.1	3.9	3.9	4.0	4.6
PCE Prices	1.7	1.9	2.0	2.0	2.0
Core PCE Prices	1.5	1.9	2.0	2.0	

*Q4 level

8d. Fed Tightening Cycles

Start	End	Nominal Funds Rate Target (%)		Real Funds Rate (%)*	
		Start	End	Start	End
Mar 83	Aug 84	8.50	11.50	2.6	7.5
Apr 87	Feb 89	6.00	9.75	3.2	5.1
Feb 94	Feb 95	3.00	6.00	0.8	3.7
Jun 99	May 00	4.75	6.50	3.5	4.8
Jun 04	Jun 06	1.00	5.25	-0.9	2.9
Dec 15		0.13		-1.2	

*Deflated with %chya in core PCE prices.



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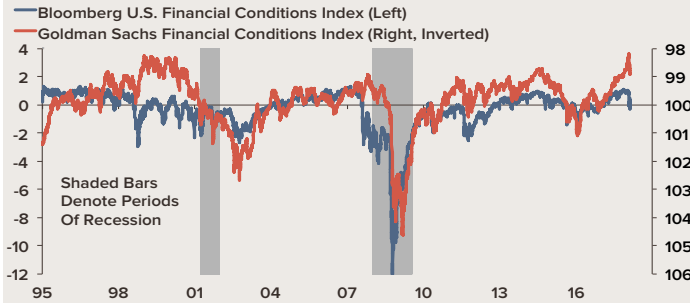
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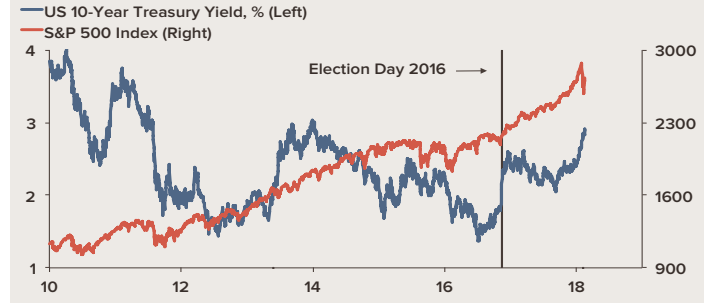
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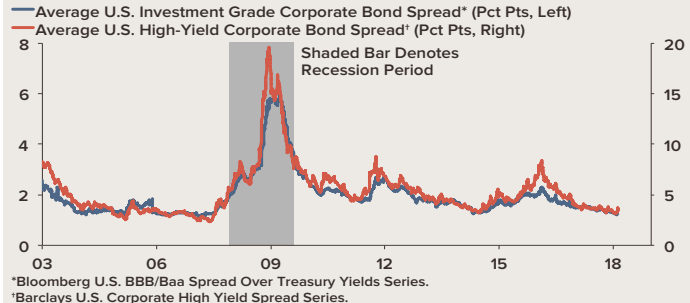
9a. Financial Conditions Remain Accommodative



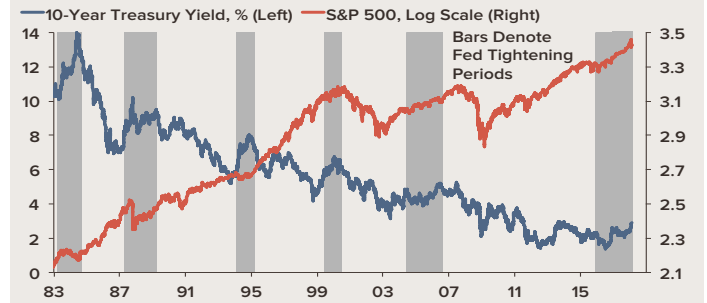
9b. Is The Correction In Equities Over Already?



9c. Credit Spreads Remain Low



9d. Markets Have Varied During Fed Tightening Cycles





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10a. Domestic Taxes Will Be Cut By Around 1.3% Of GDP In CY2018; The Cuts Took Effect Three Months Into The Fiscal Year

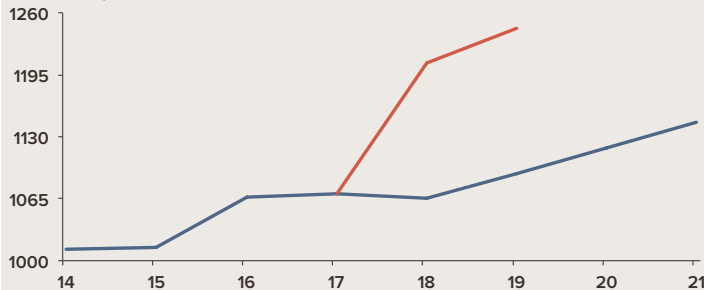
Estimated Revenue Impact Of Conference Version

	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY18-27
Total Tax Revenues (% of GDP)	-0.7	-1.4	-1.2	-1.0	-0.8	-0.6	-0.5	-0.4	-0.2	0.1	-0.6
Individual Taxes	-0.4	-0.9	-0.8	-0.7	-0.7	-0.6	-0.6	-0.5	-0.2	0.3	-0.5
Domestic Business Taxes	-0.6	-0.6	-0.5	-0.4	-0.2	-0.1	-0.1	-0.1	-0.1	-0.2	-0.3
Foreign Income Taxes	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1
Ex Foreign Taxes (% of GDP)	-1.0	-1.6	-1.3	-1.1	-0.9	-0.7	-0.6	-0.6	-0.3	0.1	-0.8

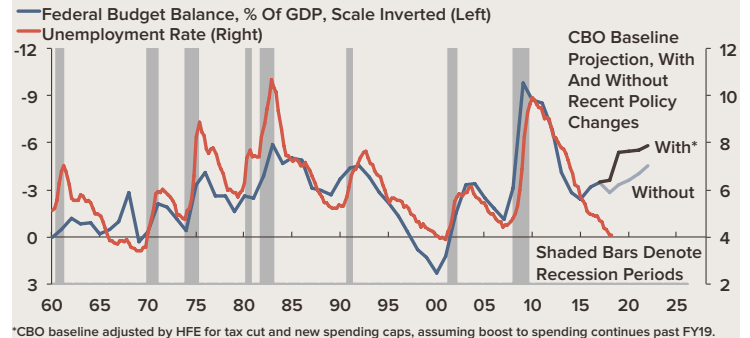
Sources: Joint Committee On Taxation (Revenues) and CBO (GDP)

10b. Caps Are Being Raised—Probably Not Just For Two Years

Federal Discretionary Spending Budget Authority Caps, Billions of Dollars, Fiscal Years
 — New Caps For FY18-19



10c. Rising Deficit Is Already High For Stage Of The Cycle





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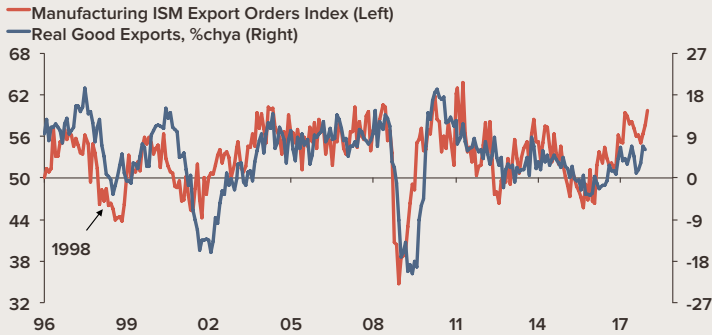
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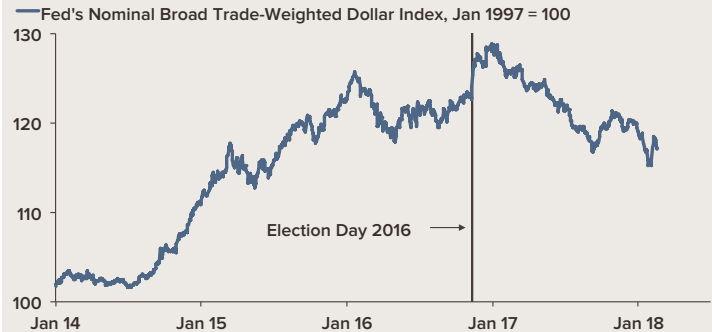
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11a. Exports Are Up, Albeit Not As Much As ISM Orders Index



11b. The Dollar Has Been Falling





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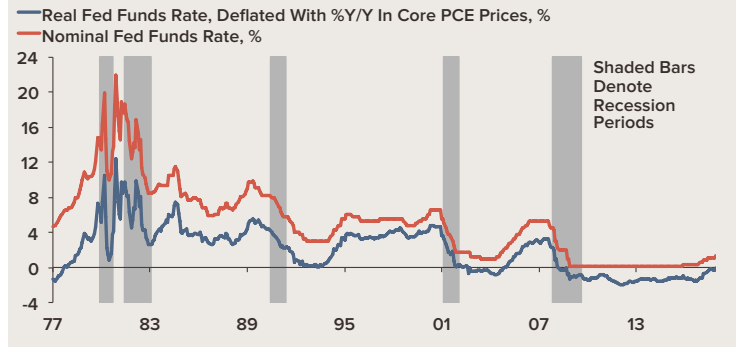
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12a. Long Expansion, But “Expansions Do Not Die Of Old Age”

Recessions	Duration (Months)	Expansions	Duration (Months)
1945	8	1945-48	37
1948-49	11	1949-53	45
1953-54	10	1954-57	39
1957-58	8	1958-60	24
1960-61	10	1961-69	106
1970	11	1970-73	36
1973-75	16	1975-80	58
1980	6	1980-81	12
1981-82	16	1982-90	92
1990-91	8	1991-2001	120
2001	8	2001-07	73
2008-09	18	2009-?	102 So Far
Averages:		Averages:	
1854-1919	21.6	1854-1919	26.6
1919-45	18.2	1919-45	35.0
1945-2009	11.1	1945-2009	58.4

12b. Recent Recessions Have Been Preceded By Fed Tightening





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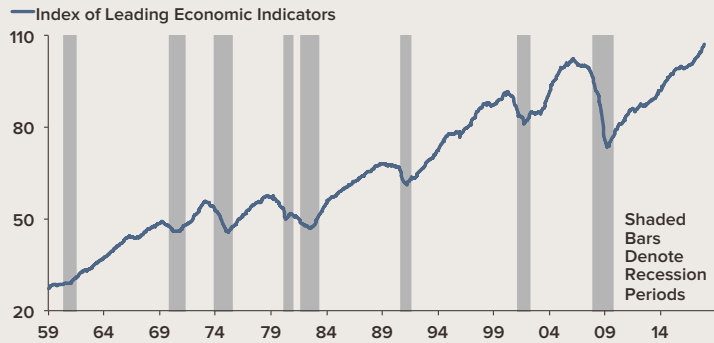
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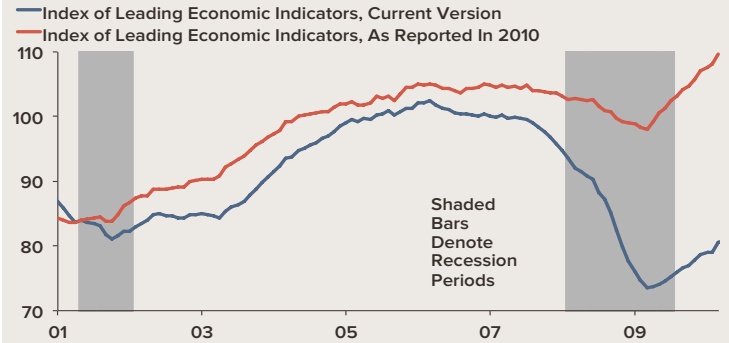
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13a. Leading Indicators Index Appears To Have A Perfect Record



13b. ...But History Has Been Refitted





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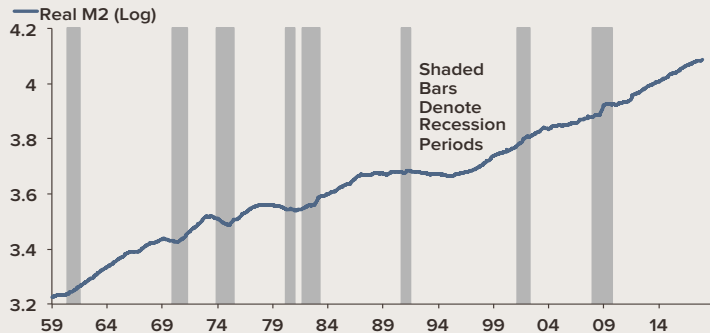
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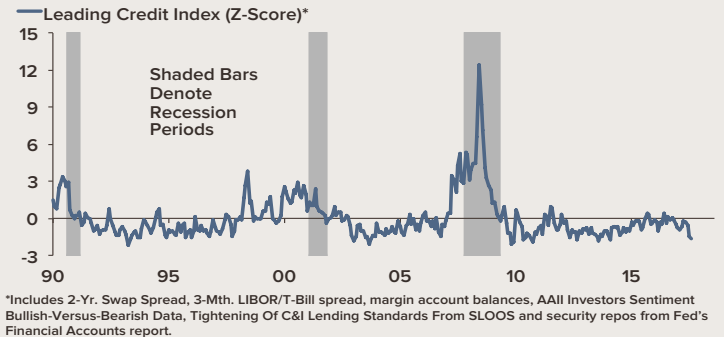
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14a. M2 Failed To Signal Last 2 Recessions And Was Dropped



14b. ...It Was Replaced By A New "Leading Credit Index"



*Includes 2-Yr. Swap Spread, 3-Mth. LIBOR/T-Bill spread, margin account balances, AAI Investors Sentiment Bullish-Versus-Bearish Data, Tightening Of C&I Lending Standards From SLOOS and security repos from Fed's Financial Accounts report.



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15. Peak In Leading Indicator Versus Business Cycle Peak (In Months)

Months Before (-) Or After (+) Business Cycle Peak

	Business Cycle Peak								Median
	Apr 60	Dec 69	Nov 73	Jan 80	Jul 81	Jul 90	Mar 01	Dec 07	
Overall Index	NA	-8	-9	-15	-8	-17	-11	-21	-11
Manufacturing Workweek	-11	-8	-8	-10	-2	-15	-11	-1	-8
Jobless Claims	-12	-7	-9	-21	-4	-18	-12	-22	-12
Manufacturing ISM New Orders	1	1	10	-7	0	-13	-7	-1	-1
Orders: Nondefense Capital Goods Ex Aircraft	-13	-3	8	-10	-3	-13	-9	-15	-9
Housing Permits	-17	-10	-11	-19	-10	-58	-27	-27	-19
S&P 500 Index	-9	-12	-10	NA	-8	-1	-7	-2	-8
Interest Rate Spread: 10s Vs. Fed Funds	NA	-20	-8	-15	-9	-17	-9	-17	-15
Orders: Consumer Goods & Materials	-13	-3	-8	-10	-9	-2	-14	-4	-8
Leading Credit Index							-12	-6	-9
Average Consumer Expectations				-14	-7	0	-2	-9	-7



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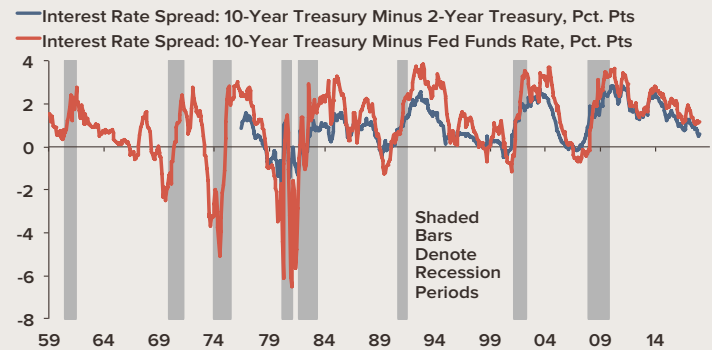
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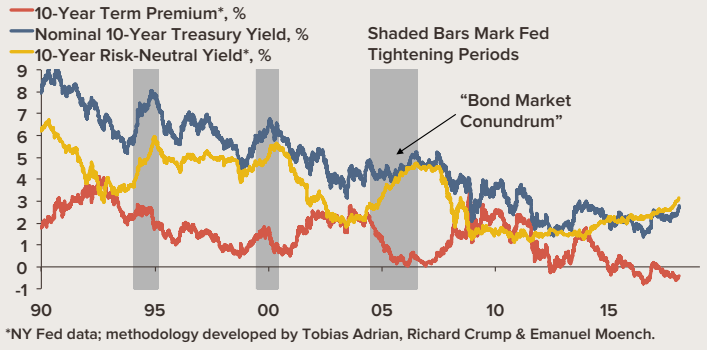
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16a. The Usually Reliable Yield Curve Remains Positively Sloped



16b. ...Even With Term Premiums Historically Low





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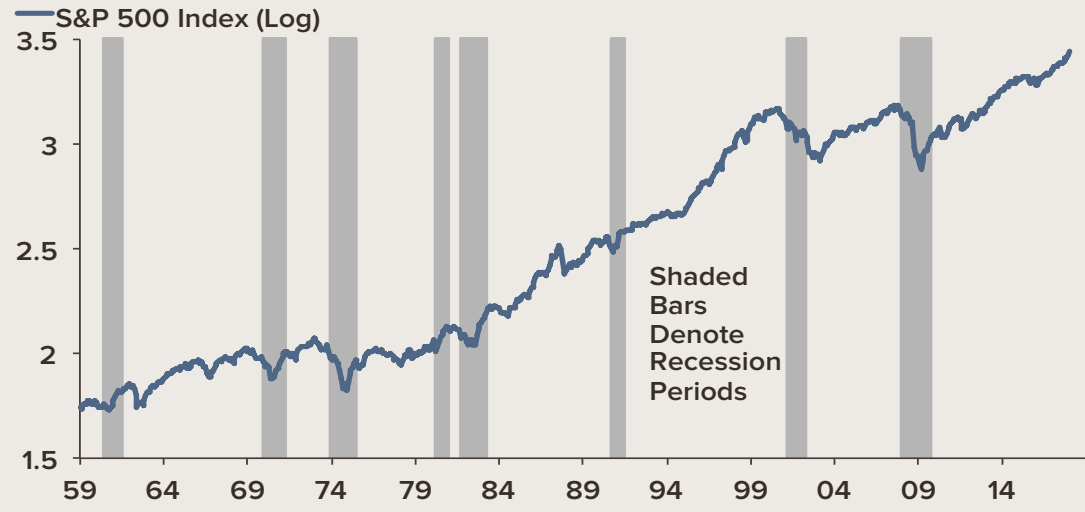
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17. Equities Usually Fall Before Recessions, But Many False Alarms





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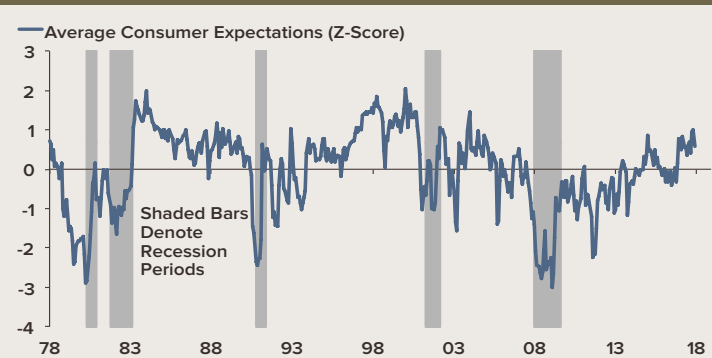
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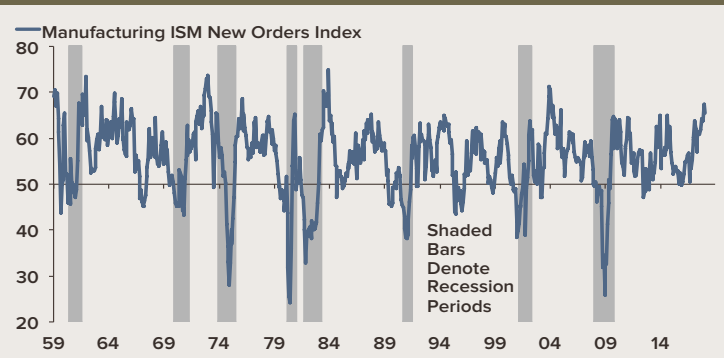
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18a. Confidence Surveys Send Many False Signals



18b. Manufacturing ISM Orders Index Has Lots Of Ups And Downs





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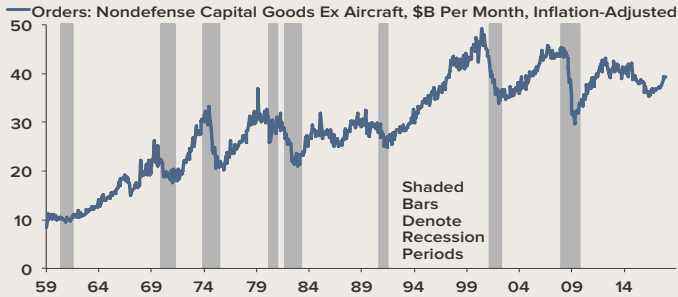
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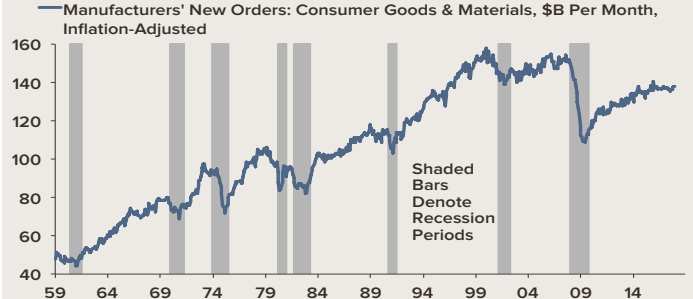
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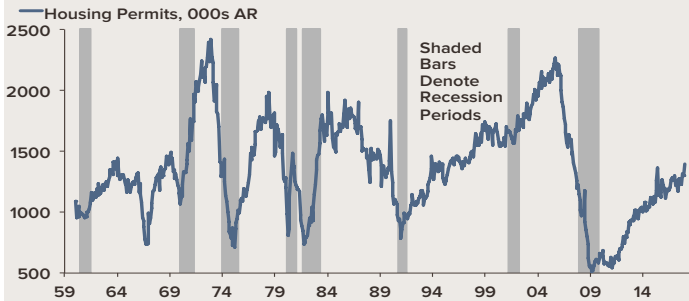
19a. Capex Orders Often Send False Signals



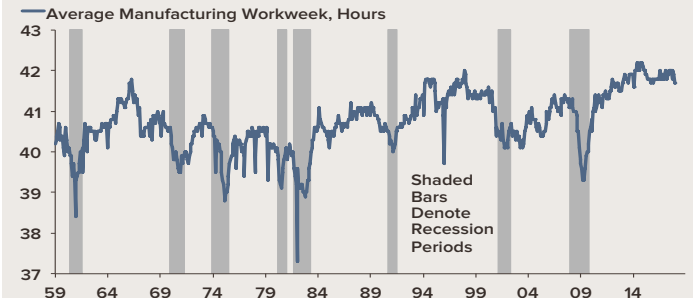
19b...Consumer Goods & Materials Orders Are Less Volatile



19c. Permits Often Peak Long Before The Overall Economy



19d. Manufacturing Workweek Is Quite Volatile





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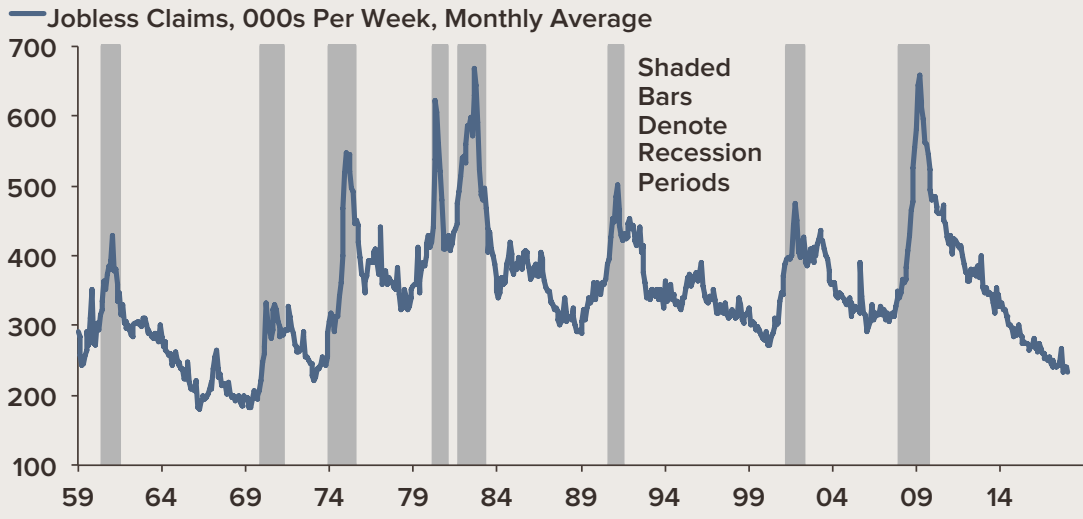
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20. A Key Momentum Indicator, But Not Always Very Leading





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