

**MUFG UNION BANK, N.A.**  
**ECONOMIC RESEARCH (NEW YORK)**  
**CHRISTOPHER S. RUPKEY, CFA**  
**MANAGING DIRECTOR**  
**CHIEF FINANCIAL ECONOMIST**  
**(212) 782-5702**  
**crupkey@us.mufg.jp**

18 MAY 2018

**MUFG Bank, Ltd.**  
 A member of MUFG, a global financial group

## FLAT TREND FOR BUSINESS INVESTMENT SPENDING ON STRUCTURES SINCE TRUMP ELECTION

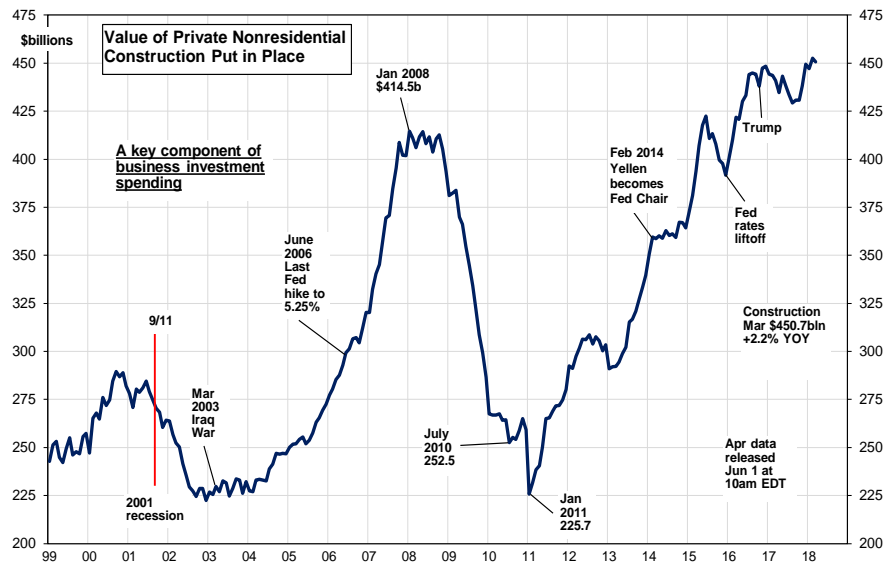
There is a cycle, and nine years of economic growth means businesses have already built the structures they need to provide their goods and services to the public. Office construction has been above \$60 billion at an annual rate since the middle of 2016 mostly, and this is slightly greater than the peaks for office construction before the 2001 and 2007-09 recessions. Property values for offices have risen eight consecutive years and were up 5.9% in 2017. The table here is for private construction as opposed to public construction, streets and highways, sewer and water, education and public housing and redevelopment that is most often thought of as infrastructure.



	Nonresidential Construction \$bln				Peak	Peak
	Mar 18	% Chg	2018 YTD	2017 YTD	Year 2008	% Chg
Total private	450.704	1.6	450.138	442.942	408.624	10.2
Lodging	30.143	8.7	29.906	27.519	35.364	-15.4
Office	64.088	-0.6	62.926	63.298	55.382	13.6
Commercial	87.027	87.4	87.492	80.742	82.827	5.6
Health Care	30.749	5.8	31.626	29.884	38.381	-17.6
Educational	21.853	2.5	21.721	21.187	18.626	16.6
Religious	2.977	-8.5	2.943	3.218	7.201	-59.1
Amusement	14.261	11.6	13.801	12.362	10.534	31.0
Transportation	18.634	36.3	18.355	13.462	9.898	85.4
Communication	23.989	3.4	23.967	23.180	26.384	-9.2
Power (oil & gas too)	90.001	-6.5	89.775	95.985	68.608	30.9
Manufacturing	66.376	-5.8	67.083	71.193	53.397	25.6

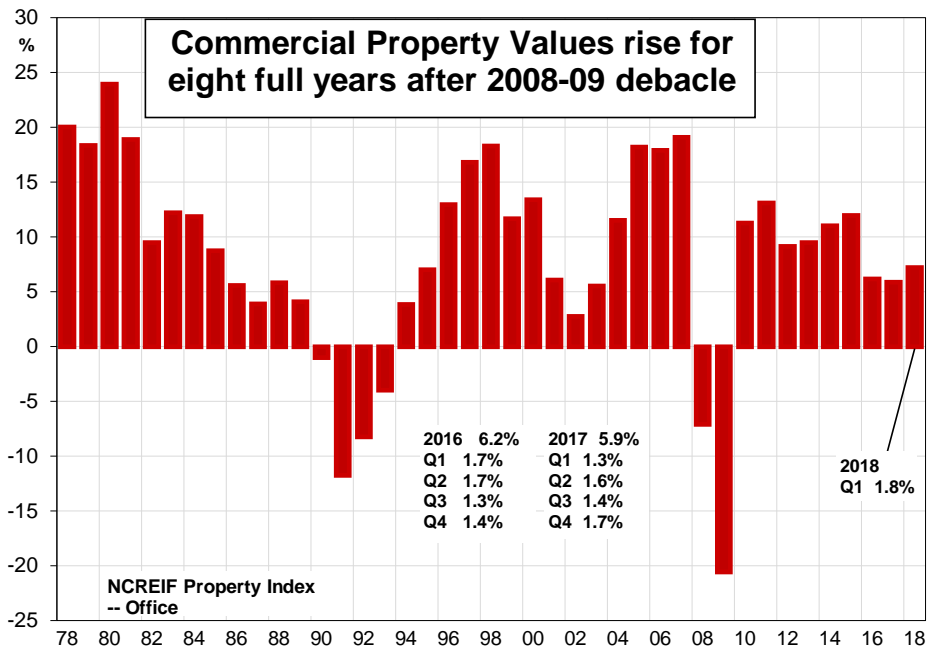
Total private nonresidential construction is rising 1.6% in the first three months of this year versus the first three months of 2017 and was \$450.7 billion at an annual rate in March 2018. Manufacturing fell 5.8% this year and is \$66.4 billion in March 2018 so there is no sign yet that factories are coming back from overseas.

Manufacturing plants saw a burst of construction back in 2015 due to chemical manufacturing and some foreign auto makers built factories as well, but there has been no significant increase in manufacturing construction since that time. Commercial construction is up 87.4% the first three months of 2018 from last year, and is \$87.0 in March. Warehouses, thinking of internet retailers, is a big part of the



upswing in commercial construction. But believe it or not more shopping centers are being built at the same time. In March 2018, warehouses \$33.9 billion of the \$87.0 billion of Commercial construction, and shopping centers are \$16.9 billion. Transportation is also adding to construction this year, mostly air travel.

It isn't clear whether business investment on structures can help get GDP growth to 3% on a sustained basis. In the table below, all categories of structures spending in GDP were adding a lot in Q1 2018 after the corporate tax cuts. The key driver is oil & gas drilling which drove structures spending 8.5% higher in 2017 despite big declines in manufacturing, and power and communication structures. We will



see if investment in new construction continues at the first quarter pace; it still seems construction is closer to the end of the cycle than the beginning.

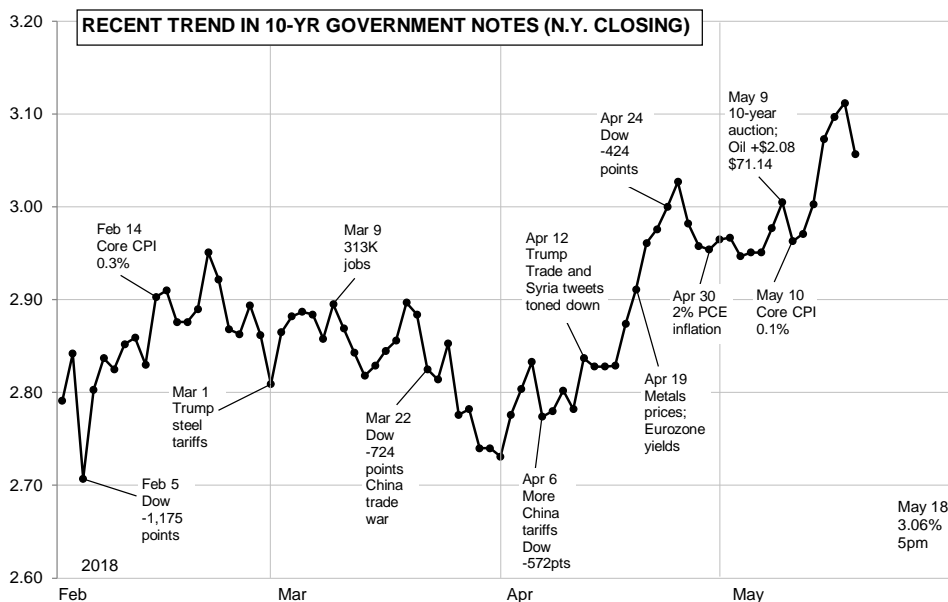
Structures (\$billion)	Q1 16	Q2 16	Q3 16	Q4 16	YOY%	Q1 17	Q2 17	Q3 17	Q4 17	YOY%	Q1 18	%
Structures (\$billion)	504.6	508.7	525.6	525.8	4.3	548.4	563.0	559.0	570.3	8.5	592.0	15.2
Commercial and health care	155.0	161.7	172.4	177.3	21.1	178.8	180.0	175.0	176.6	-0.4	180.8	9.5
Manufacturing	74.8	74.0	74.5	69.2	-8.1	69.9	67.1	62.0	62.7	-9.4	64.8	13.4
Power and communication	111.3	117.9	123.0	122.3	14.2	118.6	115.6	113.8	113.8	-7.0	115.7	6.7
Mining exploration, shafts, and wells	74.6	60.2	59.5	59.1	-34.3	83.2	102.4	108.0	113.3	91.7	122.8	33.5
Other structures *	89.0	95.0	96.2	97.8	14.1	97.9	97.8	100.2	104.0	6.3	107.8	14.6

\* Religious, educational, vocational, lodging, railroads, farm, and amusement and recreational structures, other Annual rate

## MARKETS OUTLOOK

	29-Mar 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020
30-Yr Treasury	2.97	3.10	3.10	3.20	3.35	3.45	3.60	3.55	3.75	3.75	3.90	4.00
10-Yr Note	2.74	2.80	2.90	3.00	3.20	3.30	3.50	3.50	3.70	3.70	3.90	4.00
5-Yr Note	2.56	2.60	2.70	2.80	3.05	3.15	3.40	3.45	3.65	3.65	3.90	4.00
2-Yr Note	2.27	2.40	2.55	2.80	3.00	3.15	3.40	3.40	3.60	3.80	4.00	4.20
3-month Libor	2.31	2.30	2.55	2.80	3.05	3.30	3.55	3.55	3.70	3.95	3.95	4.20
Fed Funds Rate	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.25	3.50	3.75	3.75	4.00
2s/10s spread	47	40	35	20	20	15	10	10	10	(10)	(10)	(20)

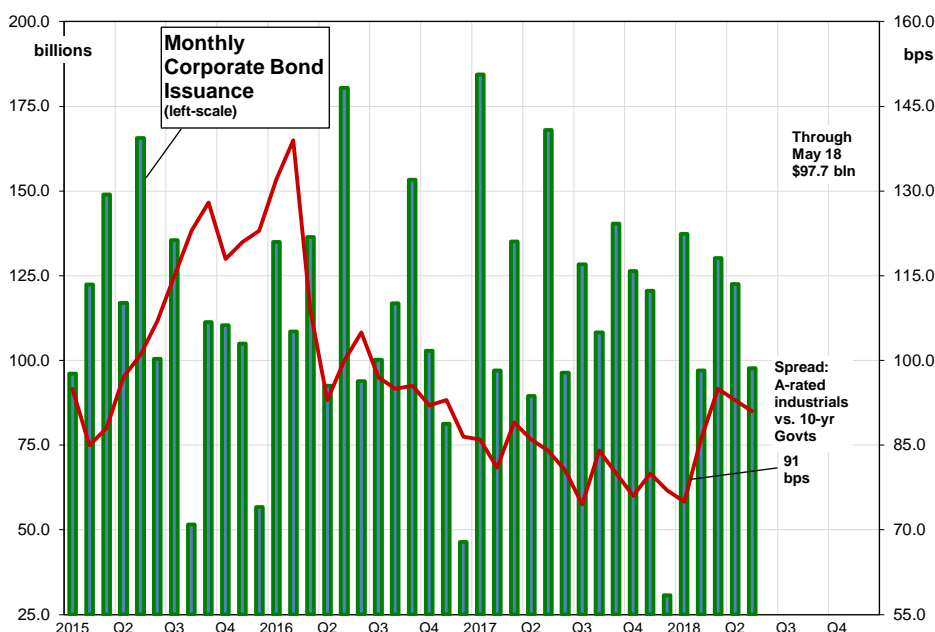
10-yr Treasury yields made new 2018 highs of 3.13% on Thursday, and closed the week at 3.06%. It wasn't completely clear why yields rose on the retail sales report on Tuesday, the revisions did not seem that strong, but the 3.05% yield high from early 2014 did break, and technically, that was that. It also wasn't completely explainable why 10-yr yields fell back abruptly from 3.13%



on Thursday to 3.06% at Friday's close, perhaps something to do with the sell-off of Italian debt given the political situation there. The Treasury sells 2-years, 5-years, and 7-years next week, and this will be another test of investor demand in this rising rate environment.

## CORP BONDS: HARLEY-DAVIDSON, SAN DIEGO G&E, CANADIAN PACIFIC

Corporate offerings were \$34.0 billion in the May 18 week versus \$47.0 billion in the May 11 week. On Thursday, Valero Energy priced a \$750 million 4.35% 10-yr (m-w +20bp) at 125 bps (Baa2/BBB). The independent petroleum refining and marketing company may use the proceeds to fund the redemption of \$750 million 9.375% notes due in 2019. Corporate bonds (10-yr Industrials rated A2) were 91 bps above 10-yr Treasuries this week versus 93 bps last Friday.



## FEDERAL RESERVE POLICY

The Fed meets June 12-13 to consider its monetary policy. The committee hasn't voted, but the market has, and for a long time now too; the market odds of a 25 bps rate hike to 2.0% are 98%. Incoming NY Fed President John Williams said recently he thought neutral rates were not far away at 2.5%. Almost done? He added that the Fed funds rate might go a little above 2.5% neutral because the committee sees core PCE inflation above target at 2.1% in 2019 and in 2020, and the economy is operating beyond full employment with an unemployment rate of 3.9%. On the other hand, he made a comment about the usefulness of the dots forecasts, given where we are in the cycle: "forward guidance, at some point, will be past its shelf life." Maybe that Fed funds rate forecast of 3.5% at the end of 2020 will indeed never see the light of day, if only because the Fed stops issuing rates forecasts.

Selected Fed assets and liabilities					Sep 10
Fed H.4.1 statistical release					2008**
billions, Wednesday data	16-May	9-May	2-May	25-Apr	pre-LEH
<b>Factors adding reserves</b>					
U.S. Treasury securities	2386.966	2395.528	2395.460	2413.218	479.782
Federal agency debt securities	4.391	4.391	4.391	4.391	0.000
Mortgage-backed securities	1745.514	1744.972	1744.972	1744.967	0.000
Primary credit (Discount Window)	0.009	0.000	0.160	0.034	23.455
Term auction credit (TAF auctions)	0.000	0.000	0.000	0.000	150.000
Asset-backed TALF	0.000	0.000	0.000	0.000	
Maiden Lane (Bear)	1.712	1.715	1.714	1.714	29.287
Maiden Lane II (AIG)	0.000	0.000	0.000	0.000	0.000
Maiden Lane III (AIG)	0.000	0.000	0.000	0.000	0.000
Central bank liquidity swaps	0.080	0.080	0.117	0.082	62.000
Federal Reserve Assets	4385.2	4405.8	4403.6	4420.5	961.7
3-month Libor %	2.33	2.36	2.36	2.37	2.82
<b>Factors draining reserves</b>					
Currency in circulation	1653.732	1649.163	1646.124	1643.335	834.477
Term Deposit Facility	0.000	0.000	0.000	0.000	0.000
Reverse repurchases w/others	2.545	2.720	6.520	3.570	0.000
<b>Reserve Balances (Net Liquidity)</b>	<b>2022.661</b>	<b>2046.775</b>	<b>1991.823</b>	<b>2010.948</b>	<b>24.964</b>
Treasuries within 15 days	28.479	26.228	26.228	34.346	14.955
Treasuries 16 to 90 days	61.882	90.360	90.359	86.284	31.549
Treasuries 91 days to 1 year	329.356	290.879	290.878	289.432	69.272
Treasuries over 1-yr to 5 years	1052.008	1068.428	1068.418	1079.938	170.807
Treasuries over 5-yrs to 10 years	290.054	304.602	304.579	308.277	91.863
Treasuries over 10-years	625.189	615.031	614.998	614.941	101.337

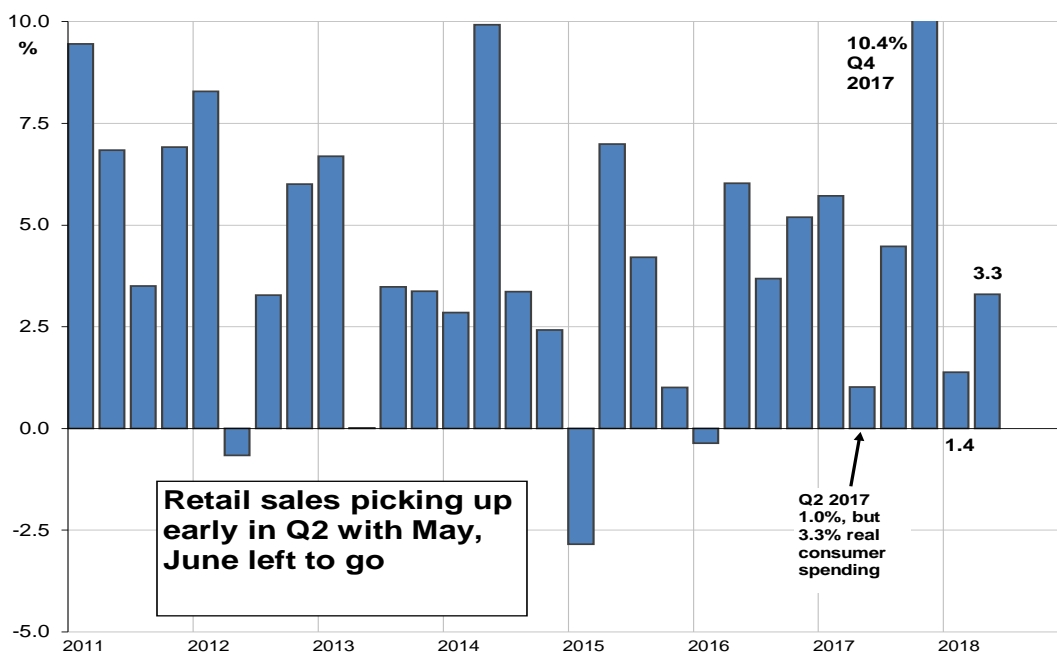
\*\*September 10, 2008 is pre-Lehman bankruptcy of 9-15-08

## OTHER ECONOMIC NEWS THIS WEEK

### Consumers not jumping for joy exactly, but at least they are jumping (Tuesday)

Breaking economy news. Retail sales for April. Consumer spending to you. They survey over 4,000 shops and restaurants and this is what they come up with. It doesn't look like April retail sales beat the guestimates of 0.3%, but there were upward revisions so the picture looks healthier than we had thought. Most store sales categories were higher, and those with declines, mostly saw stronger gains the month before. Electronics, health and personal care, sporting goods, bars and restaurants were lower in April.

Retail sales surged 10.4% in the fourth quarter last year, and now the first quarter is revised to a 1.4% gain from 0.8% in last month's report. Retail sales for April pushes the second quarter at a respectable 3.3% pace even if sales are flat in May and June. That's all that really happened.



The bond market liked it, or thought it was stronger growth, with 10-yr yields rising from 3.02% to 3.05%, a new yield high for 2018. Yields moved up last night at midnight for some reason from 3.0% to 3.02% so the higher yield trend has still got legs. It's a bear market for bonds.

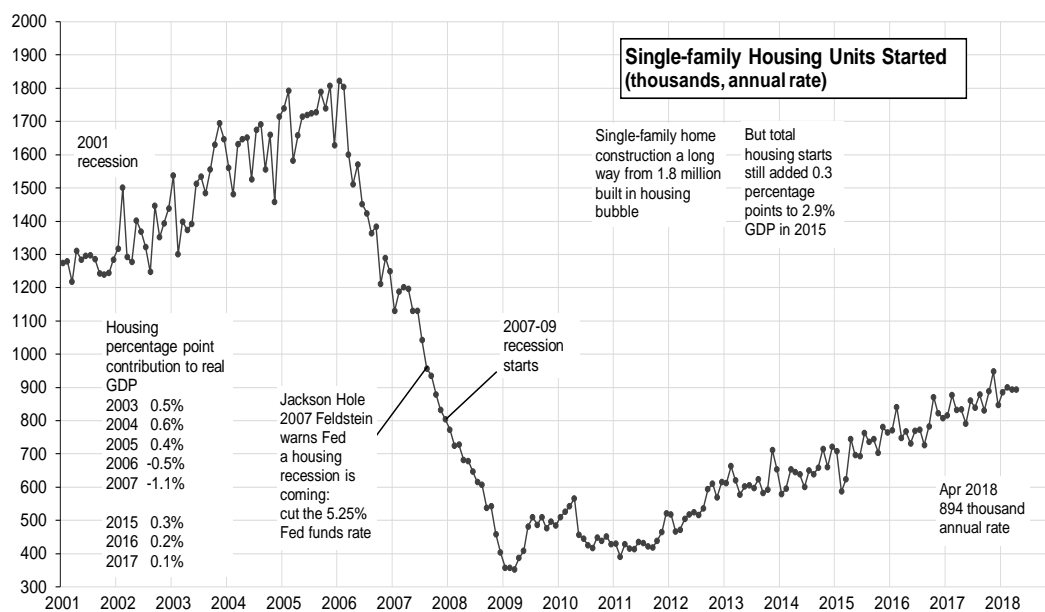
Net, net, consumers are doing their part to power the economy forward by spending their tax cuts at shops and malls that helps make the economy grow. They aren't shooting the lights out and we cannot forecast sustainable 3% GDP growth that the Trump administration is looking for yet, but at least the picture of overall consumer spending looks better after the first quarter bumpiness in results. President Obama's payroll tax holiday in 2011 and 2012 did not do much for consumer spending, but the massive tax cuts under President Trump and the Republican congress is at least moving the dial on consumer spending as it looks like consumers are spending it more than saving it.

The steady spending results today on the part of consumers will keep the Fed on course to raise interest rates at a gradual pace with the next rate hike installment likely to come at the June meeting. Consumer confidence remains high and there is no pulling back on spending from the tough talk on trade or the stock market losses earlier this year. The economic outlook is a little brighter today as consumers look ahead to the future with spending that keeps this expansion on course to be one of the longest periods of growth of all time. Stay tuned. Story developing.

## Starts down a little, permits holding firm (Wednesday)

Breaking economy news. Housing starts for April drop 3.7% to 1.287 million from an upward revised 1.336 million in March. We sure hope Millennials don't want to buy a single-family home because these are being built at a lowly 894 thousand annual rate in April which is a far cry from the 1.808 million built in the housing bubble zenith in 2005 before the crash.

At least housing permits are still in place to forecast that actual housing construction started will come back above 1.3 million. While it is true that all of the decline in April starts to 1.287 million was multi-family construction of 5 or more units, the trend of single family construction



was less uniform across the nation with a huge 17.2% jump in single family starts down in the biggest market in the South, steadying the declines everywhere else: Northeast -9.7%, Midwest -29.8%, and West -10.1%.



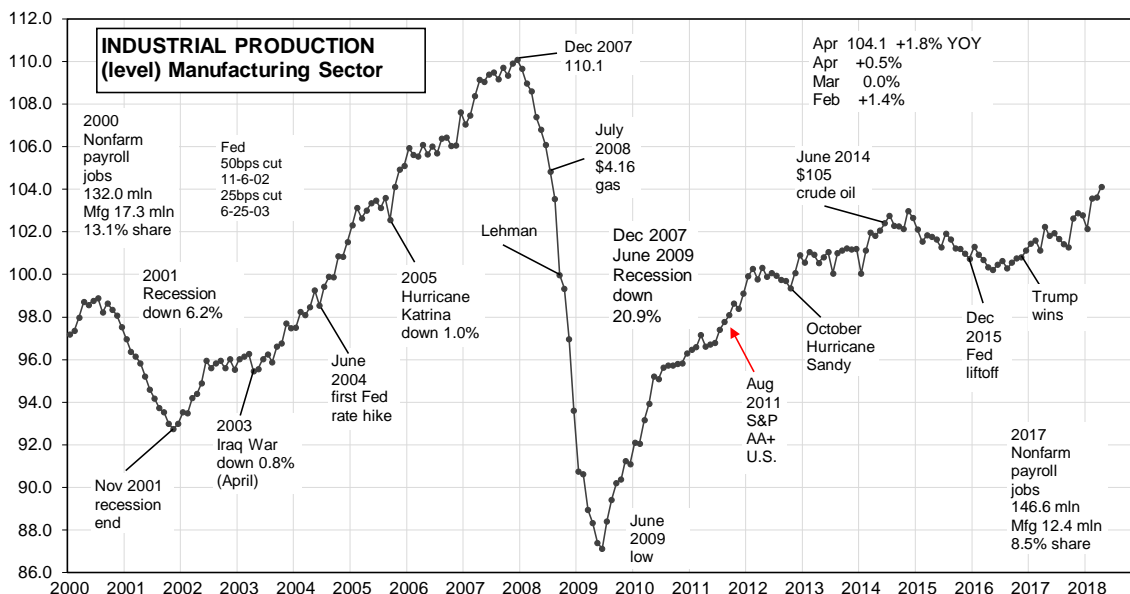
The Trump economics team sees greater investment spending as one of the goals of those massive tax cuts, but it looks like residential housing construction is not going to be leading the way when it comes to new investment dollars that help make the economy grow. 3% sustainable GDP growth, all four quarters each year, looks a little further away today if home builders are not going to build it.

Net, net, the recovery in residential housing construction remains an incomplete story with danger signs on the horizon from higher interest rates. Home buyers have more cash in their pockets from the tax cuts this year, but it will be all for naught if the costs of purchasing a new home continues higher. It's a double-whammy on rates both the short and long end of the curve. The Fed is pushing short term rates to 3% at the end of next year they are saying which will put the kibosh on some of those teaser floating rates with ultra-low yields. At the same time 10-yr yields are above 3% which means 30-yr mortgage money is going to 4.75% which is a long, long way from 3.5% mortgage money in 2016 before President Trump won the White House. If making a house less affordable to buy is making America great again, home buyers want none of that America first economics.

## Factory output 0.7% two months in a row... go, go, go (Wednesday)

Factory production is firing on all cylinders and is one of the bright spots in the economic outlook this year. Industrial output rising 3.5% the last year is doing its part to put GDP on the sustainable path for lasting 3% growth. It's true that Mining production is behind the push with a 10.6% rise the last year, thanks to the recovery in oil prices. But manufacturing production is still holding its own with a respectable increase of 1.8% the last year.

Industrial Production	
April 2018	
% YOY	Weight
<b>3.5</b> <u>Total Index</u>	<b>100.0</b>
1.8 Manufacturing	75.5
10.6 Mining	14.1
6.0 Utilities	10.4
Manufacturing payroll jobs	
12.7 million +245K YOY	
10.0% of Private Payroll Jobs	



Stay tuned. Story developing. There are warning signs out there on the horizon as the dollar's rally could throw a monkey wrench into the Trump administration plans to build it in America. You can't build it in America unless you can ship it out in exports to America's trading partners, and the dollar's rally is making American products more expensive for its overseas customers. It's full speed ahead today for production but we are worried about those clouds out there on the horizon.

---

## Analyst Certification

The views expressed in this report accurately reflect the personal views of **Christopher S. Rupkey**, the primary analyst responsible for this report, about the subject securities or issuers referred to herein, and no part of such analyst's compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed herein.

The information herein is provided for information purposes only, and is not to be used or considered as an offer or the solicitation of an offer to sell or to buy or subscribe for securities or other financial instruments. Neither this nor any other communication prepared by MUFG Bank, Ltd. (collectively with its various offices and affiliates, "MUFG Bank") or should be construed as investment advice, a recommendation to enter into a particular transaction or pursue a particular strategy, or any statement as to the likelihood that a particular transaction or strategy will be effective in light of your business objectives or operations. Before entering into any particular transaction, you are advised to obtain such independent financial, legal, accounting and other advice as may be appropriate under the circumstances. In any event, any decision to enter into a transaction will be yours alone, not based on information prepared or provided by MUFG Bank. MUFG Bank hereby disclaims any responsibility to you concerning the characterization or identification of terms, conditions, and legal or accounting or other issues or risks that may arise in connection with any particular transaction or business strategy. While MUFG Bank believes that any relevant factual statements herein and any assumptions on which information herein are based, are in each case accurate, MUFG Bank makes no representation or warranty regarding such accuracy and shall not be responsible for any inaccuracy in such statements or assumptions. Note that MUFG Bank may have issued, and may in the future issue, other reports that are inconsistent with or that reach conclusions different from the information set forth herein. Such other reports, if any, reflect the different assumptions, views and/or analytical methods of the analysts who prepared them, and MUFG Bank is under no obligation to ensure that such other reports are brought to your attention.

Copyright 2018 MUFG All Rights Reserved

The articles and opinions in this publication are for general information only, are subject to change, and are not intended to provide specific investment, legal, tax or other advice or recommendations. The information contained herein reflects the thoughts and opinions of the noted authors only, and such information does not necessarily reflect the thoughts and opinions of MUFG or its management team. We are not offering or soliciting any transaction based on this information. We suggest that you consult your attorney, accountant or tax or financial advisor with regard to your situation. Although information has been obtained from sources we believe to be reliable, neither the authors nor MUFG vouch for its accuracy, and such information may be incomplete or condensed. Neither the authors nor MUFG shall be liable for any typographical errors or incorrect data obtained from reliable sources or factual information.

### About MUFG Americas Holdings Corporation

Headquartered in New York, MUFG Americas Holdings Corporation is a financial holding company and bank holding company with total assets of \$148.1 billion at December 31, 2016. Its main subsidiaries are MUFG Union Bank, N.A. and MUFG Securities Americas Inc. MUFG Union Bank, N.A. provides an array of financial services to individuals, small businesses, middle-market companies, and major corporations. As of December 31, 2016, MUFG Union Bank, N.A. operated 365 branches, comprised primarily of retail banking branches in the West Coast states, along with commercial branches in Texas, Illinois, New York and Georgia, as well as two international offices. MUFG Securities Americas Inc. is a registered securities broker-dealer which engages in capital markets origination transactions, private placements, collateralized financings, securities borrowing and lending transactions, and domestic and foreign debt and equities securities transactions. MUFG Americas Holdings Corporation is owned by MUFG Bank, Ltd. and Mitsubishi UFJ Financial Group, Inc., one of the world's leading financial groups. MUFG Bank, Ltd. is a wholly owned subsidiary of Mitsubishi UFJ Financial Group, Inc. Visit <http://www.unionbank.com/> or <http://www.mufgamericas.com/> for more information.

### About MUFG (Mitsubishi UFJ Financial Group, Inc.)

MUFG (Mitsubishi UFJ Financial Group, Inc.) is one of the world's leading financial groups, with total assets of approximately \$2.6 trillion (USD) as of December 31, 2016. Headquartered in Tokyo and with approximately 350 years of history, MUFG is a global network with more than 2,200 offices in nearly 50 countries. The Group has more than 140,000 employees and about 300 entities, offering services including commercial banking, trust banking, securities, credit cards, consumer finance, asset management, and leasing. The Group's operating companies include MUFG Bank, Mitsubishi UFJ Trust and Banking Corporation (Japan's leading trust bank), and Mitsubishi UFJ Securities Holdings Co., Ltd., one of Japan's largest securities firms.

Through close partnerships among our operating companies, the Group aims to "be the world's most trusted financial group," flexibly responding to all of the financial needs of our customers, serving society, and fostering shared and sustainable growth for a better world. MUFG's shares trade on the Tokyo, Nagoya, and New York (MUFG) stock exchanges. Visit [www.mufg.jp/english/index.html](http://www.mufg.jp/english/index.html).