

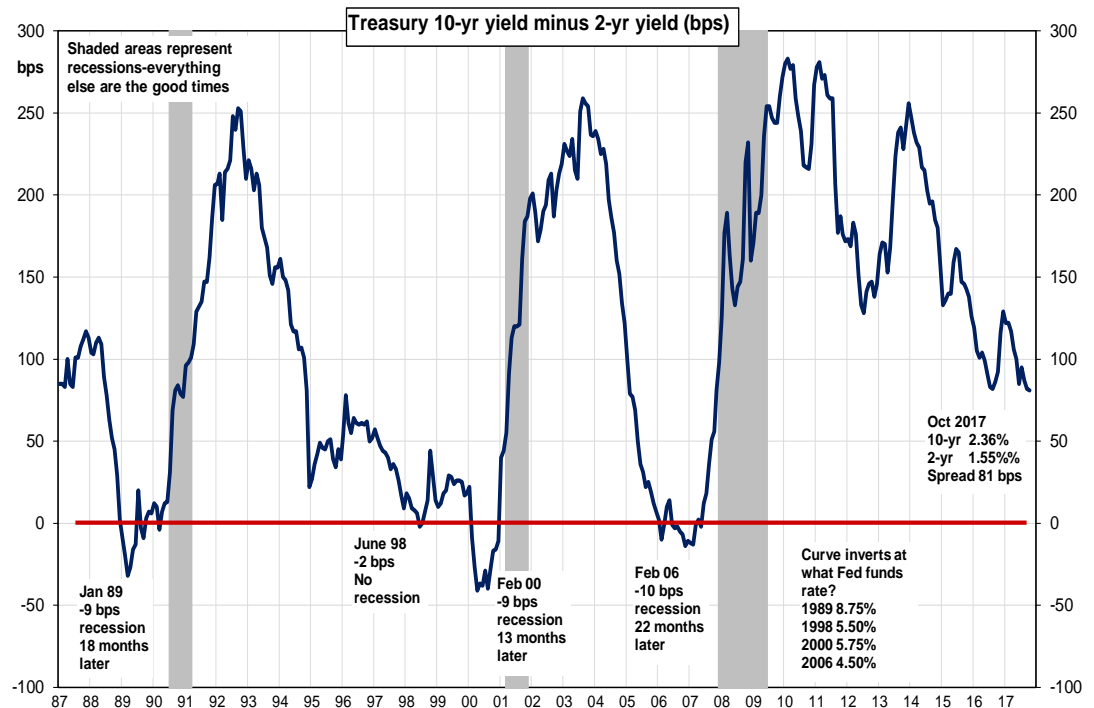
CHRISTOPHER S. RUPKEY, CFA
 MANAGING DIRECTOR
 CHIEF FINANCIAL ECONOMIST
 ECONOMIC RESEARCH OFFICE (NEW YORK)
 (212) 782-5702
 crupkey@us.mufg.jp

10 NOVEMBER 2017

MUFG | 1251 Avenue of the Americas
 New York, New York 10020
 A member of MUFG, a global financial group

THE YIELD CURVE IS DEAD

We mean the 2-yr to 10-yr yield curve for U.S. Treasuries; it's dead as a leading indicator of recession. In other economic cycles, the curve flattened near the end of a long series of Fed rate hikes, the flattening signaled rates were high enough, the economy was buckling and credit was less available, credit is the life blood of the economy. No credit



and the economy falls into recession. That's how it happened in the days before the Fed came to dominate the interest rate markets. It took them over twenty years starting with February 1994 when

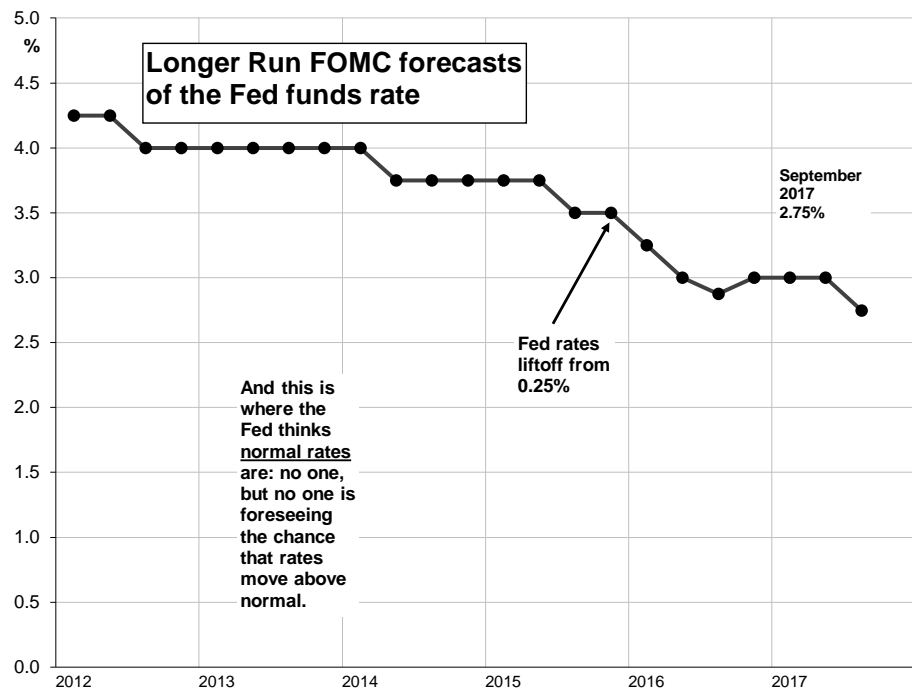
The 2-yr - 10-yr Treasury yield curve is dead, but we hear the 3-month Libor - Corporate bond yield curve is very much alive.

they first even admitted to having complete control over their own Fed funds rate. We've never come out of a recession before knowing where Fed officials think rates are going over the next few years. We've never had a time where QE purchases flattened the curve, and the low 1.25% Fed funds rate has kept 10-yr yields too low coming out of a recession. The Fed has not allowed rates to normalize, that is what is keeping 10-yr yields low and artificially flattening the yield curve too early in the cycle. The +74 bps 2s10s yield curve on Friday, down from +125 bps at the end of 2016, does not signal a recession is right around the corner. The yield curve has lost its meaning. It's reason for being.

One of many market signals of recession are the yield spread between 2-yr and 10-yr Treasuries. When this curve inverts, where 2-yr yields are higher than 10-yr yields, credit conditions are tight enough to cause a recession. That's the theory although the history looking back to the 80s is nothing to hang your hat on, bet on it stuff. In fact, the curve was fairly flat under 100 bps for much of the late 90s and it all was a bunch of mush that indicated nothing.

The 2s10s curve inverted in February 2000 when the Fed funds rate was moving up through 5.75% on its way to the 6.5% peak and the recession began 13 months later. An even greater lead time took place before the not so Great Recession. The 2s10s curve inverted in February 2006 when the Fed funds rate was moving up through 4.50% on its way to the 5.25% peak and the recession began, wait for it, 22 months later.

We don't think the current narrowing of the 2-yr to 10-yr Treasury spread means much. 10-yr Treasury yields are low, flattening the curve, because the Fed won't lift the Fed funds rate claiming the economy isn't strong enough or some such fake line of reasoning. We expect 10-yr yields will rise more quickly once the market gets a few more Fed rate hikes under its belt, and this will keep the curve from inverting for some time.

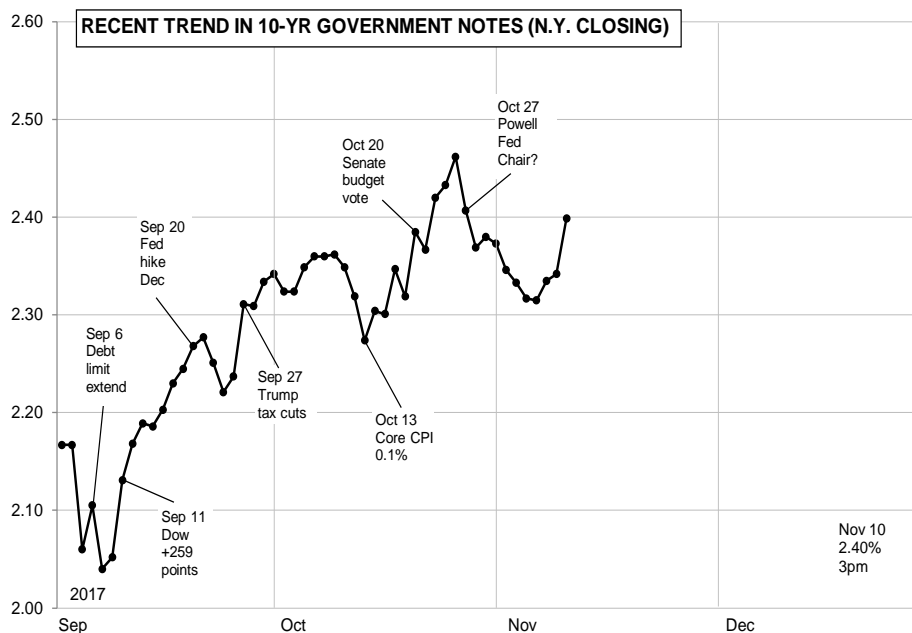


And we don't like answering questionnaires about where do we think the terminal rate of Fed funds is this cycle, so don't ask. The peak was 5.25% back in 2006 before the Great Recession. The Fed funds rate is likely going much higher before possibly slowing down the economy. Much higher than the Fed's current expectations of 2.75% for the longer run Fed funds rate that is thought to have a neutral effect on the economy. Stay tuned. Story developing.

MARKETS OUTLOOK

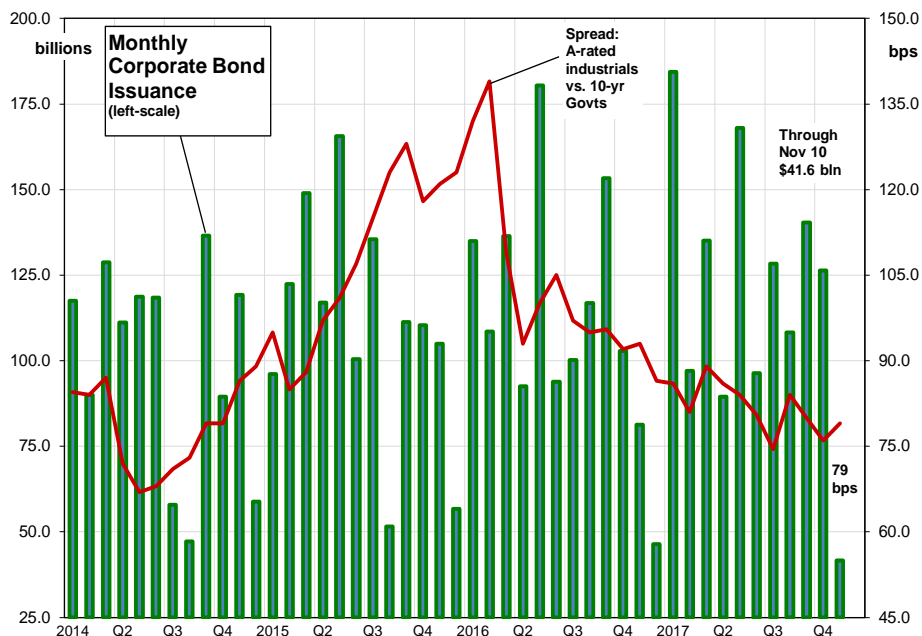
	29-Sep 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q1 2020
30-Yr Treasury	2.86	3.10	3.20	3.40	3.60	3.70	3.80	4.00	4.10	4.10	4.10	4.20
10-Yr Note	2.33	2.50	2.70	3.00	3.20	3.40	3.50	3.70	3.80	3.90	3.90	4.00
5-Yr Note	1.94	2.10	2.40	2.70	3.00	3.20	3.30	3.50	3.60	3.70	3.70	3.90
2-Yr Note	1.48	1.60	1.85	2.10	2.40	2.60	2.85	3.10	3.35	3.35	3.60	3.85
3-month Libor	1.33	1.65	1.90	2.20	2.45	2.70	2.95	3.20	3.45	3.35	3.70	3.95
Fed Funds Rate	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.25	3.50	3.75
2s/10s spread	85	90	85	90	80	80	65	60	45	55	30	15

10-year Treasury yields were trading higher at 2.40% on Friday afternoon versus 2.33% at last week's close. There were 3-yr, 10-yr, 30-year auctions this week, but Friday was the day that saw a jump in Treasury yields in a move that is difficult to explain by "news." The bump up occurred right at the Europe opening Friday morning with 10-yr Gilts trading down sharply at 3am New York time. Bond rally seems to have stalled at the 2.30% yield line for now.



CORPORATE BONDS: ORACLE, APPLE, J&J, MOSAIC CO., AEP, SUNCOR

Corporate offerings were \$33.2 billion in the November 10 week versus \$25.5 billion in the November 3 week. On Tuesday, Kellogg Co. priced \$600 million 3.40% 10-yrs (m-w +20bp) at 112.5 bps (Baa2/BBB). The cereal, snacks, convenience foods company will use the proceeds to repay commercial paper taken on during a recent merger. Corporate bonds (10-yr Industrials rated A2) were 79 bps above 10-yr Treasuries this week versus 77 bps last Friday.



FEDERAL RESERVE POLICY

The Fed meets December 12-13 to consider its monetary policy. We are still trying to get used to news that the populist, drain-the-swamp President has reappointed Fed governor Powell, or rather elevated him to the top Chair on the Captain's Deck at the Federal Reserve. We will see where this goes in terms of the existing FOMC forecasts for 3 rate hikes in 2018 and call-it 2-1/2 rate hikes in 2019. Still too slow. The economy is normal so interest rates should be normal too. The uncertainty will be who exactly will be the four other Fed governors that Trump will get to appoint after Yellen resigns on February 3 at the end of her term. The new members in the building could change views and sway votes down there in Washington D.C.

Selected Fed assets and liabilities					Sep 10
Fed H.4.1 statistical release					2008**
billions, Wednesday data	8-Nov	1-Nov	25-Oct	18-Oct	pre-LEH
Factors adding reserves					
U.S. Treasury securities	2459.985	2459.827	2465.727	2465.641	479.782
Federal agency debt securities	6.757	6.757	6.757	6.757	0.000
Mortgage-backed securities	1770.630	1770.630	1770.563	1777.945	0.000
Primary credit (Discount Window)	0.004	0.001	0.015	0.009	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	1.712	1.711	1.705	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
<u>Central bank liquidity swaps</u>	0.037	0.040	0.037	0.035	62.000
Federal Reserve Assets	4505.4	4502.8	4508.2	4516.6	961.7
3-month Libor %	1.41	1.38	1.37	1.36	2.82
Factors draining reserves					
Currency in circulation	1591.737	1589.253	1584.028	1585.186	834.477
Term Deposit Facility	0.000	0.000	0.000	0.000	0.000
Reverse repurchases w/others	74.546	87.165	112.057	121.457	0.000
Reserve Balances (Net Liquidity)	2317.610	2281.472	2241.618	2255.104	24.964
Treasuries within 15 days	11.043	11.043	8.701	8.701	14.955
Treasuries 16 to 90 days	56.307	28.456	39.496	39.494	31.549
Treasuries 91 days to 1 year	317.797	345.643	321.809	321.808	69.272
Treasuries over 1-yr to 5 years	1111.537	1111.513	1133.435	1133.422	170.807
Treasuries over 5-yrs to 10 years	329.680	329.644	328.941	328.922	91.863
Treasuries over 10-years	633.622	633.529	633.345	633.294	101.337

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

Don't blink or you'll miss it: the great balance sheet unwind has begun. The Fed's Treasury security holdings dropped \$5.7 billion from \$2.465 trillion on October 25.

Market-based odds of a December 13 rate hike to 1.5% are steady at a green-light 90% chance. Maybe hold that thought on three more rate hikes in 2018 though as Philadelphia Fed President Harker said this week while he has penciled in three rate hikes next year, "some of the underlying numbers like wage growth, job openings and hires, if we saw that wasn't translating to higher prices-our dual mandate is very clear, it's stable prices." Guess that is a warning shot across the bow about how important it is for inflation to rise more quickly. (Wonder what Volcker must think, the Fed's push for more inflation?) Core PCE inflation is 1.3% currently and the Fed forecast for Q4 2018 is 1.9%, so perhaps the final of the three rate hikes penciled in for 2018 is more dependent on 1.9% core inflation than we thought. Core PCE inflation should move up three-tenths at least after the negative-inflation cell phone data plan effect washes out of the year-on-year data in March 2018.

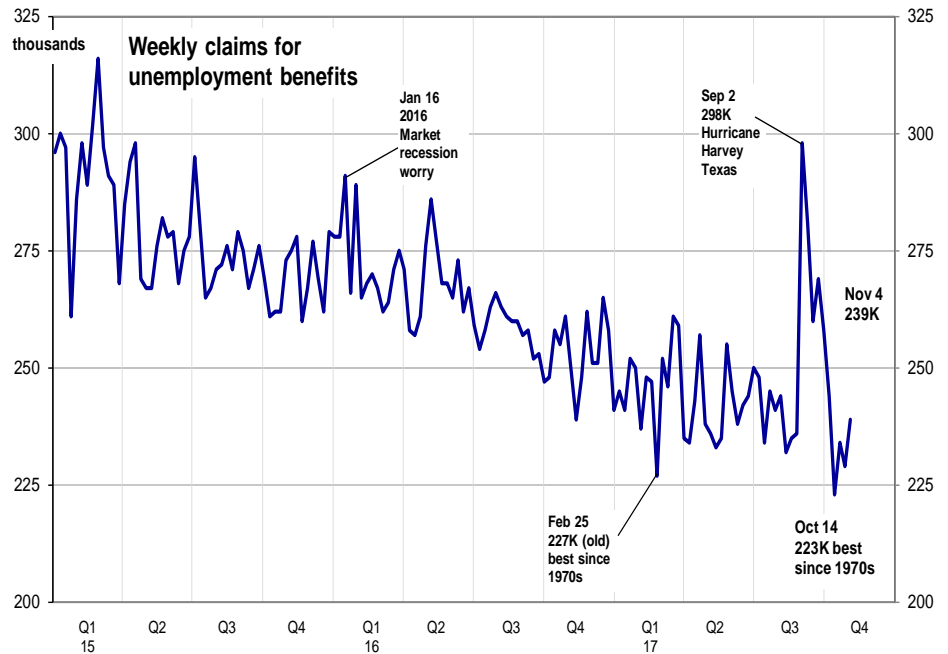
OTHER ECONOMIC NEWS THIS WEEK

No news jobless claims still the lowest in a generation or two

Breaking economy news. Weekly jobless claims rose 10K to 239K in the October 28 week signaling all is well in the labor markets.

Businesses continue to keep job layoffs to a minimum because good help is hard to find in an economy that has run nine straight years without a downturn.

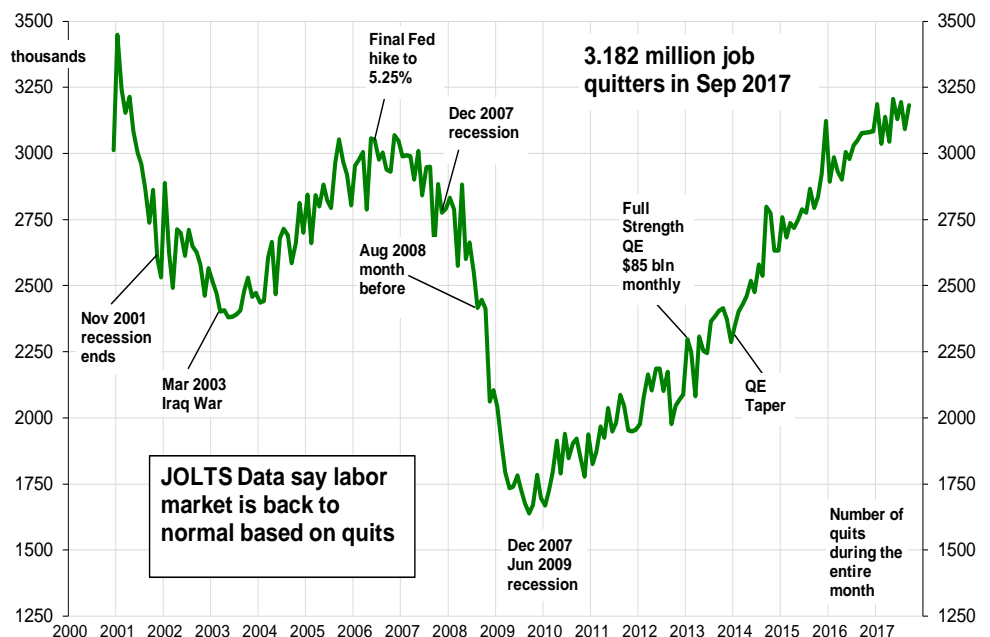
Everyone who lost their jobs in the recession has been rehired. The unemployment rate was 4.4% before the Great Recession that Fed officials cannot stop reminding us about, and is even lower today at 4.1%. And don't go overboard about labor force dropouts, you aren't running for president and don't need to worry people needlessly about economic distress that doesn't exist. You are better off than you were four years ago. Believe it. Vote for me.



With the labor market as tight as a drum the Fed can be confident in its forecasts for one more rate hike at the final December meeting this year. The economy doesn't need any additional monetary stimulus. Dow industrials closed last night up 19.2% year-to-date so monetary policy doesn't need to keep on laboring away trying to improve financial conditions. Fed policy been there and done that. Raise rates to normal is our advice to the new Fed Chair, and sooner rather than later. Don't believe the Fed economics staff's models. Especially that unobservable natural rate of interest they claim is zero and not the 2% constant in the Taylor Rule. The economy is stronger than you think. Bet on it.

Workers of the world unite. Rise from their desks, walk out the door and quit their jobs

Breaking economy news. The monthly JOLTS data from the Bureau of Labor Statistics. Jolts stands for Job Openings and Labor Turnover. 6.093 million job openings in September. Remember how the president's economics team is trying to boost the economy with tax cuts to create jobs, jobs, jobs and bring factories back from overseas to provide more jobs for Americans? Well,



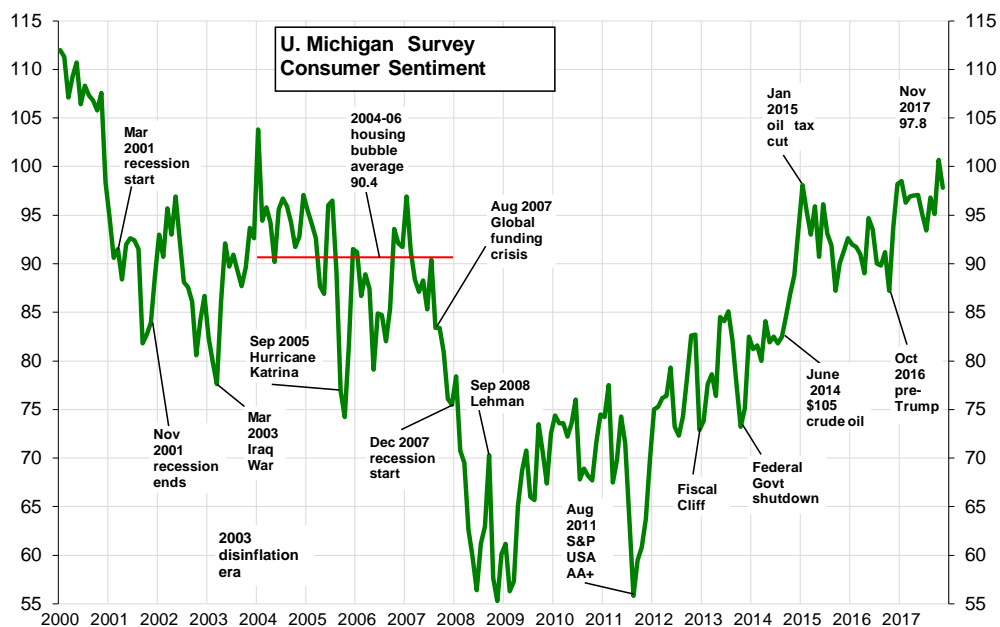
right now, job openings in manufacturing are 425 thousand of those 6.093 million openings in September. Obviously, manufacturers want to hire but cannot find any workers. The shoe is clearly on the other wrong foot for this Administration or something like that.

And Janet Yellen's favorite (minor labor market indicator) in the Jolts report? Wonder if noneconomist Jay Powell will embrace Yellen's favorite after being schooled by her the last four years? The indicator is the Quits rate which is the number of voluntary separations initiated by the employee. You have to have a lot of confidence in this economy, in this labor market, if you are thinking of quitting your job (you know who you are.) 3.182 million up and walked out in September which signals the labor market is pretty darn good and shows the economy overall no longer requires the support of Fed policy: those officials in Washington that just cannot stop shooting and put their guns back in their holsters.

Consumer sentiment falls back to 97.8 in November after jumping 5.6 points in October to 100.7

As summer turns to fall for the economy, consumers took a step back a little this month in their sentiment about just how good the future is.

They remain optimistic overall and their confidence loss does not mean the economy is in headlong retreat. But we think Americans are confused by the current tax cut proposals which will radically change how workers will pay Uncle Sam. Change is good but massive change is never good for consumer confidence as it sows the seeds of uncertainty that has the potential to throw a monkey wrench into one of the longest economic expansions in US history. Washington uncertainty is back. Big time. Bet on it.



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 The Bank of Tokyo-Mitsubishi UFJ, Ltd. (collectively with its various offices and affiliates, "BTMU") 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 BTMU. BTMU 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 BTMU believes that any relevant factual statements herein and any assumptions on which information herein are based, are in each case accurate, BTMU makes no representation or warranty regarding such accuracy and shall not be responsible for any inaccuracy in such statements or assumptions. Note that BTMU 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 BTMU is under no obligation to ensure that such other reports are brought to your attention.

Copyright 2017 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 guarantee 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 The Bank of Tokyo-Mitsubishi UFJ, Ltd. and Mitsubishi UFJ Financial Group, Inc., one of the world's leading financial groups. The Bank of Tokyo-Mitsubishi UFJ, 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 Bank of Tokyo-Mitsubishi UFJ, 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 (MTU) stock exchanges. Visit www.mufg.jp/english/index.html.