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MUFG Bank, Ltd.
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BOND MARKET VALUATION

Easy newsletter this week. Stock market valuation last week. Bond market valuation this week. A prudent investment portfolio has 60% equities and 40% bonds as we learned during our CFA courses not too long ago. Unless bond yields are already zero maybe. Happy

Friday to everyone. This will be quick. The bond market is out of control, but let's face it. The Fed funds rate is back to 0.25%. The last time the Fed cut rates to to zero in December 2008 after Lehman they kept them down there for seven years of famine until liftoff in December 2015. 10-year Treasury yields fell as low as 1.3%-something during the lean and mean years of stingy Fed policy on yields with "important lows" made in 2012 (July 2012 1.38%), and oy, years later in 2016 (July 2016 1.32%) before President Trump was elected in November 2016. The Dream of Higher Yields is over if you are a baby boomer (born 1946-64... put your glasses on and check your Driver's License). Savings rates were 5.25 percent in June 2006; one brief shining moment before being cut a year later in the Global funding crisis in the summer of 2007. Financial crises are bad for interest rates. It's not patriotic to criticize the Federal Reserve right now. There's a war on. Interest rates are down and companies are borrowing to keep from going under not to make new



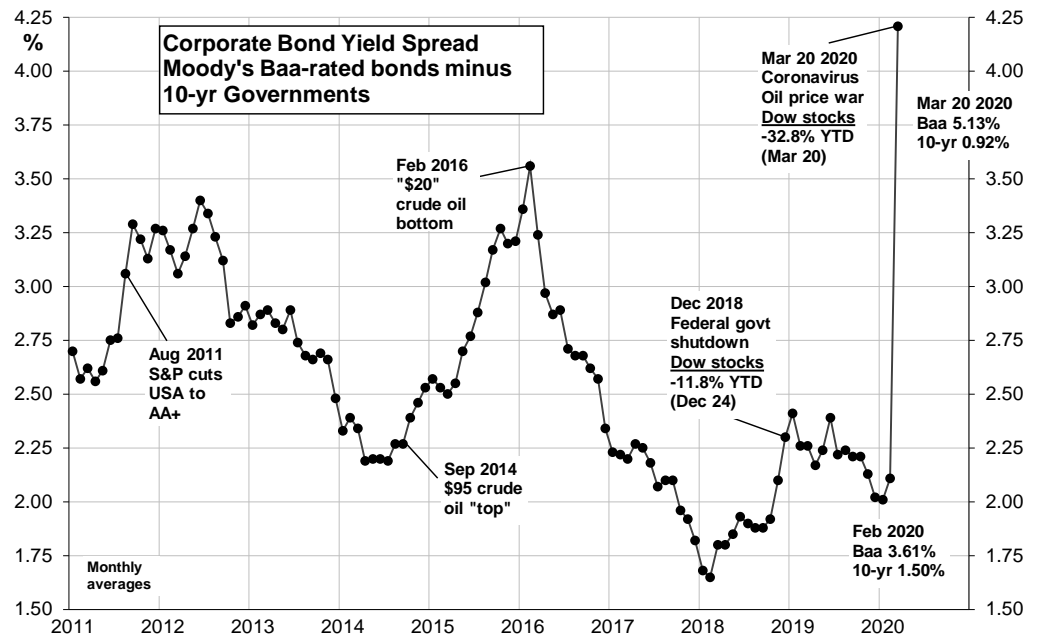
	10-yr Treasury Yield	CPI	Real Yield bps
2002	4.61	1.6	301
2003	4.01	2.3	171
2004	4.27	2.7	157
2005	4.29	3.4	89
2006	4.80	3.2	160
2007	4.63	2.9	173
2008	3.66	3.8	-14
2009	3.26	-0.3	356
2010	3.22	1.6	162
2011	2.78	3.2	-42
2012	1.80	2.1	-30
2013	2.35	1.5	85
2014	2.54	1.6	94
2015	2.14	0.1	204
2016	1.84	1.3	54
2017	2.33	2.1	23
2018	2.91	2.4	51
2019	2.14	1.8	34
2020	1.63	2.4	-77

2020-to February

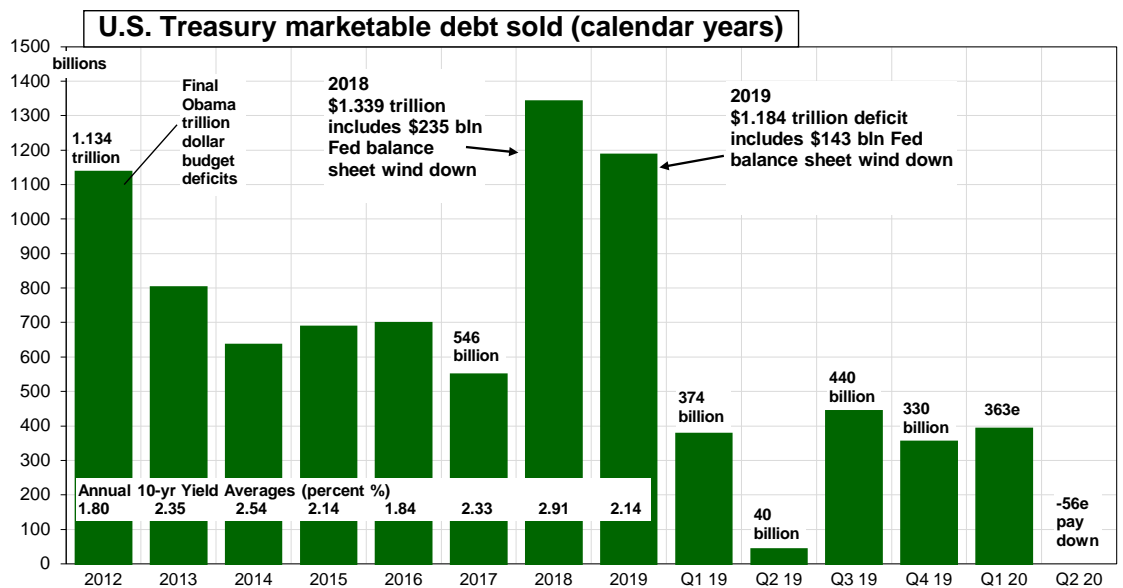
investments that make the economy grow. The world economy is a mess and will stay that way until the coronavirus shelter in place shutdowns are lifted. They will lift, won't they?

We can throw out some traditional bond market valuation measures like the Fed funds rate, crushed 150 bps to zero in March, and inflation. The Fed's focus on PCE inflation instead of CPI inflation like social security benefits are indexed to has helped to muddy the public's "expectations of inflation."

The public has lost interest and frankly the major moves in headline CPI inflation have been energy related. It is fair to say that bond yields have been lower relative to CPI inflation than they used to be. They will stay that way now that the Fed funds rate has been floored. The only economic problem this poses is that inflation continues to erode the value of paper money and meager bond yields don't offset this even if it could. In the last ten years since the last recession, paper money in wallets and purses lost 17 percent of its value as CPI inflation averaged 1.8% per year, 2010 to 2019.



The final bond valuation metric we will look at is supply. The latest coronavirus fiscal spending package from Washington is over \$2 trillion, or 10% of GDP, which may be enough to hold off the new Coronavirus Great Depression. The U.S. doesn't have

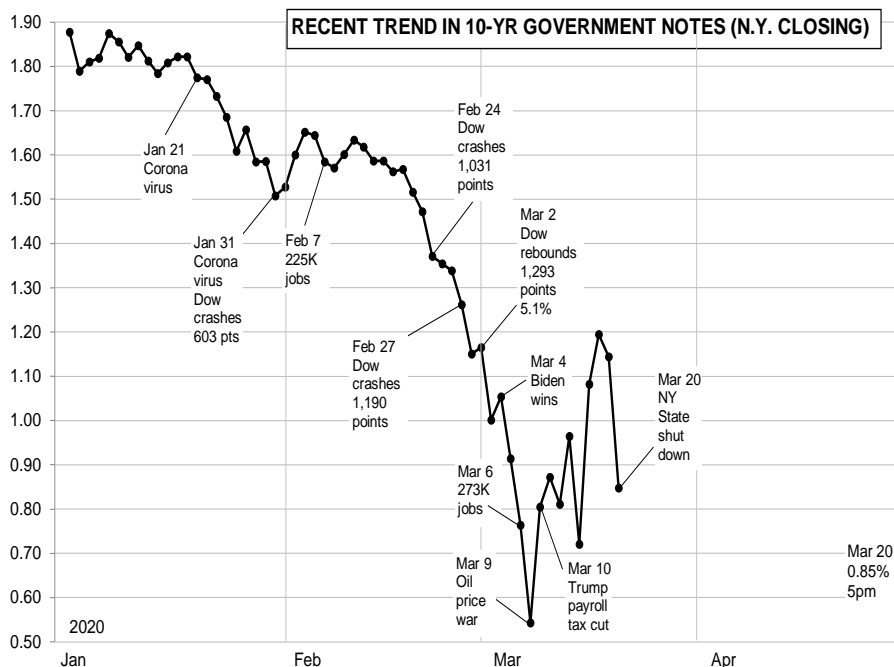


\$2 trillion and will have to borrow from the credit market. The Federal budget deficit is already over \$1 trillion right now, as it has never been right since the Tax Cuts and Jobs Act was signed by President Trump in December 2017. A \$3 trillion Federal budget cannot be financed without the help of the Fed's QE purchases. The Fed said in Sunday, March 15's announcement that they would buy \$500 billion government securities and it will have to be more if our outlook for 10-yr Treasury yields of 0.75 to 1.0 percent as far as the eye can see is going to be realized.

MARKETS OUTLOOK

	29-Mar 2019	28-Jun 2019	30-Sep 2019	31-Dec 2019	20-Mar 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021
30-Yr Treasury	2.81	2.53	2.11	2.39	1.42	1.20	1.10	1.20	1.20	1.30
10-Yr Note	2.41	2.01	1.67	1.92	0.85	0.70	0.70	0.80	0.90	1.00
5-Yr Note	2.23	1.77	1.55	1.69	0.46	0.40	0.50	0.60	0.70	0.80
2-Yr Note	2.26	1.76	1.62	1.57	0.32	0.30	0.30	0.30	0.40	0.40
3-month Libor	2.60	2.32	2.09	1.90	1.20	1.10	1.00	0.80	0.60	0.50
Fed Funds Rate	2.50	2.50	2.00	1.75	0.25	0.25	0.25	0.25	0.25	0.25
2s/10s spread	15	25	5	35	53	40	40	50	50	60

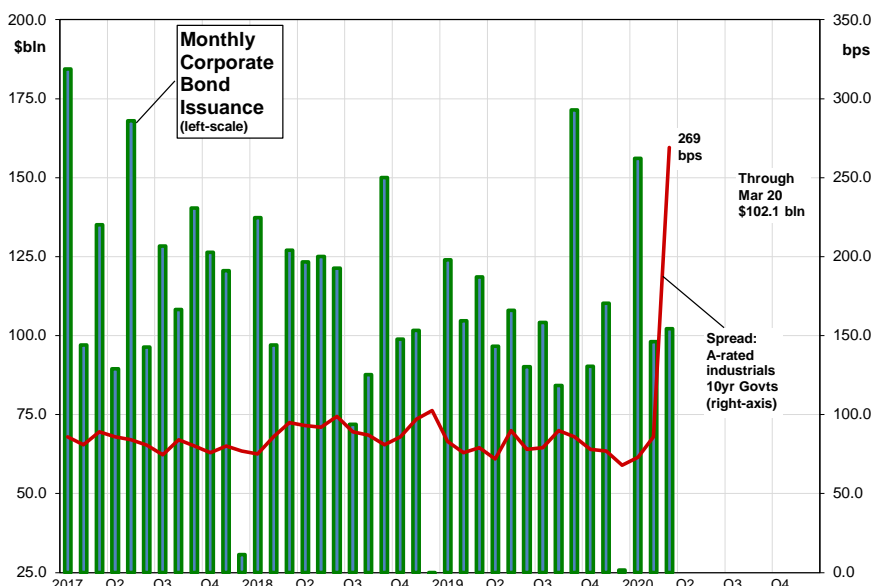
We moved the interest rate forecast down with the Fed funds rate drop of 150 bps in March to zero. There's a credit crunch with the recession concerns fueling worries borrowers can't pay the money back. 3-month Libor is 1.2% and didn't decline after the 100 bps Fed cut last Sunday night. Mortgage rates are 3.65% this week which is unchanged from yields in January. Like the credit crunch after Lehman it will take time for credit-based yields to decline. We look for



10-yr Treasury yields to stick around 0.75% for a time. Expectations for the economy are too bearish, but the yield trend depends on how much Fed QE there is to offset the "\$2 trillion" fiscal stimulus.

CORPORATES: EXXON, INTEL, PEPSICO, NORTHROP GRUMMAN, COCA-COLA

Corporate offerings were \$62.7 billion in the March 20 week versus \$8.1 billion in the March 13 week. On Thursday, The Walt Disney Company sold \$6.0 billion 5s/7s/10s/20s/30s. It priced a \$1.25 billion 3.8% 10-yr (m-w +45bp) at 270 bps (A2/A). The media entertainment company will use the proceeds for the repayment of indebtedness (including commercial paper) and for general corporate purposes. Corporate bond yields (10-yr Industrials rated A2) were 269 bps above 10-yr Treasuries Friday versus 145 bps last Friday.



FEDERAL RESERVE POLICY

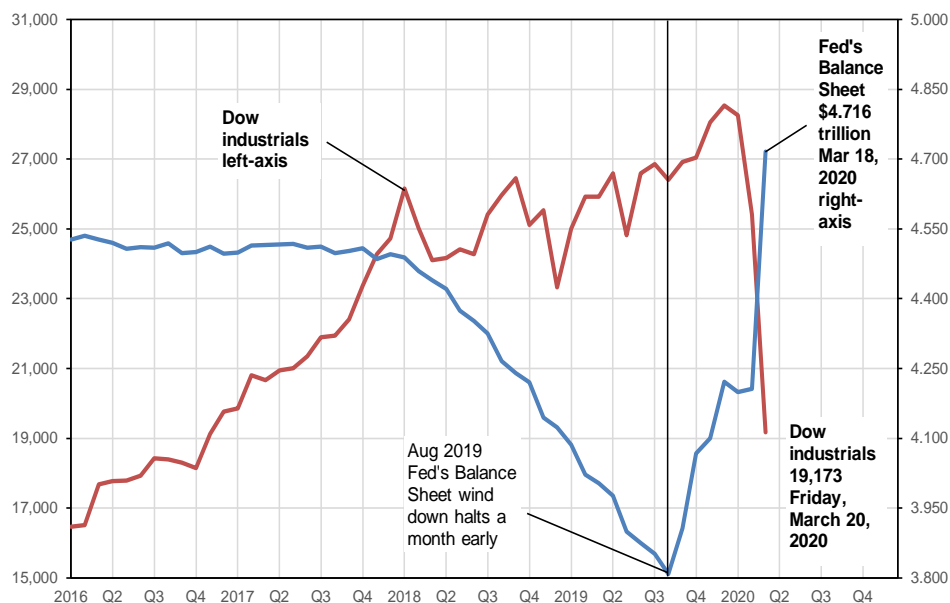
The Fed meets March 17-18, 2020 to consider its monetary policy. The meeting was cancelled Fed Chair Powell said after announcing at 5pm ET Sunday, March 15, they were cutting rates 100 bps back to 0.25%, and would do \$700 billion QE purchases (\$500 billion Governments, \$200 billion MBS). There was a brief press conference Sunday night with Powell after the stunning move. It would be unpatriotic for us to complain about low interest rates as America is at war against the spreading coronavirus threat to life. We would just note that this time will be different for the bond market than it was in the last seven-year drought for savers

where zero rates were in place from December 2008 after Lehman to liftoff in December 2015. Bond yields are likely to stay lower this time around, may never bounce back without "inflation," and will become less interesting as an active, tradeable financial asset class.

The Fed announced on Sunday, March 15 it would buy \$500 billion government securities. In the first week, they already bought \$272.1 billion. The original QE governments in March 2009 was for \$300 billion. For the monthly open-ended QE in 2013, they were buying \$45 billion governments per month. With the \$2 trillion fiscal stimulus from Washington coming, they are going to need a bigger gun.

Selected Fed assets and liabilities					Sep 10
Fed H.4.1 statistical release					2008**
billions, Wednesday data					pre-LEH
Factors adding reserves					
U. S. Treasury securities	2640.771	2523.031	2502.624	2474.060	479.782
Federal agency debt securities	2.347	2.347	2.347	2.347	0.000
Mortgage-backed securities (MBS)	1366.676	1371.846	1371.846	1371.843	0.000
Repurchase agreements	441.945	242.375	195.000	143.440	126.750
Primary credit (Discount Window)	28.224	0.011	0.001	0.013	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)	0.000	0.000	0.000	0.000	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	
<u>Central bank liquidity swaps</u>	0.045	0.058	0.048	0.044	62.000
Federal Reserve Assets	4716.5	4360.0	4289.3	4206.4	961.7
3-month Libor %	1.12	0.77	1.00	1.61	2.82
Factors draining reserves					
Currency in circulation	1843.254	1818.957	1810.269	1800.040	834.477
Term Deposit Facility	0.000	0.000	0.000	0.000	0.000
Reverse repurchases w/others	0.477	1.325	5.025	2.300	0.000
Reserve Balances (Net Liquidity)	1945.393	1779.990	1735.005	1680.070	24.964
Treasuries within 15 days	35.806	21.427	22.679	34.812	14.955
Treasuries 16 to 90 days	211.429	221.961	213.281	188.784	31.549
Treasuries 91 days to 1 year	387.117	378.403	367.820	355.980	69.272
Treasuries over 1-yr to 5 years	966.762	915.101	914.339	913.398	170.807
Treasuries over 5-yr to 10 years	357.666	327.906	326.323	325.382	91.863
Treasuries over 10-years	681.991	658.232	658.181	655.702	101.337

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



QE purchases in the Bernanke days were thought to bring downward pressure to bear on longer-term yields, or keep them from rising, when the Fed funds rate hits zero at 0.25%. 10-yr Treasury yields never fell lower than 1.38% following Lehman while QE operations were done off and on up through the time of the December 2015 rates liftoff when the Fed raised the rates the first time in seven years from 0.25 to 0.50 percent. At Sunday's press conference, he emphasized the purchases were to improve Treasury market functioning, and it is early days yet to guess if the FOMC eventually comes to a view of where longer-term Treasury yields should trade to help support the economy. At the moment, corporate bond and mortgage rates are going up not down, and the Fed might shift the focus here in the immediate future. At some point, if there is a massive fiscal stimulus, it would seem that more QE purchases of Treasuries will be needed, otherwise 10-yr yields will rise. They closed 0.96% on Friday, March 13 before Sunday's 100 bps rate cut. Maybe they don't want bond yields higher than 1.00%?

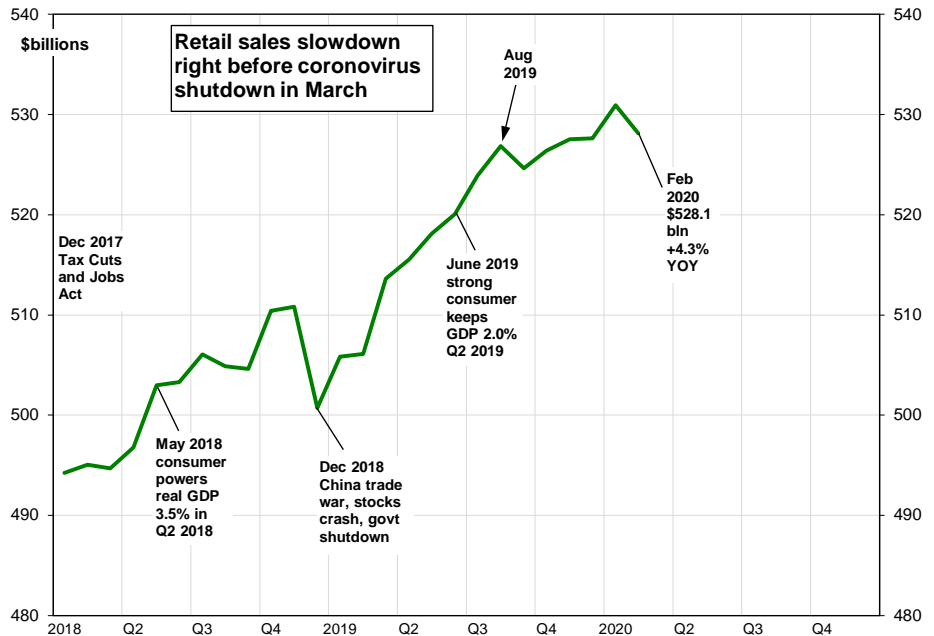


OTHER ECONOMIC NEWS THIS WEEK

Retail sales fall in February before the coronavirus storm (Tuesday)

Breaking economy news. Retail sales fell in February, but we will still have to wait to see how bad the looming downturn will be as it was not until the first two weeks of March that many companies told their employees to stay at home. Retail sales fell 0.5% in February, while January sales were revised to a gain of 0.6% from the initial 0.3% increase. The White House didn't even announce new guidelines urging Americans to curb non-essential travel for 15 days until yesterday afternoon. Let's hope the shuttering of the shops and malls around the country doesn't drag the economy down too far over the cliff into recession where negative growth in the economy in the second quarter is all but assured.

Many categories fell in February: cars, furniture, health and personal care, clothing. Even bars & restaurants fell 0.5% and that's going to fall further with the closings recommended by government leaders. Internet sales were up 0.7% in February, and is the fastest growing source of retail spending with a 14.8% increase from last year, but so-called nonstore retailers are just 12.6% of total retail sales. Internet shopping is certainly going to go up as a share of retail purchases next month, you can bet your last dollar there.



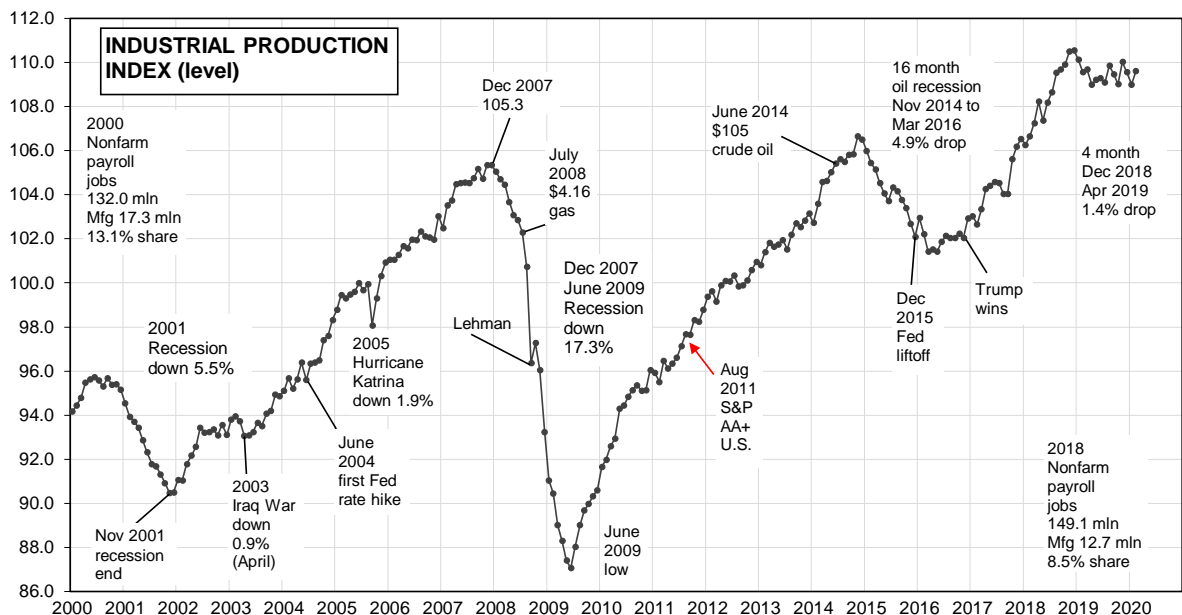
Net, net, retail sales turned down in February, but this is likely to be just the tip of the iceberg in showing just how far sales will fall in March with state after state declaring a state of emergency and urging its citizens to stay at home and curb all non-essential travel. March could see a record drop in retail sales. If you think more and more sales are generated for retailers through the Internet, you'd be correct, but smart phone sales are unlikely to keep consumers spending at anywhere near normal levels. Stay tuned. And don't go outside. It's not safe out there.

Wheels of production at US factories are turning slowly (Tuesday)

Breaking economy news. Industrial production rose 0.6% in February after being dragged down by the weather, warmer than seasonal temperatures, in December and January. Output at Utilities jumped 7.1% in February. Manufacturing production barely had a heartbeat with a rise of just 0.1%. If you take out the large gain for motor vehicles and the big drop in civilian aircraft, factory production was unchanged.

Net, net, the wheels of production continue to roll onward in February, but for how long is the real question as the economy slows to the stall speed and is just inches away from falling over the cliff and into recession. Purchasing managers have said the manufacturing sector was no longer in a recession the last two months, but the fact remains that industrial production peaked in December 2018 and has been unable to gather the strength to return to the previous highs. The spread of the coronavirus will hasten the decline of factory production in the next few months as company managers tell nonessential employees to stay home. Factories won't stay open for long if consumers aren't buying what companies are building and selling. Bet on it. The industrial production index is one of the key indicators of an economic recession and it is one reason some economists maintain that the U.S. is already in a recession. Stay tuned. Story developing.

Percent changes			Industrial Production	
Dec	Jan	Feb	February 2020	
-0.4	-0.5	0.6	YOY	Weight
0.1	-0.2	0.1	<u>0.0</u> Total Index	<u>100.0</u>
0.8	1.0	-1.5	-0.4 Manufacturing	75.3
-5.7	-4.9	7.1	2.1 Mining	14.2
			0.4 Utilities	10.4
			Manufacturing payroll jobs	
			12.9 million +31K YOY	
			9.9% of Private Payroll Jobs	



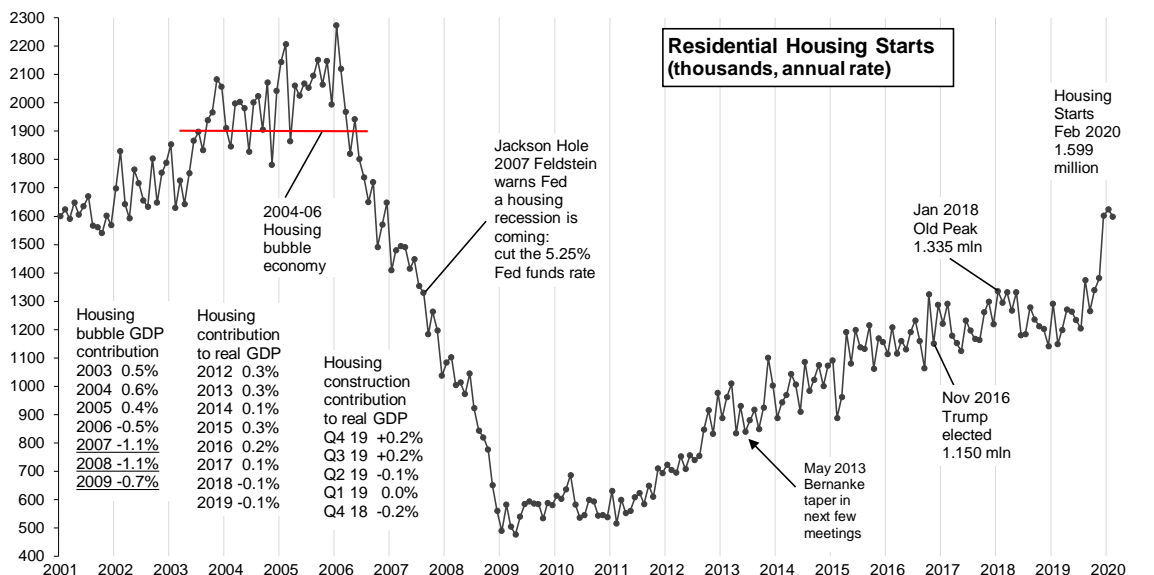
Housing starts strong, but fewer permits point the way down (Wednesday)

Breaking economy news. Residential housing construction. Housing starts were surprisingly strong as they fell just 1.5% to 1.599 million at an annual rate in February. However, permits fell by 5.5% to 1.464 million in February and are pointing the way down for residential housing construction in the months to come. Housing starts have been well above permits the last few months which is not the usual case, so housing starts could come down sharply in coming months. It was still warmer than seasonal in February in many parts of the country which could have artificially boosted construction activity.

Net, net, one of the economy's bright spots is starting to fade. Builders are taking out fewer construction permits and this trend is likely to continue as the isolation measures to stop the spread of the coronavirus keeps more and more workers at home.

Housing starts got hammered even before the spreading coronavirus threatened to take the broader economy down as companies and workers stopped their normal activity and shelter in place.

In our longer-term view, the economic outlook is darkening. Fiscal stimulus to replace workers' temporary lost paychecks may keep spending in the economy positive for a time, but these measures need to be weighed against the danger of pushing the national debt to unsustainable levels that threaten the smooth-functioning of the U.S. Treasury markets. Fed officials have often worried about increased government spending on the retiring, baby boom workers, and now it looks like the debt deluge that sends bond yields soaring could come years before it was expected. The coronavirus threatens the health of Americans, but the steps to fight it could wreck America's financial markets forever. The economy and public officials are between a rock and a hard place when it comes to making tough choices to keep the economy up and running. Stay tuned. Story developing.

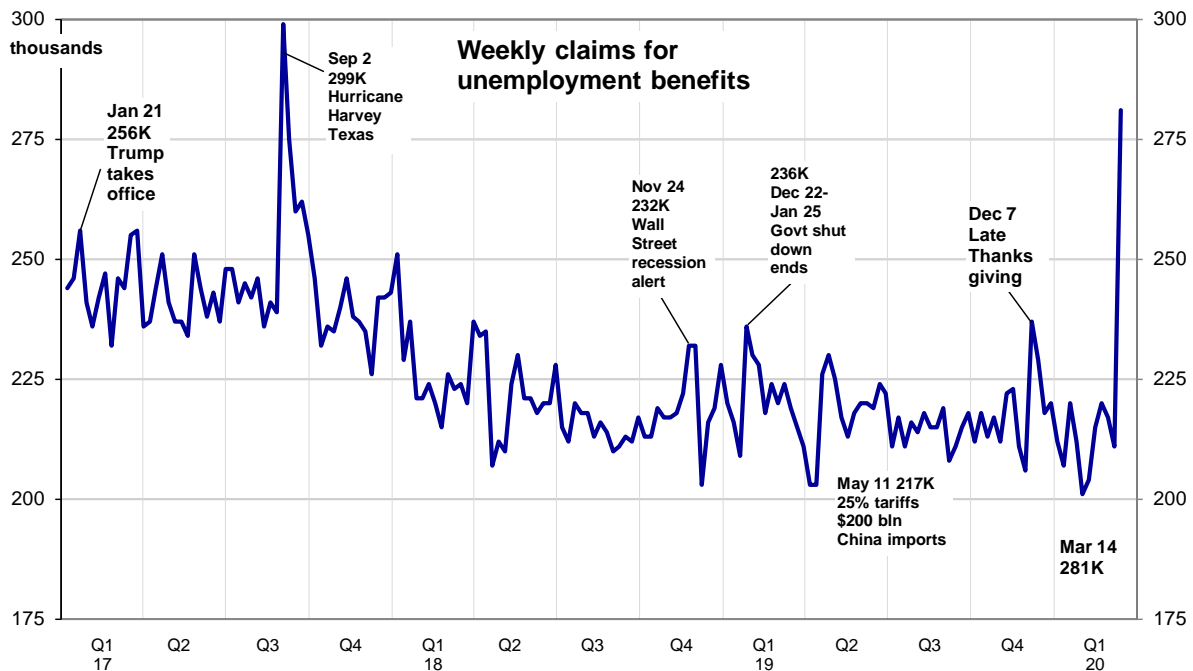


Joblessness from the spreading coronavirus fear is already here (Thursday)

Breaking economy news. Job layoffs soar 70 thousand to a "It's a recession" level of 281 thousand in the March 14 week. There's no surprise here with the restaurant industry warning 5 to 7 million workers will lose their jobs in coming months. Today's jobless claims statistics provide the confirmation if it was needed that the economy has just fallen over the cliff and is turning down into a recession.

Net, net, the latest weekly unemployment claims statistics show severe stress in the labor markets with new claims for benefits confirming the job losses are bad enough to show the economy has entered the recession-zone. This shouldn't come as any surprise and the markets are taking the news in stride as the government has sent people home from work to stop the virus spread.

Spending and jobs in the economy won't come back until the virus counts of positive cases levels out and people are once again free to roam the Main Streets of America and frequent the shops and bars and restaurants again. The stock market isn't selling off on this economic news of job layoffs this morning as it knows the applications for benefits will only go higher in the weeks to come. Bet on it. Don't ask for whom the bell tolls, it tolls for thee.



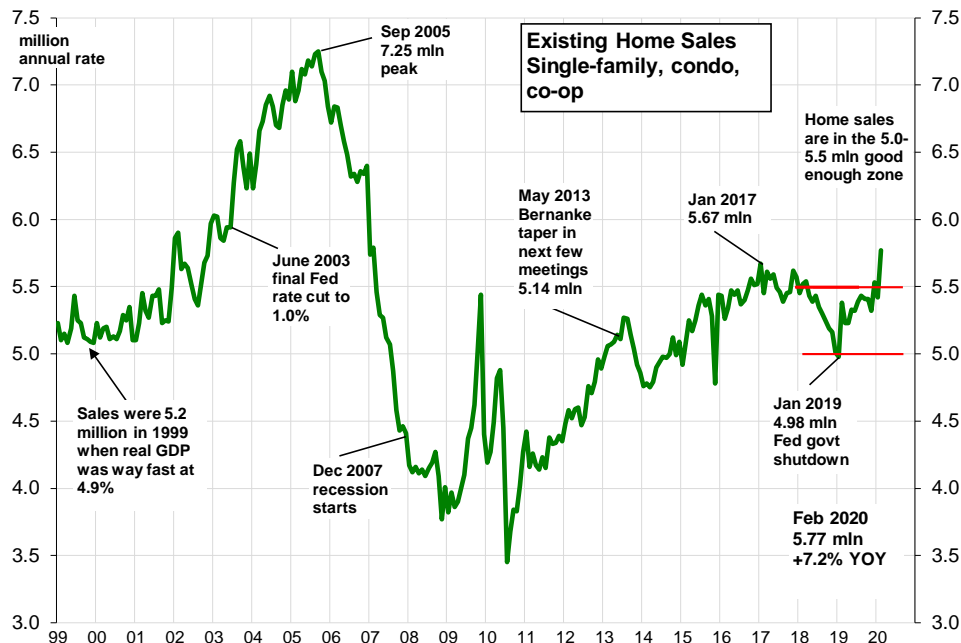
Best existing home sales since recession set to tumble in new recession (Friday)

Breaking economy news. Existing home sales jumped 6.5% to 5.77 million at an annual rate in February which is now a new record high since the last recession ended way back in June 2009. Today's results are all water under the bridge as far as the outlook ahead as the coronavirus is keeping millions in their homes and not out walking around kicking the tires on whether to purchase a new residence. Don't turn around or today's super results will be gone as the best existing home sales since the recession are set to tumble in the new recession.

In February, every area of the country saw greater sales activity, except for the Northeast, which was a surprise given the warmer than seasonal temperatures this month. Existing home sales in the West were up the most in February with sales of 1.26 million which is 11.5% higher than last year. Affordability remains an issue with home prices rising 8.1 percent the last year in the West to a median price of \$410,100.

Net, net, existing home sales are at the best level since the Great Recession, but all of that good news is strictly rear-view mirror now as America shelters in place with sales turnover set to tumble in the new recession starting right now. This is the fastest recession in history from good times to bad times and this will suck down every sector of the economy even the housing sector that had been recovering.

The bright light for the economy of stronger housing sales is about to go out. The coronavirus is leading Americans to isolate themselves from one another and that means existing home sales traffic is going to stop in tracks. If realtors can't show the properties, then home sales are going to die on the vine. The rebound in home resales will have to wait on clarification from health officials on whether America will stay at home for two weeks or for a longer 12 week period. Shelter in place means no new or existing homes will be sold in the months to come. Bet on it.



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