US Economic Weekly

Off the couch and into the cubicle

01 March 2019

Economics
United States

Macro viewpoint: Off the couch and into the cubicle

Labor market conditions are at the tightest level since the Great Recession, luring workers back into the labor market. These workers are having an easier time finding work, with many transitioning straight to employment from "out of the labor force." The resulting rise in the labor force participation rate should help contain wage and price inflation, giving the Fed another reason to be "patient".

View from the top:

Review:

4Q GDP growth was 2.6% qoq saar, beating forecasts. Intellectual property investment, inventories, and trade were positive surprises.

In his testimony to Congress, Chair Powell reiterated patient policy and that the balance sheet unwind will end this year, with details forthcoming.

Preview:

The February jobs report should be strong. We expect job growth of 210,000, the unemployment rate to decrease 0.2pp to 3.8%, and wage growth to reach a new cyclical high of 3.4%.

GDP update:

Following 4Q GDP, we revise down 1Q 2019 growth to 1.0% from 1.5%. The revision largely reflects greater drag from inventories, with some adjustments to other components. Full year 2019 growth remains at 2.2%.

Data deck for March.4- March.8

Date	Time	Indicator	Period	BofAML Estimate	Consensus	Previous
3/04/19	10:00	Construction Spending mom	Dec	0.0%	0.2%	0.8%
3/05/19	10:00	New Home Sales	Dec	589k	580k	657k
3/05/19	10:00	ISM Non-Manufacturing	Feb	56.5	57.2	56.7
3/05/19	14:00	Monthly Budget Statement	Jan	$25.0bn	$3.0bn	-$13.5bn
3/06/19	8:15	ADP Employment	Feb	200k	185k	213k
3/06/19	8:30	Trade Balance	Dec	-$56.9bn	-$54.2bn	-$49.3bn
3/07/19	8:30	Initial Jobless Claims	Mar 02	225k	—	225k
3/07/19	8:30	Nonfarm Productivity	4Q F	1.7%	1.5%	2.2%
3/07/19	8:30	Unit Labor Costs	4Q F	1.6%	2.0%	0.9%
3/07/19	15:00	Consumer Credit	Jan	—	$17.0bn	$16.6bn
3/08/19	8:30	Housing Starts	Jan	1190k	—	1078k
3/08/19	8:30	Building Permits	Jan	1250k	—	1326k
3/08/19	8:30	Change in Nonfarm Payrolls	Feb	210k	185k	304k
3/08/19	8:30	Private Payrolls	Feb	200k	165k	296k
3/08/19	8:30	Unemployment Rate	Feb	3.8%	3.9%	4.0%
3/08/19	8:30	Average Hourly Earnings mom	Feb	0.3%	0.3%	0.1%
3/08/19	8:30	Average Weekly Hours	Feb	34.5	34.5	34.5

Source: BofA Merrill Lynch Global Research, Bloomberg

Table of Contents

Michelle Meyer
US Economist
MLPF&S
+1 646 855 6261
mmeyer2@baml.com

Joseph Song
US Economist
MLPF&S
+1 646 855 8138
jsong5@baml.com

Alexander Lin, CFA
US Economist
MLPF&S
+1 646 855 6499
alexander.lin@baml.com

Stephen Juneau
US Economist
MLPF&S
+1 646 855 7254
stephen.juneau@baml.com

Mingzi Yi
US and Canada Economist
MLPF&S
+1 646 855 8069
mingzi.yi@baml.com

Anna Zhou
US Economist
MLPF&S
+1 646 855 9002
anna.zhou@baml.com

US Economics
MLPF&S

See Team Page for List of Analysts

Timestamp: 01 March 2019 04:30AM EST

Macro viewpoint

Joseph Song
US Economist
MLPF&S
+1 646 855 8138
jsong5@baml.com

Off the couch and into the cubicle

- Labor market conditions are at the tightest level since the Great Recession, luring workers back into the labor market.
- These workers are having an easier time finding work, with many transitioning straight to employment from "out of the labor force."
- The resulting rise in the labor force participation rate should help contain wage and price inflation, giving the Fed another reason to be "patient".

The long road back

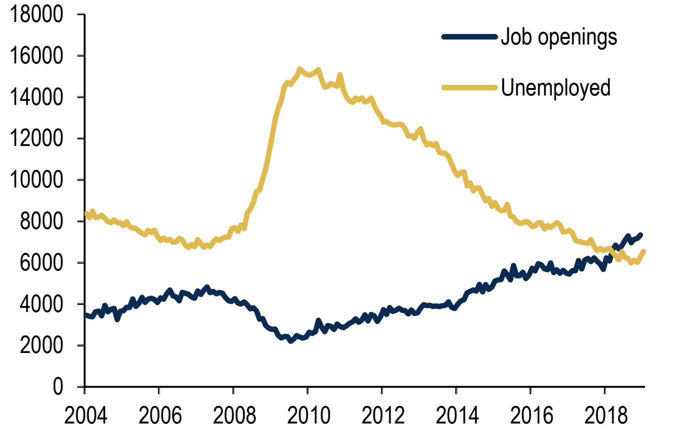
By most measures, labor market conditions are very tight. The unemployment rate and the underutilization rate (the U-6 measure) are near cyclical lows, notwithstanding the latest turn up in January owing to the government shutdown. The number of job openings outnumbers the number of unemployed workers (Chart 1). Tighter labor market conditions are finally beginning to show up in wage measures as well: the Employment Cost Index and average hourly earnings measures are growing near 3% and the trend is pointing higher.

Importantly, these developments have enticed workers back into the labor market. The labor force participation rate has stabilized just under 63% in the past few years and may be turning up as positive cyclical forces are offsetting the negative structural force of the aging population (Chart 2). Strong labor force growth allows the economy to add jobs at a rapid rate without a further drop in the unemployment rate, helping contain wage inflation. Below we delve into the latest developments on the participation margin and implications for wages and monetary policy.

Getting the call-up

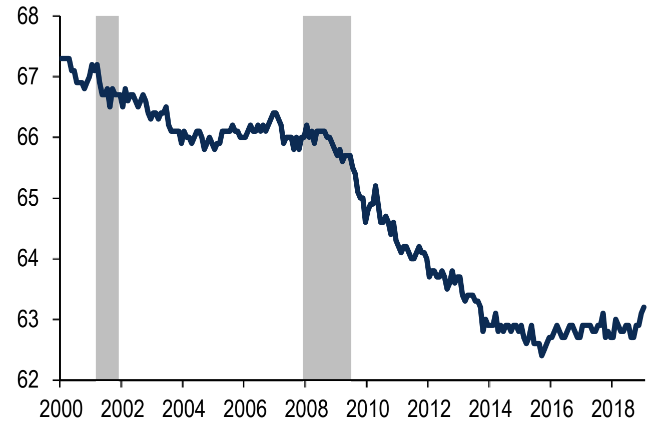
One of the reasons more workers are returning to the labor force is that it is easier to find a job. We can see this through two channels. First, the average spell of unemployment is getting shorter. The median duration of unemployment is down to 8.9

Chart 1: Job openings outnumber the unemployed (in thousands)



Source: Bureau of Labor Statistics

Chart 2: Labor force participation rate showing signs of some temporary uplift (%)



Source: Bureau of Labor Statistics

weeks, essentially back down to pre-recession levels. Also, the average duration of unemployment is at a cyclical low of 20.5 weeks and half the average duration at the peak of the recovery. Second, workers today who are out of the labor force are more likely to move directly from out of the market into a job without an intervening period of unemployment. Chart 3 shows the rate at which workers not in the labor force transitioning to employment based on the Bureau of Labor Statistics' household survey microdata. During the recession, the number of workers finding jobs out of nonparticipation dropped notably as job prospects dimmed. However, now with businesses having difficulties filling open positions, workers are getting pulled directly from couches into cubicles at a faster clip.

Unsurprisingly, industries that have been reporting the greatest difficulty finding and retaining labor seem to be attracting more of these direct hires. Manufacturing, transportation, and retail sales have seen a notable uptick in the share of workers that are hired from outside the labor force (Chart 4). Many employers in these sectors have reported a willingness to look beyond blemishes (e.g., lack of experience/skills, criminal records, spells of unemployment) and have raised minimum wages in the past few years in an effort to attract workers. For example, Amazon, Walmart, Costco and other retail giants have announced significant wage increases for entry level workers. All these factors appear to be luring workers back into the labor market.

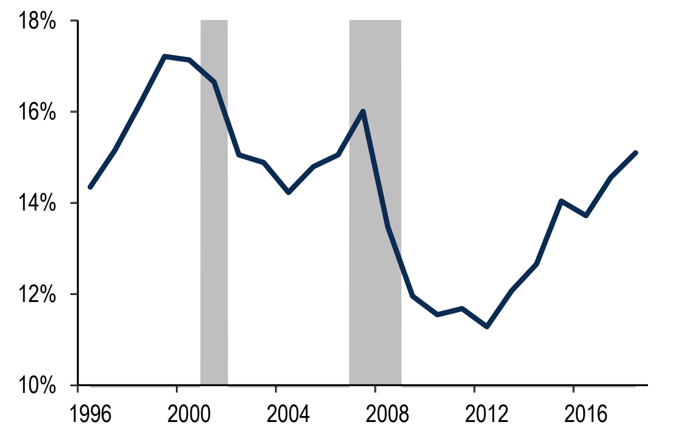
Coolant for the engine

Greater flow of workers back into the labor force will act as a natural coolant for any overheating in the labor market and suggests a more gradual increase in wages. Indeed, the sectors noted above that employ more workers from outside the labor force generally have lower wage levels than the average. This sort of compositional change to the labor force could bias wage growth lower. Indeed, San Francisco Fed President Daly and colleagues find that aggregate wage growth has been partially held down during the current recovery due to the entry of new and returning workers to full-time employment, as they tend to make less than experienced workers.

That said, the wage Phillips curve is alive and well, just a little flatter due to the returning workers taking some pressure off of a tight labor market. Indeed, our private payrolls tracker suggests that next week's February employment report should show another solid month of job gains, nudging the unemployment rate down to 3.8%. In turn, we look for wage growth to modestly accelerate to 3.4% yoy from 3.2% yoy.

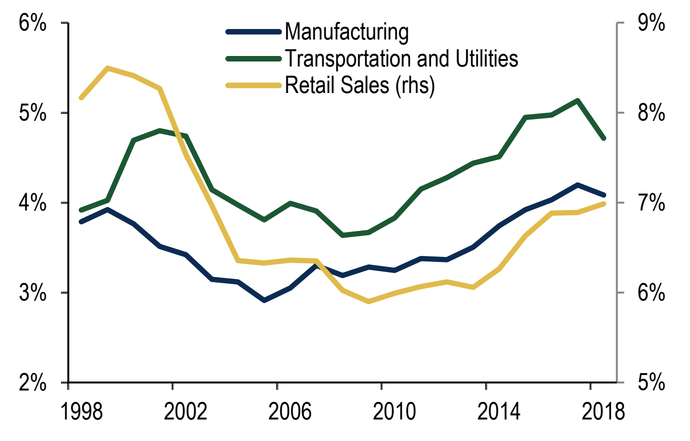
Above-trend growth over the next year suggests there may still be room to pull in additional workers and argues for limited upside risk to inflation this year. This should give Chair Powell and the FOMC another reason to be "patient" in raising rates.

Chart 3: Percent of nonparticipants who want a job who find a job (%)



Source: BofA Merrill Lynch Global Research, Census Bureau

Chart 4: Percent of workers that come straight from not in the labor force by industry (%)



Source: BofA Merrill Lynch Global Research, Census Bureau

View from the top

What's new

Review

- 4Q GDP growth was 2.6% qoq saar, beating forecasts. Intellectual property investment, inventories, and trade were positive surprises.
- In his testimony to Congress, Chair Powell reiterated patient policy and that the balance sheet unwind will end this year, with details forthcoming.

Preview

- The February jobs report should be strong. We expect job growth of 210,000, the unemployment rate to decrease 0.2pp to 3.8%, and wage growth to reach a new cyclical high of 3.4%.

GDP update

- **Following 4Q GDP, we revise down 1Q 2019 growth to 1.0% from 1.5%. The revision largely reflects greater drag from inventories, with some adjustments to other components. Full year 2019 growth remains at 2.2%.**

Core views

Growth

- We expect growth to slow from 2.8% in 2018 to 2.2% in 2019. Both years remain above our potential growth estimate of 1.7%. Trade tensions are a headwind and further escalation is a downside risk.

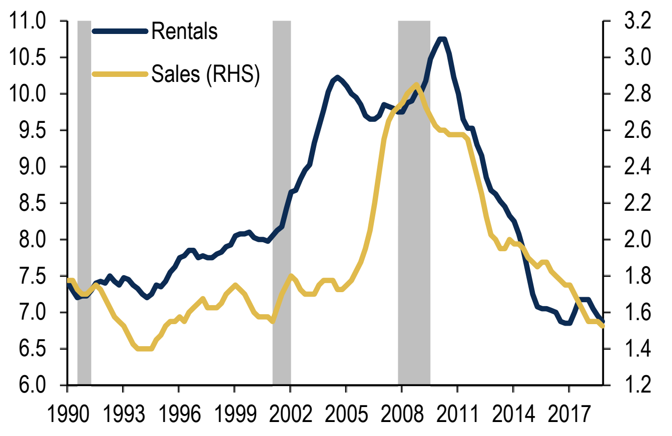
Inflation

- Our outlook is for core PCE inflation to gradually accelerate to 2.1% by year-end, supported by an economy growing above potential, albeit slowing.

Federal Reserve

- The Fed has emphasized that policy is not on a pre-set course and will respond to the data. We believe economic conditions will allow them to hike twice more in 2019 before moving to a holding pattern, but risks are skewed to fewer hikes. The Fed will end the balance sheet unwind in the second half of the year.

Chart 5: Housing vacancy rates edged down further for both rentals and sales (%, 4q moving average)



Source: BofA Merrill Lynch Global Research, Census Bureau

- According to the latest data from the Census Bureau, housing vacancy rates for rentals and homeowners continued to head lower in 4Q 2018. This suggests that the housing market continues to face supply constraints and that demand remains positive.
- Rental vacancy rates moved lower across regions and median rental prices declined in all regions but the Northeast.
- The decline in homeowner vacancy rates was also broad-based across regions as homeownership rates rose to the highest level since 2Q 2014. Specifically, ownership rates picked up for 35-39 year olds, which might suggest that pent-up Millennial demand is starting to be realized, at least amongst older Millennials.

Data in the past week

Data deck for Feb 25 – Mar 01

Date	Time	Indicator	Period	Actual	Consensus	Previous
2/26/19	8:30	Housing Starts	Dec	1078k	1256k	1214k
2/26/19	8:30	Building Permits	Dec	1326k	1290k	1322k
2/26/19	9:00	Case-Shiller HPI yoy	Dec	4.7%	—	5.1%
2/26/19	10:00	Consumer Confidence	Feb	131.4	124.9	121.7
2/27/19	8:30	Advance Goods Trade Balance	Dec	-$79.5bn	-$73.6bn	-$70.5bn
2/27/19	10:00	Pending Home Sales	Jan	4.6%	1.0%	-2.3%
2/28/19	8:30	Initial Jobless Claims	Feb 23	225k	—	216k
2/28/19	8:30	GDP qoq (Annualized)	4Q A	2.6%	2.5%	3.4%
2/28/19	8:30	GDP Price Index	4Q A	1.8%	1.7%	1.8%
2/28/19	8:30	Core PCE (qoq)	4Q A	1.7%	1.6%	1.6%
2/28/19	9:45	Chicago Purchasing Managers	Feb	64.7	57.5	56.7
3/01/19	8:30	Personal Income	Jan	NR	0.3%	—
3/01/19	8:30	Personal Income	Dec	NR	—	0.2%
3/01/19	8:30	Personal Spending	Dec	NR	0.3%	0.4%
3/01/19	8:30	PCE Headline Prices (mom)	Dec	NR	0.0%	0.1%
3/01/19	8:30	PCE Headline Prices (yoy)	Dec	NR	1.7%	1.8%
3/01/19	8:30	PCE Core Prices (mom)	Dec	NR	0.2%	0.2%
3/01/19	8:30	PCE Core Prices (yoy)	Dec	NR	1.9%	1.9%
3/01/19	10:00	U. of Michigan Sentiment	Feb F	NR	96.0	95.5
3/01/19	10:00	ISM Manufacturing	Feb	NR	56.4	56.6
3/01/19	All day	Total Vehicle Sales	Feb	NR	16.8M	16.6M

Source: BofA Merrill Lynch Global Research, Bloomberg
NR= Not Released

Economy grew faster-than-expected in 4Q 2018

4Q GDP growth surprised to the upside, growing 2.6% qoq saar versus consensus forecasts at 2.2%. This is only a modest slowing from 3.4% in 3Q and leaves full 2018 year growth at 2.9%. Two components in particular drove the upside surprise: Intellectual property products (IPP) investment surged 13.1% qoq saar from 5.6% in 3Q, and inventories increased to $97.1bn from $89.8bn. Combined those two categories added 0.7pp to growth. Equipment investment also accelerated to 6.7% from 3.4%. On the negative end of things, consumption moderated to 2.8% from 3.5%, residential investment contracted 3.5%, structures fell 4.2%, and trade sliced 0.2pp from growth. Government spending also slowed to a tepid 0.4%, as a 5.6% contraction in non-defense spending offset a 6.9% pop in defense.

There was also a positive surprise in inflation: the GDP price index increased 1.8% qoq saar versus forecasts of 1.7%, and core PCE similarly came in a tenth higher at 1.7%. This suggests that the monthly core PCE trajectory is likely to be revised higher in the December report, making it likely that % yoy comes in at 1.9%.

The housing market is weakening, but not collapsing

The weak December data continue to roll in. Housing starts plunged 11.2% mom in December to 1.078 million saar, the lowest since Sept 2016. However, there are reasons to fade some of the weakness. First, building permits held at 1.326 million saar in December, creating a historically large gap between the two measures of housing activity. The last time the gap was this big was in May 2015 and starts rebounded sharply in the month following, falling in line with permits. Second, rates rose through 4Q while the stock market sold off in December, ending the year with a dramatic correction. Homebuilder stocks suffered as did confidence among homebuilders based on the NAHB index. The good news is that both have rebounded impressively since the start of the year. This sets up for a recovery in starts as builders feel better about their growth prospects.

Home price appreciation slows further

Home prices continued to cool in December with the national Case-Shiller index slowing to 4.7% from 5.1% in November and the 20-city composite dropping to 4.2% from

4.6%. Looking ahead, we expect home price growth to continue to simmer through this year, with % yoy appreciation slowing to 3%. The recent pullback in rates is likely to be supportive of the housing data in the near term, but the longer-term trend will likely be for continued cooling. Affordability still remains quite stretched and we likely need to see continued rebalancing before we see a sustained turn in the market.

Nominal trade deficit widens to the largest in history

The goods trade deficit deteriorated to $79.5bn to end 2018, marking the largest nominal trade deficit in history. This was worse than expectations for a more modest widening to $73.6bn from $70.5bn in November. Goods imports surged 2.4% mom, which reflected a positive payback after declining in November by 3.6%. Meanwhile, goods exports slid 2.8% mom, the third consecutive monthly decline and largest of the three. This move likely reflected the weaker global growth backdrop coupled with the strong dollar. Thus, the trade deficit was smacked by a double whammy of strong imports and weak exports.

December inventories data were mixed. On the one hand, retail inventories were robust with a 0.9% gain. On the other hand, nondurable manufacturing inventories contracted 0.4% mom. Wholesale inventories were initially released earlier this week and were unrevised at 1.1%. Separately, core capital goods shipments were revised to flat in December from +0.5% initially, indicating less realized capex demand in 4Q.

Consumer confidence rebounds in February

February consumer confidence rebounded to 131.4 from an upwardly revised 121.7 (120.2 initially) in January. The recovery in the index was expected but the magnitude was not, as consensus was looking for a 124.9 print. Moreover, the reversal likely reflected the end to the government shutdown and the continued recovery in equity prices. Looking at the details, the increase in confidence was broad-based but was mostly due to a jump in the expectations index. The present situation index rose to 173.5 from 170.2 and the expectations index picked up to 103.4 from 89.4. All things considered, the report is a positive signal that the weakness in consumer spending may be transitory.

Data in the week ahead

Monday, March 4th

Data deck for Mar.4

Date	Time	Indicator	Period	BofAML Estimate	Consensus	Previous
3/04/19	10:00	Construction Spending mom	Dec	0.0%	0.2%	0.8%

Source: BofA Merrill Lynch Global Research, Bloomberg

Construction Spending

We forecast construction spending will be flat in December after increasing by 0.8% mom in November. We expect that private residential construction will be the key driver behind December's deceleration, as housing starts plunged on the month. Elsewhere, we look for positive growth in private non-residential construction and state and local construction spending.

Tuesday, March 5th

Data deck for Mar.5

Date	Time	Indicator	Period	BofAML Estimate	Consensus	Previous
3/05/19	10:00	New Home Sales	Dec	580k	580k	657k
3/05/19	10:00	ISM Non-Manufacturing	Feb	56.5	57.2	56.7
3/05/19	14:00	Monthly Budget Statement	Jan	$25.0bn	$3.0bn	-$13.5bn

Source: BofA Merrill Lynch Global Research, Bloomberg

New Home Sales

We look for new home sales to plunge to 580k in December from 657k in November. Our forecast reflects a few factors. First, new home sales increased by an outsized 16.9% in November, so some reversal is to be expected. Second, mortgage rates were still relatively elevated in December, which may have kept prospective buyers on the sidelines. Last, increased uncertainty about the long-term economic outlook, reflected by the decline in consumer sentiment and drop in equity markets, could have led some people shopping for new homes to delay their purchase.

ISM Non-manufacturing

We look for the February ISM non-manufacturing index to be little changed, edging down to 56.5 from 56.7 in January. The services sector continues to show signs of expanding activity with solid job gains and improvements in most regional non-manufacturing surveys. However, we expect that most of the component indexes will moderate somewhat on the month, resulting in a slightly lower headline print.

Monthly Budget Statement

We forecast that the federal government ran a budget surplus of $25bn in February following a deficit of $12bn in January. Revenues should get a nice boost as some households make estimated individual income tax payments for 1Q. Outlays should stay steady from December levels. If our forecast proves true, the deficit should be $292bn fiscal year to date, up from $176bn at the same time last year.

Wednesday, March 6th

Data deck for Mar.6

Date	Time	Indicator	Period	BofAML Estimate	Consensus	Previous
3/06/19	8:15	ADP Employment	Feb	200k	185k	213k
3/06/19	8:30	Trade Balance	Dec	-$56.9bn	-$54.2bn	-$49.3bn

Source: BofA Merrill Lynch Global Research, Bloomberg

ADP Employment

We expect ADP employment growth of 200k in February following a gain of 213k in January. We take signal from our private payrolls tracker based on BAC data, which looks for a gain of 212k. Other labor market indicators point to solid job gains in February. Employment indexes in regional business surveys all suggest employment activity expanded further and the labor market differential index from the Conference Board is at a cyclical high.

Trade balance

We look for the trade balance to decline to -$56.9bn in December from -$49.3bn in November, driven by the widening goods trade deficit. As revealed in the advance trade report, goods exports fell on the back of rising geopolitical uncertainties and weakening global growth. Meanwhile, goods imports resumed growth after the temporary drop in November, possibly due to retailers bringing spring merchandise into the country early to avoid increased tariffs. On balance, we expect the trade balance to reach its lowest level since 2009.

Thursday, March 7th

Data deck for Mar.7

Date	Time	Indicator	Period	BofAML Estimate	Consensus	Previous
3/07/19	8:30	Initial Jobless Claims	Mar 02	225k	—	225k
3/07/19	8:30	Nonfarm Productivity	4Q F	1.7%	1.5%	2.2%
3/07/19	8:30	Unit Labor Costs	4Q F	1.6%	2.0%	0.9%
3/07/19	15:00	Consumer Credit	Jan	—	$17.0bn	$16.6bn

Source: BofA Merrill Lynch Global Research, Bloomberg

Claims

We look for 225k initial jobless claims in the week ending March 2nd, little changed from the prior week's reading. Initial claims have settled back into the 220-230k range after a few choppy weeks, likely owing to Martin Luther King Jr Holiday and the government shutdown. In last week's reading the 4-week moving average edged lower to 229k from 236k.

Nonfarm productivity & unit labor costs

We look for nonfarm productivity in 4Q to grow by 1.7% qoq saar in the final 4Q estimate, a moderate slowdown from the prior quarter's reading of 2.3%. The slowdown in output growth in 4Q was more pronounced than that in total work hours growth, reflecting possible deceleration in productivity growth. Meanwhile, we look for unit labor cost to jump to 1.6% qoq saar in 4Q from 0.9% in 3Q, as we saw solid growth in average hourly earnings in 4Q. On an annual basis, we look for productivity to grow by 1.8%, up from 1.3% in 3Q and for unit labor costs to accelerate to 2.0% from 0.9% in 3Q.

Friday, March 8th

Data deck for Mar.8

Date	Time	Indicator	Period	BofAML Estimate	Consensus	Previous
3/08/19	8:30	Housing Starts	Jan	1190k	—	1078k
3/08/19	8:30	Building Permits	Jan	1250k	—	1326k
3/08/19	8:30	Change in Nonfarm Payrolls	Feb	210k	185k	304k
3/08/19	8:30	Private Payrolls	Feb	200k	165k	296k
3/08/19	8:30	Unemployment Rate	Feb	3.8%	3.9%	4.0%
3/08/19	8:30	Average Hourly Earnings mom	Feb	0.3%	0.3%	0.1%
3/08/19	8:30	Average Weekly Hours	Feb	34.5	34.5	34.5

Source: BofA Merrill Lynch Global Research, Bloomberg

Housing starts and permits

We expect housing starts will rebound in January, increasing to 1190k from 1089k in December. As we noted here, December's print was disappointing, but there are reasons to fade the weakness. The difference between starts and permits in December also suggests that we should see payback in January. Meanwhile, we look for permits to cool, declining to 1275k in January from 1326k in December.

Nonfarm payrolls

We forecast nonfarm payroll employment growth of 210k in February following an outsized gain of 304k in January and we look for private payrolls, which excludes government workers, to increase by 200k.

In our view, other indicators released in the February Employment Situation report should show further tightening of labor market conditions. We expect the unemployment rate to drop 0.2pp to 3.8% from 4.0%. We see several reasons for a meaningful drop in February. First, our forecast for job gains remains above "breakeven levels" (i.e., the amount of job creation needed to keep the unemployment rate unchanged). Second, we see scope for the labor force participation rate to modestly soften in February, as it unexpectedly rose in January. Third, we estimate that the government shutdown boosted the rate by at least 0.05pp in the last report, which we believe should fully reverse in February as the shutdown ended.

On compensation, we think the limited slack in the labor market likely helped to bid up wages and forecast that average hourly earnings grew 0.3% mom in February following a 0.1% mom increase in January. If our forecast proves correct, the yoy % should move up to 3.4% from 3.2%, marking the strongest wage gain in the current business cycle and supporting our outlook for wage growth to gradually track higher this year. Last, we expect average weekly hours to be little changed at 34.5 hours.

Upcoming policy speakers

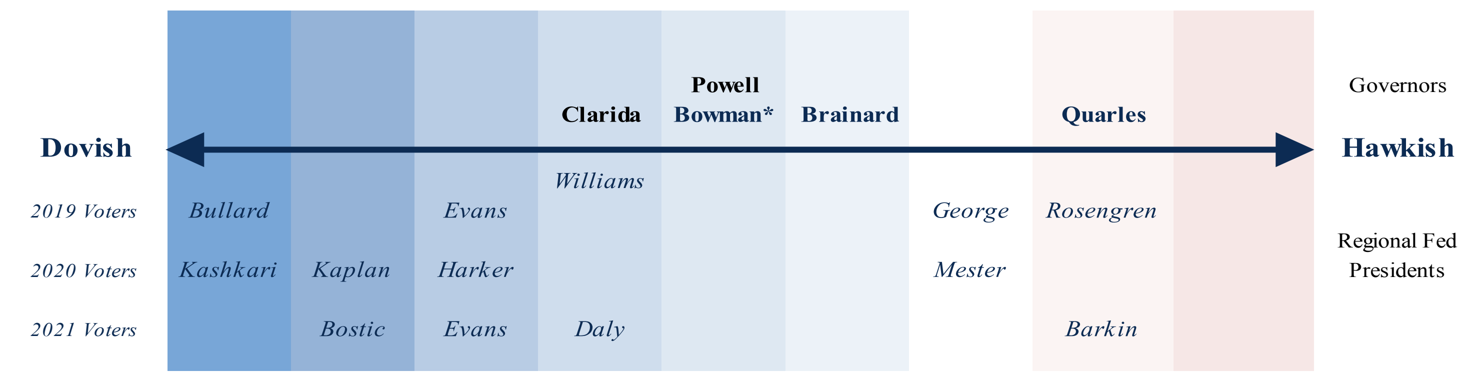
Key speaking engagements and news events*

Monday, Mar 04		*No events scheduled at this time*
Tuesday, Mar 05	12:50pm	*Richmond Fed President Barkin speaks at Rural Economy conference*
Wednesday, Mar 06	*12:00pm*	*New York Fed President Williams(voter) Speaks to Economic Club of New York*
	12:00pm	*Cleveland Fed President Mester Participates in Moderated Discussion*
Thursday, Mar 07	*12:15pm*	*Fed Governor Brainard (voter) speaks on economy and monetary policy*
Friday, Mar 08	***10:00pm***	***Fed Chair Powell (voter) speaks on monetary policy normalization review***

*All listed times are Eastern times. Dates and times are subject to change.
Source: Bloomberg

FOMC dove-hawk spectrum

FOMC dove-hawk spectrum



Note(s): NY Fed President (Williams) is always a voter.
* There is limited information on Bowman's monetary policy views. For now, we assume she will vote with the core of the committee.
Source: BofA Merrill Lynch Global Research

Economic forecast summary

Real Economic Activity, % SAAR	2Q 17	3Q 17	4Q 17	1Q 18	2Q 18	3Q 18	4Q 18	1Q 19	2Q 19	3Q 19	4Q 19	2017	2018	2019	2020
Real GDP	3.0	2.8	2.3	2.2	4.2	3.4	2.6	1.0	2.5	1.9	1.9	2.2	2.9	2.2	1.8
% Change, Year Ago	2.1	2.3	2.5	2.6	2.9	3.0	3.1	2.8	2.3	2.0	1.8				
Final Sales	2.8	1.8	3.2	1.9	5.4	1.0	2.5	1.4	2.6	2.0	2.0	2.2	2.8	2.1	1.9
Domestic Demand	2.6	1.7	4.0	1.9	4.0	2.9	2.6	1.6	2.8	2.2	2.2	2.5	2.9	2.4	2.1
Consumer Spending	2.9	2.2	3.9	0.5	3.8	3.5	2.8	1.2	2.5	2.1	2.1	2.5	2.6	2.4	2.0
Residential Investment	-5.5	-0.5	11.2	-3.4	-1.4	-3.5	-3.5	1.0	-1.0	-1.0	-1.0	3.3	-0.2	-1.3	-1.3
Nonresidential Investment	7.3	3.4	4.9	11.5	8.7	2.5	6.2	3.7	4.3	3.7	3.7	5.3	7.0	4.4	3.3
Structures	3.8	-5.8	1.3	13.9	14.5	-3.4	-4.2	2.0	3.5	2.5	2.5	4.6	5.0	1.2	2.6
Equipment	9.7	9.8	9.9	8.5	4.6	3.4	6.7	2.0	3.5	2.5	2.5	6.1	7.5	3.6	2.6
Intellectual Property	6.6	1.7	0.7	14.1	10.5	5.6	13.1	7.0	6.0	6.0	6.0	4.6	7.7	7.8	4.7
Government	0.1	-1.0	2.4	1.5	2.5	2.6	0.4	1.5	3.1	1.7	1.7	-0.1	1.5	1.8	1.8
Exports	3.6	3.5	6.6	3.6	9.3	-4.9	1.6	3.0	2.0	2.0	2.0	3.0	3.9	1.7	2.0
Imports	2.5	2.8	11.8	3.0	-0.6	9.3	2.7	4.0	3.0	3.0	3.0	4.6	4.6	3.7	3.0
Net Exports (Bil 12$)	-844	-846	-899	-902	-841	-950	-963	-979	-992	-1005	-1018	-859	-914	-998	-1053
Contribution to growth (ppts)	0.1	0.0	-0.9	0.0	1.2	-2.0	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.2	-0.3	-0.2
Inventory Accumulation (Bil 12$)	11.9	64.4	16.1	30.3	-36.8	89.8	97.1	75.0	70.0	65.0	60.0	22.5	45.1	67.5	60.0
Contribution to growth (ppts)	0.2	1.0	-0.9	0.3	-1.2	2.3	0.1	-0.4	-0.1	-0.1	-0.1	0.0	0.1	0.1	0.0
Nominal GDP (Bil $, SAAR)	19359	19588	19832	20041	20412	20658	20891	21021	21295	21510	21717	19485	20501	21386	22269
% SAAR	4.2	4.8	5.1	4.3	7.6	4.9	4.6	2.5	5.3	4.1	3.9	4.2	5.2	4.3	4.1
Key Indicators															
Industrial Production (% SAAR)	5.0	-1.5	7.7	2.6	6.4	5.8	5.3	-0.6	2.0	2.0	1.9	1.6	4.4	2.7	1.9
Capacity Utilization (%)	76.2	75.8	77.1	77.2	77.9	78.6	79.2	79.1	79.3	79.6	79.8	76.1	78.2	79.4	80.3
Nonfarm Payrolls (Avg mom change, 000s)	190	136	218	228	243	189	232	215	175	160	150	179	223	175	115
Civilian Unemployment Rate (%)	4.4	4.3	4.1	4.1	3.9	3.8	3.8	3.9	3.8	3.7	3.6	4.4	3.9	3.7	3.5
Civilian Participation Rate (%)	62.8	63.0	62.7	62.9	62.8	62.8	63.0	63.2	63.2	63.2	63.2	62.8	62.9	63.2	63.2
Productivity (% SAAR)	1.6	2.3	-0.3	0.3	3.0	2.2	1.7	-0.9	1.0	0.8	1.0	1.1	1.3	0.9	1.0
Personal Savings Rate (%)	6.7	6.7	6.3	7.4	6.6	6.3	6.1	6.3	6.6	6.8	7.1	6.7	6.6	6.7	6.7
Light Vehicle Sales (Millions SAAR)	16.8	17.1	17.6	17.1	17.2	16.9	17.5	16.9	16.8	16.5	16.2	17.1	17.2	16.6	15.5
Housing Starts (Thous. SAAR)	1171	1172	1259	1317	1261	1234	1167	1233	1263	1269	1274	1208	1245	1260	1285
Current Account (% of GDP)												-2.3	-2.3	-2.4	-2.6
US Budget Balance ($bn, Fiscal Year)												-666	-779	-930	-975
Inflation															
GDP Price Index (% SAAR)	1.2	2.2	2.5	2.0	3.0	1.7	1.8	1.7	2.8	2.2	2.0	1.9	2.2	2.1	2.3
% Change, Year Ago	1.7	1.9	2.0	2.0	2.4	2.3	2.2	2.1	2.0	2.1	2.2				
PCE Chain Prices (% SAAR)	0.8	1.6	2.7	2.5	2.0	1.5	1.5	1.2	2.6	1.9	1.6	1.8	2.0	1.7	2.0
% Change, Year Ago	1.6	1.6	1.8	1.9	2.2	2.2	1.9	1.6	1.7	1.8	1.8				
Core PCE Chain Prices (% SAAR)	1.3	1.4	2.1	2.2	2.1	1.5	1.7	2.2	2.1	2.0	1.9	1.6	1.9	2.0	2.1
% Change, Year Ago	1.6	1.5	1.6	1.7	1.9	2.0	1.9	1.9	1.9	2.0	2.1				
CPI, Consumer Prices (% SAAR)	0.1	2.1	3.3	3.5	1.7	2.0	1.5	0.7	3.0	2.1	1.6	2.1	2.4	1.8	2.1
% Change, Year Ago	1.9	2.0	2.1	2.2	2.7	2.6	2.2	1.6	1.8	1.8	1.9				
CPI ex Food & Energy (% SAAR)	0.8	1.8	2.2	3.0	1.8	2.0	2.2	2.5	2.3	2.3	2.3	1.8	2.1	2.3	2.4
% Change, Year Ago	1.8	1.7	1.8	1.9	2.2	2.2	2.2	2.2	2.3	2.4	2.4				

Shaded regions represent BofA Merrill Lynch US Economics Research forecast

Source: BofA Merrill Lynch US Economics Research

To view our long-run forecasts, see [US Economic Watch: The long View: the debate over the trend]

Global economic forecast summary

	GDP growth, %				CPI inflation, %				Short-term interest rates, %			
	2017	2018F	2019F	2020F	2017	2018F	2019F	2020F	Current	2018F	2019F	2020F
Global	**3.8**	**3.8**	**3.4**	**3.6**	**3.0**	**3.2**	**3.1**	**3.1**	**4.33**	**4.42**	**4.30**	**4.20**
US	2.2	2.8	2.2	1.8	2.1	2.4	1.7	2.1	2.38	2.38	2.88	2.88
Global ex US	**4.2**	**4.0**	**3.6**	**4.0**	**3.1**	**3.4**	**3.4**	**3.3**	**4.74**	**4.86**	**4.60**	**4.47**
Euro Area	2.4	1.8	1.1	1.5	1.5	1.8	1.2	1.2	0.00	0.00	0.00	0.25
UK	1.7	1.4	1.1	1.6	2.7	2.5	1.9	1.8	0.75	0.75	1.00	1.50
Japan	1.7	0.7	0.6	0.6	0.5	1.0	0.3	0.7	-0.10	-0.10	-0.10	0.00
Canada	3.0	2.1	1.8	1.8	1.6	2.3	1.7	1.9	1.75	1.75	2.00	2.25
Emerging EMEA	2.9	3.0	1.9	2.7	6.9	7.4	7.8	7.0	9.64	9.82	9.24	8.60
Latin America	1.7	1.4	1.9	2.3	6.5	6.9	7.6	5.8	10.94	12.09	10.14	8.72
Brazil	1.0	1.2	3.0	3.0	3.4	3.7	3.6	4.1	6.50	6.50	6.50	7.25
Emerging Asia	6.2	6.2	5.9	6.0	2.2	2.4	2.4	2.9	4.60	4.59	4.56	4.58
China	6.9	6.6	6.1	6.2	1.6	2.1	1.6	2.2	4.35	4.35	4.35	4.35

Shaded regions represent BofA Merrill Lynch Global Economics Research forecast.
Source: BofA Merrill Lynch Global Economics Research

Interest rate forecast summary

(% EOP)	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19	2017	2018	2019
Fed Funds	1.00-1.25	1.00-1.25	1.25-1.50	1.50-1.75	1.75-2.00	2.00-2.25	2.25-2.50	2.25-2.50	2.50-2.75	2.75-3.00	2.75-3.00	1.25-1.50	2.25-2.50	2.75-3.00
Fed effective	1.06	1.16	1.33	1.67	1.91	2.18	2.40	2.38	2.63	2.88	2.88	1.33	2.40	2.88
3-Month LIBOR	1.30	1.30	1.69	2.31	2.34	2.40	2.81	2.70	2.75	2.85	2.95	1.69	2.81	2.95
2-Year T-Note	1.38	1.39	1.88	2.27	2.53	2.82	2.49	2.80	2.90	3.00	2.90	1.88	2.49	2.90
5-Year T-Note	1.89	1.94	2.21	2.56	2.74	2.95	2.51	2.90	2.95	3.00	2.95	2.21	2.51	2.95
10-Year T-Note	2.30	2.37	2.41	2.74	2.86	3.06	2.68	3.00	3.05	3.00	3.00	2.41	2.68	3.00
30-Year T-Bond	2.83	2.90	2.74	2.97	2.99	3.21	3.01	3.10	3.15	3.05	3.05	2.74	3.01	3.05
2-Year swap	1.62	1.65	2.08	2.58	2.79	2.99	2.66	2.96	3.07	3.19	3.09	2.08	2.66	3.09
5-year swap	1.96	2.01	2.24	2.71	2.89	3.07	2.57	3.00	3.07	3.12	3.09	2.24	2.57	3.09
10-year swap	2.28	2.35	2.40	2.79	2.93	3.12	2.71	3.05	3.10	3.07	3.07	2.40	2.71	3.07
30-year swap	2.54	2.61	2.54	2.82	2.93	3.13	2.84	2.92	2.99	2.90	2.90	2.54	2.84	2.90

Source: BofA Merrill Lynch Global Research

FX rate forecast summary

	Spot	19-Mar	19-Jun	19-Sep	19-Dec	20-Mar	20-Jun	20-Sep	20-Dec
G3									
EUR-USD	1.14	1.16	1.20	1.22	1.25	1.25	1.27	1.30	1.30
USD-JPY	111	106	107	103	101	105	105	105	105
EUR-JPY	127	123	128	126	126	131	133	137	137
Dollar Bloc									
USD-CAD	1.32	1.33	1.35	1.36	1.35	1.35	1.35	1.35	1.35
AUD-USD	0.71	0.72	0.74	0.76	0.78	0.78	0.79	0.80	0.81
NZD-USD	0.68	0.69	0.70	0.71	0.72	0.72	0.73	0.73	0.74
Europe									
EUR-GBP	0.86	0.87	0.86	0.86	0.86	0.87	0.87	0.88	0.88
GBP-USD	1.33	1.33	1.40	1.42	1.45	1.44	1.46	1.48	1.48
EUR-CHF	1.14	1.17	1.18	1.20	1.22	1.23	1.24	1.25	1.25
USD-CHF	1.00	0.98	0.97	0.98	0.98	0.98	0.98	0.96	0.96
EUR-SEK	10.51	10.55	10.45	10.37	10.30	10.25	10.20	10.15	10.10
USD-SEK	9.24	9.09	8.71	8.50	8.24	8.20	8.03	7.81	7.77
EUR-NOK	9.74	9.70	9.60	9.50	9.40	9.30	9.20	9.10	9.00
USD-NOK	8.56	8.08	7.87	7.79	7.52	7.44	7.24	7.00	6.92

Source: BofA Merrill Lynch Global Research

Monthly CPI forecast update

	Non-seasonally Adjusted						Seasonally Adjusted			
	Total CPI			Energy			Total CPI		Core CPI	
	Level	mom	yoy	Level	mom	yoy	mom	yoy	mom	yoy
2017: Jul	244.79	-0.07	1.7	202.55	-1.02	3.4	0.09	1.8	0.12	1.7
2017: Aug	245.52	0.30	1.9	205.89	1.65	6.4	0.37	2.0	0.23	1.7
2017: Sep	246.82	0.53	2.2	215.71	4.77	10.1	0.46	2.2	0.16	1.7
2017: Oct	246.66	-0.06	2.0	207.29	-3.90	6.4	0.07	2.0	0.22	1.8
2017: Nov	246.67	0.00	2.2	209.38	1.01	9.4	0.30	2.2	0.14	1.7
2017: Dec	246.52	-0.06	2.1	206.60	-1.33	6.9	0.23	2.1	0.22	1.8
2018: Jan	247.87	0.54	2.1	210.66	1.97	5.5	0.40	2.1	0.30	1.8
2018: Feb	248.99	0.45	2.2	213.52	1.36	7.7	0.19	2.2	0.17	1.8
2018: Mar	249.55	0.23	2.4	212.55	-0.45	7.0	0.05	2.4	0.19	2.1
2018: Apr	250.55	0.40	2.5	218.83	2.95	7.9	0.18	2.4	0.11	2.1
2018: May	251.59	0.42	2.8	226.81	3.65	11.7	0.28	2.7	0.19	2.2
2018: Jun	251.99	0.16	2.9	229.14	1.03	12.0	0.19	2.8	0.16	2.2
2018: Jul	252.01	0.01	2.9	227.11	-0.89	12.1	0.18	2.9	0.21	2.3
2018: Aug	252.15	0.06	2.7	226.94	-0.07	10.2	0.11	2.7	0.08	2.2
2018: Sep	252.44	0.12	2.3	226.17	-0.34	4.8	0.05	2.3	0.16	2.2
2018: Oct	252.89	0.18	2.5	225.76	-0.18	8.9	0.31	2.5	0.20	2.2
2018: Nov	252.04	-0.33	2.2	215.91	-4.36	3.1	-0.01	2.2	0.23	2.3
2018: Dec	251.23	-0.32	1.9	205.91	-4.63	-0.3	-0.01	1.9	0.18	2.2
2019: Jan	251.71	0.19	1.6	200.56	-2.59	-4.8	-0.02	1.5	0.24	2.1
2019: Feb	252.74	0.41	1.5	202.35	0.89	-5.2	0.15	1.5	0.19	2.2
2019: Mar	253.85	0.44	1.7	210.22	3.89	-1.1	0.29	1.7	0.19	2.2
2019: Apr	254.97	0.44	1.8	215.52	2.52	-1.5	0.25	1.8	0.19	2.3
2019: May	255.88	0.35	1.7	221.45	2.75	-2.4	0.24	1.8	0.19	2.3
2019: Jun	256.53	0.25	1.8	226.69	2.37	-1.1	0.28	1.8	0.19	2.3
2019: Jul	256.45	-0.03	1.8	223.84	-1.26	-1.4	0.13	1.8	0.19	2.3
2019: Aug	256.81	0.14	1.9	223.43	-0.18	-1.5	0.19	1.9	0.19	2.4
2019: Sep	256.95	0.05	1.8	219.89	-1.59	-2.8	-0.01	1.8	0.19	2.4
2019: Oct	257.12	0.07	1.7	216.39	-1.59	-4.1	0.18	1.7	0.19	2.4
2019: Nov	256.82	-0.12	1.9	212.52	-1.79	-1.6	0.18	1.9	0.19	2.4
2019: Dec	256.45	-0.14	2.1	207.91	-2.17	1.0	0.15	2.0	0.19	2.4

NSA: Not seasonally adjusted, SA: seasonally adjusted. MoM is monthly percent change; YoY is year-over-year percent change. Shaded regions represent BofA Merrill Lynch US Rates Research forecast.
Source: BofA Merrill Lynch Global Research

Rolling calendar of business indicators

Monday	Tuesday	Wednesday	Thursday	Friday
4 Mar 10:00 am: Construction Spending – Dec Dec .... 0.0%* Nov .... 0.8% Oct 0.1%	5 Mar 8:30 am: New Home Sales– Dec Dec .... 580K* Nov .... 657K Oct .... 562K 10:00 am: ISM Non-Manufacturing Index – Feb Feb .... 56.5* Jan .... 56.7 Dec .... 58.0 2:00 pm: Monthly Budget Statement – Jan Jan .... $25.0B* Dec .... -$13.5B Nov .... -$204.9B	6 Mar MBA Mortgage Applications -(week ending 03/01/19) 8:15 am: ADP Employment Change– Feb Feb .... 200K* Jan .... 213K Dec .... 263K 8:30 am: Trade Balance– Dec Dec .... -$56.9B* Nov .... -$49.3B Oct .... -$55.7B 2:00 pm: Fed Releases Beige Book	7 Mar 8:30 am: Initial Jobless Claims -(week ending 03/02/19) 8:30 am: Nonfarm Productivity– 4Q(F) 4Q(F) .... 1.7%* 3Q .... 2.2% 2Q .... 3.0% 8:30 am: Nonfarm Productivity– 4Q(F) 4Q(F) .... 1.6%* 3Q .... 0.9% 2Q .... -2.8%	8 Mar 8:30 am: Nonfarm Payrolls – Feb Feb .... 210k* Jan .... 304k Dec .... 312k 8:30 am: Private Payrolls – Feb Feb .... 200k* Jan .... 296k Dec .... 301k 8:30 am: Unemployment Rate – Feb Feb .... 3.8%* Jan .... 4.0% Dec .... 3.9% 8:30 am: Avg. Hourly Earnings – Feb Feb .... 0.3%* Jan .... 0.1% Dec .... 0.4% 8:30 am: Housing Starts – Jan Jan .... 1190k* Dec .... 1078k Nov .... 1214k 8:30 am: Building Permits – Jan Jan .... 1250k* Dec .... 1326k Nov 1322k
11 Mar 8:30 am: Advance Retail Sales – Jan Dec .... -1.2% Nov .... 0.1% 8:30 am: Retail Sales ex Autos – Jan Dec .... -1.8% Nov .... 0.0% 8:30 am: Retail Sales ex Autos &Gas– Jan Dec .... -1.4% Nov .... 0.7% 8:30 am: Core Control Group – Jan Dec .... -1.7% Nov .... 1.0% 10:00 am: Business Inventories – Dec Nov .... -0.1% Oct 0.6%	12 Mar 6:00 am: NFIB Small Business Optimism – Feb Jan .... 101.2 Dec .... 104.4 8:30 am: Consumer Price Index – Feb Jan .... 0.0% Dec .... 0.0% 8:30 am: Core CPI – Feb Jan .... 0.2% Dec 0.2%	13 Mar MBA Mortgage Applications -(week ending 03/08/19) 8:30 am: PPI Final Demand – Feb Jan .... -0.1% Dec .... -0.1% 8:30 am: Core PPI – Feb Jan .... 0.3% Dec .... 0.0% 8:30 am: Core Core PPI – Feb Jan .... 0.2% Dec 0.0%	14 Mar 8:30 am: Initial Jobless Claims -(week ending 03/09/19) 8:30 am: Import Price Index – Feb Jan .... -0.5% Dec .... -1.0%	15 Mar 8:30 am: Empire Manufacturing – Mar Feb .... 8.8 Jan .... 3.9 9:15 am: Industrial Production – Feb Jan .... -0.6% Dec .... 0.1% 9:15 am: Capacity Utilization – Feb Jan .... 78.2% Dec .... 78.8% 9:15 am: Mfg. Production – Feb Jan .... -0.9% Dec .... 0.8% 10:00 am: U. of Michigan Consumer Sentiment – Mar (P) Feb .... 95.5 Jan .... 91.2 4:00 pm: Net Long-Term TIC Flows – Jan Dec .... -$48.3B Nov $32.0B
18 Mar 10:00 am: NAHB Housing Market Index– Mar Feb .... 62 Jan 58	19 Mar 8:30 am: Housing Starts – Feb Jan .... DLYD Dec .... 1,078K 8:30 am: Building Permits – Feb Jan .... DLYD Dec 1,326K	20 Mar MBA Mortgage Applications -(week ending 03/15/19) 2:00pm: FOMC Rate Decision	21 Mar 8:30 am: Initial Jobless Claims -(week ending 03/16/19) 8:30 am: Current Account Balance– 4Q 3Q .... -$124.8B 2Q .... -$101.2B 8:30 am: Philly Fed Index – Mar Feb .... -4.1 Jan 17.0	22 Mar 10:00 am: Existing Home Sales– Feb Jan .... 4.94M Dec .... 5.00M 2:00 pm: Monthly Budget Statement – Feb Jan .... NR Dec .... -$13.5B

*Projections— subject to revision as additional data become available. P – preliminary reading , S – second reading, T – third reading, F – final reading

Source: BofA Merrill Lynch Global Research

Disclosures

Important Disclosures

BofA Merrill Lynch Research Personnel (including the analyst(s) responsible for this report) receive compensation based upon, among other factors, the overall profitability of Bank of America Corporation, including profits derived from investment banking. The analyst(s) responsible for this report may also receive compensation based upon, among other factors, the overall profitability of the Bank's sales and trading businesses relating to the class of securities or financial instruments for which such analyst is responsible.

Other Important Disclosures

Prices are indicative and for information purposes only. Except as otherwise stated in the report, for the purpose of any recommendation in relation to: (i) an equity security, the price referenced is the publicly traded price of the security as of close of business on the day prior to the date of the report or, if the report is published during intraday trading, the price referenced is indicative of the traded price as of the date and time of the report; or (ii) a debt security (including equity preferred and CDS), prices are indicative as of the date and time of the report and are from various sources including Bank of America Merrill Lynch trading desks.
The date and time of completion of the production of any recommendation in this report shall be the date and time of dissemination of this report as recorded in the report timestamp.

Recipients who are not institutional investors or market professionals should seek the advice of their independent financial advisor before considering information in this report in connection with any investment decision, or for a necessary explanation of its contents.
Officers of MLPF&S or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments.
Individuals identified as economists do not function as research analysts under U.S. law and reports prepared by them are not research reports under applicable U.S. rules and regulations. Macroeconomic analysis is considered investment research for purposes of distribution in the U.K. under the rules of the Financial Conduct Authority.
BofA Merrill Lynch Global Research policies relating to conflicts of interest are described at https://rsch.baml.com/coi
"BofA Merrill Lynch" includes Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") and its affiliates. Investors should contact their BofA Merrill Lynch representative or Merrill Lynch Global Wealth Management financial advisor if they have questions concerning this report or concerning the appropriateness of any investment idea described herein for such investor. "BofA Merrill Lynch" and "Merrill Lynch" are each global brands for BofA Merrill Lynch Global Research.
Information relating to Non-US affiliates of BofA Merrill Lynch and Distribution of Affiliate Research Reports:
MLPF&S distributes, or may in the future distribute, information of the following non-US affiliates in the US (short name: legal name, regulator): Merrill Lynch (South Africa): Merrill Lynch South Africa (Pty) Ltd., regulated by The Financial Service Board; MLI (UK): Merrill Lynch International, regulated by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA); BofASE (France): BofA Securities Europe SA is authorized by the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers (AMF); BAMLI DAC (Milan): Bank of America Merrill Lynch International DAC, Milan Branch, regulated by the Bank of Italy, the European Central Bank (ECB) and the Central Bank of Ireland (CBI); Merrill Lynch (Australia): Merrill Lynch Equities (Australia) Limited, regulated by the Australian Securities and Investments Commission; Merrill Lynch (Hong Kong): Merrill Lynch (Asia Pacific) Limited, regulated by the Hong Kong Securities and Futures Commission (HKSFC); Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd, regulated by the Monetary Authority of Singapore (MAS); Merrill Lynch (Canada): Merrill Lynch Canada Inc, regulated by the Investment Industry Regulatory Organization of Canada; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa de Bolsa, regulated by the Comisión Nacional Bancaria y de Valores; Merrill Lynch (Argentina): Merrill Lynch Argentina SA, regulated by Comisión Nacional de Valores; Merrill Lynch (Japan): Merrill Lynch Japan Securities Co., Ltd., regulated by the Financial Services Agency; Merrill Lynch (Seoul): Merrill Lynch International, LLC Seoul Branch, regulated by the Financial Supervisory Service; Merrill Lynch (Taiwan): Merrill Lynch Securities (Taiwan) Ltd., regulated by the Securities and Futures Bureau; DSP Merrill Lynch (India): DSP Merrill Lynch Limited, regulated by the Securities and Exchange Board of India; Merrill Lynch (Indonesia): PT Merrill Lynch Sekuritas Indonesia, regulated by Otoritas Jasa Keuangan (OJK); Merrill Lynch (Israel): Merrill Lynch Israel Limited, regulated by Israel Securities Authority; Merrill Lynch (Russia): OOO Merrill Lynch Securities, Moscow, regulated by the Central Bank of the Russian Federation; Merrill Lynch (DIFC): Merrill Lynch International (DIFC Branch), regulated by the Dubai Financial Services Authority (DFSA); Merrill Lynch (Spain): Merrill Lynch Capital Markets Espana, S.A.S.V., regulated by Comisión Nacional del Mercado De Valores; Merrill Lynch (Brazil): Bank of America Merrill Lynch Banco Multiplo S.A., regulated by Comissão de Valores Mobiliários; Merrill Lynch KSA Company: Merrill Lynch Kingdom of Saudi Arabia Company, regulated by the Capital Market Authority.
This information: has been approved for publication and is distributed in the United Kingdom (UK) to professional clients and eligible counterparties (as each is defined in the rules of the FCA and the PRA) by MLI (UK), which is authorized by the PRA and regulated by the FCA and the PRA - details about the extent of our regulation by the FCA and PRA are available from us on request; has been approved for publication and is distributed in the European Economic Area (EEA) by BofASE (France), which is authorized by the ACPR and regulated by the ACPR and the AMF; has been considered and distributed in Japan by Merrill Lynch (Japan), a registered securities dealer under the Financial Instruments and Exchange Act in Japan, or its permitted affiliates; is issued and distributed in Hong Kong by Merrill Lynch (Hong Kong) which is regulated by HKSFC; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in India by DSP Merrill Lynch (India); and is issued and distributed in Singapore to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch (Singapore) (Company Registration No 198602883D). Merrill Lynch (Singapore) is regulated by MAS. Bank of America N.A., Australian Branch (ARBN 064 874 531), AFS License 412901 (BANA Australia) and Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distribute this information in Australia only to 'Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of BANA Australia, neither MLEA nor any of its affiliates involved in preparing this information is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this information in Brazil and its local distribution is by Merrill Lynch (Brazil) in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the DFSA. Information prepared and issued by Merrill Lynch (DIFC) is done so in accordance with the requirements of the DFSA conduct of business rules. Bank of America Merrill Lynch International DAC, Frankfurt Branch (BAMLI DAC (Frankfurt)) distributes this information in Germany and is regulated by BaFin, the ECB and the CBI.
This information has been prepared and issued by MLPF&S and/or one or more of its non-US affiliates. The author(s) of this information may not be licensed to carry on regulated activities in your jurisdiction and, if not licensed, do not hold themselves out as being able to do so. MLPF&S is the distributor of this information in the US and accepts full responsibility for information distributed to MLPF&S clients in the US by its non-US affiliates. Any US person receiving this information and wishing to effect any transaction in any security discussed herein should do so through MLPF&S and not such foreign affiliates. Hong Kong recipients of this information should contact Merrill Lynch (Asia Pacific) Limited in respect of any matters relating to dealing in securities or provision of specific advice on securities or any other matters arising from, or in connection with, this information. Singapore recipients of this information should contact Merrill Lynch (Singapore) Pte Ltd in respect of any matters arising from, or in connection with, this information.
General Investment Related Disclosures:
Taiwan Readers: Neither the information nor any opinion expressed herein constitutes an offer or a solicitation of an offer to transact in any securities or other financial instrument. No part of this report may be used or reproduced or quoted in any manner whatsoever in Taiwan by the press or any other person without the express written consent of BofA Merrill Lynch.
This document provides general information only, and has been prepared for, and is intended for general distribution to, BofA Merrill Lynch clients. Neither the information nor any opinion expressed constitutes an offer or an invitation to make an offer, to buy or sell any securities or other financial instrument or any derivative related to such securities or instruments (e.g., options, futures, warrants, and contracts for differences). This document is not intended to provide personal investment advice and it does not take into account the specific investment objectives, financial situation and the particular needs of, and is not directed to, any specific person(s). This document and its content do not constitute, and should not be considered to constitute, investment advice for purposes of ERISA, the US tax code, the Investment Advisers Act or otherwise. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this document and should understand that statements regarding future prospects may not be realized. Any decision to purchase or subscribe for securities in any offering must be based solely on existing public information on such security or the information in the prospectus or other offering document issued in connection with such offering, and not on this document.
Securities and other financial instruments referred to herein, or recommended, offered or sold by BofA Merrill Lynch, are not insured by the Federal Deposit Insurance Corporation and are not

deposits or other obligations of any insured depository institution (including, Bank of America, N.A.). Investments in general and, derivatives, in particular, involve numerous risks, including, among others, market risk, counterparty default risk and liquidity risk. No security, financial instrument or derivative is suitable for all investors. In some cases, securities and other financial instruments may be difficult to value or sell and reliable information about the value or risks related to the security or financial instrument may be difficult to obtain. Investors should note that income from such securities and other financial instruments, if any, may fluctuate and that price or value of such securities and instruments may rise or fall and, in some cases, investors may lose their entire principal investment. Past performance is not necessarily a guide to future performance. Levels and basis for taxation may change.

BofA Merrill Lynch is aware that the implementation of the ideas expressed in this report may depend upon an investor's ability to "short" securities or other financial instruments and that such action may be limited by regulations prohibiting or restricting "shortselling" in many jurisdictions. Investors are urged to seek advice regarding the applicability of such regulations prior to executing any short idea contained in this report.

Foreign currency rates of exchange may adversely affect the value, price or income of any security or financial instrument mentioned in this report. Investors in such securities and instruments effectively assume currency risk.

UK Readers: The protections provided by the U.K. regulatory regime, including the Financial Services Scheme, do not apply in general to business coordinated by BofA Merrill Lynch entities located outside of the United Kingdom.

MLPF&S or one of its affiliates is a regular issuer of traded financial instruments linked to securities that may have been recommended in this report. MLPF&S or one of its affiliates may, at any time, hold a trading position (long or short) in the securities and financial instruments discussed in this report.

BofA Merrill Lynch, through business units other than BofA Merrill Lynch Global Research, may have issued and may in the future issue trading ideas or recommendations that are inconsistent with, and reach different conclusions from, the information presented herein. Such ideas or recommendations may reflect different time frames, assumptions, views and analytical methods of the persons who prepared them, and BofA Merrill Lynch is under no obligation to ensure that such other trading ideas or recommendations are brought to the attention of any recipient of this information.

In the event that the recipient received this information pursuant to a contract between the recipient and MLPF&S for the provision of research services for a separate fee, and in connection therewith MLPF&S may be deemed to be acting as an investment adviser, such status relates, if at all, solely to the person with whom MLPF&S has contracted directly and does not extend beyond the delivery of this report (unless otherwise agreed specifically in writing by MLPF&S). If such recipient uses the services of MLPF&S in connection with the sale or purchase of a security referred to herein, MLPF&S may act as principal for its own account or as agent for another person. MLPF&S is and continues to act solely as a broker-dealer in connection with the execution of any transactions, including transactions in any securities referred to herein.

Copyright and General Information:

Materials prepared by BofA Merrill Lynch Global Research personnel are based on public information. Facts and views presented in this material have not been reviewed by, and may not reflect information known to, professionals in other business areas of BofA Merrill Lynch, including investment banking personnel. BofA Merrill Lynch has established information barriers between BofA Merrill Lynch Global Research and certain business groups. As a result, BofA Merrill Lynch does not disclose certain client relationships with, or compensation received from, such issuers. To the extent this material discusses any legal proceeding or issues, it has not been prepared as nor is it intended to express any legal conclusion, opinion or advice. Investors should consult their own legal advisers as to issues of law relating to the subject matter of this material. BofA Merrill Lynch Global Research personnel's knowledge of legal proceedings in which any BofA Merrill Lynch entity and/or its directors, officers and employees may be plaintiffs, defendants, co-defendants or co-plaintiffs with or involving issuers mentioned in this material is based on public information. Facts and views presented in this material that relate to any such proceedings have not been reviewed by, discussed with, and may not reflect information known to, professionals in other business areas of BofA Merrill Lynch in connection with the legal proceedings or matters relevant to such proceedings.

This information has been prepared independently of any issuer of securities mentioned herein and not in connection with any proposed offering of securities or as agent of any issuer of any securities. None of MLPF&S, any of its affiliates or their research analysts has any authority whatsoever to make any representation or warranty on behalf of the issuer(s). BofA Merrill Lynch Global Research policy prohibits research personnel from disclosing a recommendation, investment rating, or investment thesis for review by an issuer prior to the publication of a research report containing such rating, recommendation or investment thesis.

Any information relating to the tax status of financial instruments discussed herein is not intended to provide tax advice or to be used by anyone to provide tax advice. Investors are urged to seek tax advice based on their particular circumstances from an independent tax professional.

The information herein (other than disclosure information relating to BofA Merrill Lynch and its affiliates) was obtained from various sources and we do not guarantee its accuracy. This information may contain links to third-party websites. BofA Merrill Lynch is not responsible for the content of any third-party website or any linked content contained in a third-party website. Content contained on such third-party websites is not part of this information and is not incorporated by reference. The inclusion of a link does not imply any endorsement by or any affiliation with BofA Merrill Lynch. Access to any third-party website is at your own risk, and you should always review the terms and privacy policies at third-party websites before submitting any personal information to them. BofA Merrill Lynch is not responsible for such terms and privacy policies and expressly disclaims any liability for them.

All opinions, projections and estimates constitute the judgment of the author as of the date of publication and are subject to change without notice. Prices also are subject to change without notice. BofA Merrill Lynch is under no obligation to update this information and BofA Merrill Lynch's ability to publish information on the subject issuer(s) in the future is subject to applicable quiet periods. You should therefore assume that BofA Merrill Lynch will not update any fact, circumstance or opinion contained herein.

Certain outstanding reports or investment opinions relating to securities, financial instruments and/or issuers may no longer be current. Always refer to the most recent research report relating to an issuer prior to making an investment decision.

In some cases, an issuer may be classified as Restricted or may be Under Review or Extended Review. In each case, investors should consider any investment opinion relating to such issuer (or its security and/or financial instruments) to be suspended or withdrawn and should not rely on the analyses and investment opinion(s) pertaining to such issuer (or its securities and/or financial instruments) nor should the analyses or opinion(s) be considered a solicitation of any kind. Sales persons and financial advisors affiliated with MLPF&S or any of its affiliates may not solicit purchases of securities or financial instruments that are Restricted or Under Review and may only solicit securities under Extended Review in accordance with firm policies.

Neither BofA Merrill Lynch nor any officer or employee of BofA Merrill Lynch accepts any liability whatsoever for any direct, indirect or consequential damages or losses arising from any use of this information.

Research Analysts

US Economics

Michelle Meyer
US Economist
MLPF&S
+1 646 855 6261
mmeyer2@baml.com

Joseph Song
US Economist
MLPF&S
+1 646 855 8138
jsong5@baml.com

Alexander Lin, CFA
US Economist
MLPF&S
+1 646 855 6499
alexander.lin@baml.com

Mingzi Yi
US and Canada Economist
MLPF&S
+1 646 855 8069
mingzi.yi@baml.com

Stephen Juneau
US Economist
MLPF&S
+1 646 855 7254
stephen.juneau@baml.com

Anna Zhou
US Economist
MLPF&S
+1 646 855 9002
anna.zhou@baml.com