

# U.S. Economic Comment

- Slow inflation in Q1: transitory or fundamental?
- IOER confusion: ceiling or floor?

**Michael Moran**

Daiwa Capital Markets America  
 212-612-6392  
 michael.moran@us.daiwacm.com

## Inflation: Transitory in Play, but so too Fundamentals

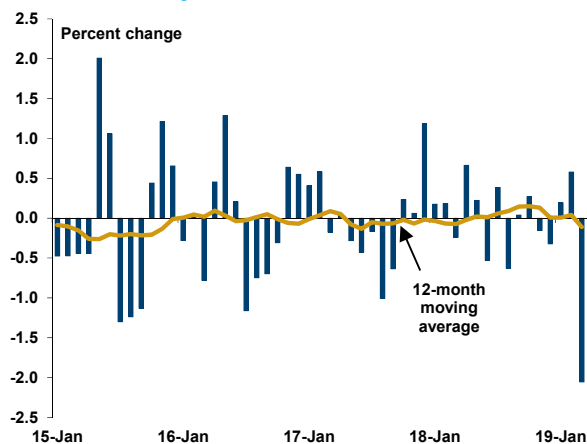
Chairman Powell's press conference this week was dominated by questions related to the slow rate of inflation in early 2019 and the Fed's possible reaction. Reporters seemed to be pressing Mr. Powell to open a door for a rate cut, but he argued that policy was properly calibrated at this time ("we think our policy stance is appropriate at the moment and we don't see a strong case for moving in either direction").

Mr. Powell defended the FOMC's rigid stance by noting that much of the recent easing in inflation was the result of transitory factors -- sharp price reductions on a few items that are not likely to be sustained or repeated. He highlighted recent changes in airfares, portfolio management fees, and apparel prices. These areas have indeed been soft, falling 2.0 percent in March and leaving a net decline for the quarter (the quarter-to-quarter drop totaled 1.5 percent, annual rate, left chart).

He also cited stable inflation as measured by the trimmed mean price index for personal consumption expenditures. This gauge, which is published by the Federal Reserve Bank of Dallas, excludes outlying observations at both ends of the distribution of price changes to remove idiosyncratic shifts and leave a clear picture of underlying inflation. This measure shows some month-to-month variation, but the year-over-year change has indeed been steady at a rate close to two percent (right chart). The Cleveland Fed constructs a similar measure (the median CPI), and it shows a hint of acceleration.

Thus, it is difficult to criticize the Fed for not considering easier policy at this time. However, easing could remain an issue in the months ahead, as fundamental constraints on inflation also seem to be present. In fact, the latest week brought two economic reports supporting an outlook for benign inflation: productivity and the employment cost index.

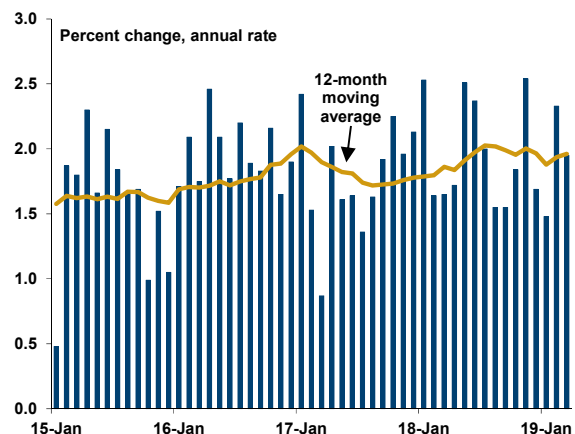
### CPI: Transitory Influences\*



\* A weighted average index constructed from the Apparel, Airline Fare, and Financial Services components of the Consumer Price Index. Weights are derived from the relative importance of each component in the CPI.

Source: Bureau of Labor Statistics via Haver Analytics; Daiwa Capital Markets America

### Trimmed-Mean 1-Month PCE Inflation



PCE = personal consumption expenditures

Source: Federal Reserve Bank of Dallas via Haver Analytics

This report is issued by Daiwa Securities Group Inc. through its relevant group companies. Daiwa Securities Group Inc. is the global brand name of Daiwa Securities Co. Ltd., Tokyo ("Daiwa Securities") and its subsidiaries worldwide that are authorized to do business within their respective jurisdictions. These include: Daiwa Capital Markets Hong Kong Ltd. (Hong Kong), regulated by the Hong Kong Securities and Futures Commission, Daiwa Capital Markets Europe Limited (London), regulated by the Financial Conduct Authority and a member of the London Stock Exchange, and Daiwa Capital Markets America Inc. (New York), a U.S. broker-dealer registered with the U.S. Securities and Exchange Commission, a futures commission merchant regulated by the U.S. Commodity Futures Trading Commission, and a primary dealer in U.S. government securities. The data contained in this report were taken from statistical services, reports in our possession, and from other sources believed to be reliable. The opinions and estimates expressed are our own, and we make no representation or guarantee either as to accuracy, completeness or as to the existence of other facts or interpretations that might be significant.

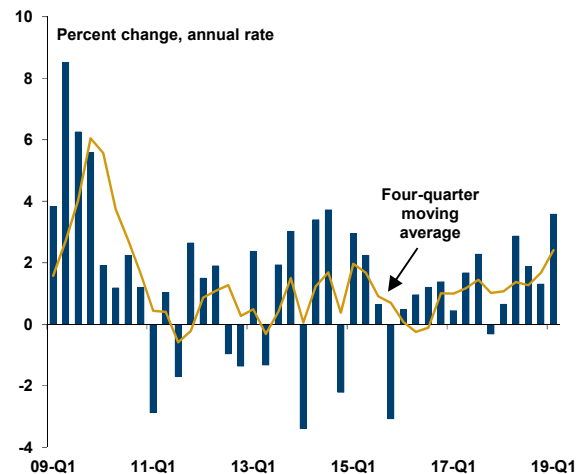
Analysts were looking for solid growth in productivity in the first quarter (approximately two percent versus increases closer to one percent in the past several years), but the change went far beyond expectations with a jump of 3.6 percent. Productivity often moves erratically, and thus any quarterly change should be interpreted cautiously. However, the jump followed favorable results in the prior three quarters, which left year-over-year growth at 2.4 percent. This pace is the fastest since the early stages of the current expansion, when a return to normal levels of production after the recession translated to a temporary spurt in efficiency. The pickup in the past year seems to suggest an acceleration in the underlying trend (chart, left).

The employment cost index rose 0.7 percent in the first quarter of the year, one of the better readings of the current expansion. While the latest advance compared favorably with other recent observations, it was not overwhelming considering the current environment. With the labor market tight and businesses having trouble finding qualified workers, faster increases might be expected. One might hope that wages would grow at a pace equal to inflation plus productivity gains. In tight labor markets, compensation growth might be even faster. With inflation at 1.5 percent and productivity possibly growing at more than two percent, the increase of 2.9 percent in employment costs in the past year does not raise inflation alarms.

Projections of faster inflation at this time are based largely on the view that tight labor markets will push wages higher, which will lead businesses to raise prices. Wage growth is picking up, but the rate of advance is not especially rapid for a fully employed economy. Moreover, given recent productivity gains, businesses should be able to absorb the labor costs rather than pass them through to the prices of their products.

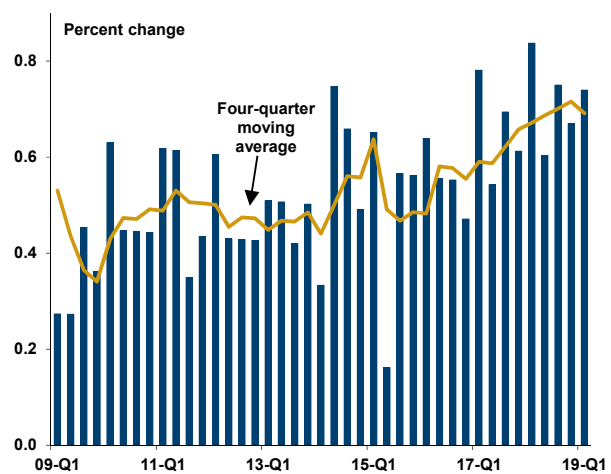
We do not doubt Chairman Powell's view that temporary factors were restraining inflation early this year, but fundamentals also seemed to be in play.

### Nonfarm Productivity



Source: Bureau of Labor Statistics via Haver Analytics

### Employment Cost Index



Source: Bureau of Labor Statistics via Haver Analytics

## IOER: Best Viewed as a Floor on the Federal Funds Rate

We have been bombarded in past two weeks with questions regarding the relationship between the federal funds rate (FFR) and the interest rate on excess reserves (IOER), which has shifted recently. Federal funds have generally traded at a rate below that on excess reserves since late 2008, when the Fed started to pay interest on reserves (a spread of 5 to 20 basis points was typical, chart). The fed funds rate gradually moved closer to IOER during much of 2018, finally matching it in November and exceeding it in the past two weeks or so (an average federal funds rate of 2.44 percent in the week ended April 26 versus 2.40 percent for the rate on excess reserves).

Some market participants expressed puzzlement because they viewed IOER as a ceiling on the federal funds rate. Others expressed concern because the recent shift raised the possibility that the Fed was losing control over the federal funds rate. We are neither puzzled nor concerned.

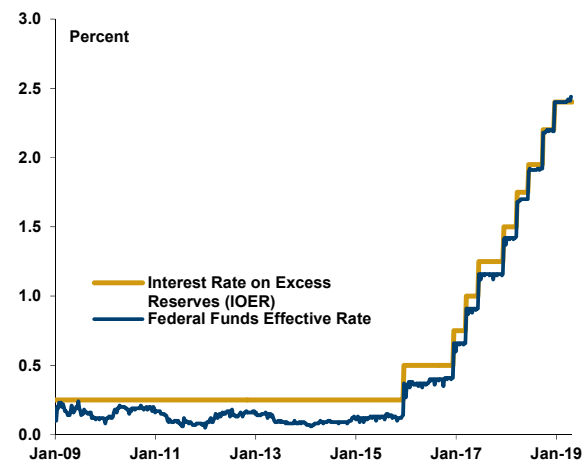
We are not puzzled that IOER has broken down as a ceiling on the fed funds rate because it was never meant to be a ceiling. In an environment of abundant reserves in the banking system, which is where we have been since the Fed introduced quantitative easing, the federal funds rate does not need a ceiling; the huge volume of reserves will keep the rate low. The challenge for monetary policy in an environment of abundant reserves is lifting the federal funds rate when officials feel that policy should be tightened. This is the job of the interest rate on excess reserves. Raising IOER will lift the federal funds rate by approximately the same amount, and thus it can be viewed as a floor that pushes the federal funds upward (or allows FFR to decline if the Fed wishes to ease policy).

An intuitive perspective shows more clearly why IOER is best viewed as a floor on the federal funds rate. An institution holding reserves at the Fed always has the option of investing those funds elsewhere, with the federal funds market a convenient alternative. In a perfect market with no regulatory constraints, no depository would shift from reserves to federal funds if the funds rate was lower than that on excess reserves. Thus, in theory, FFR should be equal to or perhaps slightly greater than IOER. That is, IOER is a theoretical floor.

Of course, the federal funds rate is often (usually) below IOER, but this is because of certain regulatory constraints that leave the market less than perfect. Most important, some reserve account holders, such as government sponsored enterprises, are not eligible to receive interest on their reserve deposits, and thus they have an incentive to shift from this zero-rate account to the federal funds market. Their efforts to unload their reserves will push the federal funds rate below the IOER. Depository institutions will be willing takers of these discounted funds because they can be held at the Fed and earn the IOER, leaving an essentially risk-free arbitrage profit.

Logic might suggest that such arbitrage activity would tend to limit the downward pressure on the federal funds rate and leave it close to the interest rate on excess reserves. However, regulations again come into play. Absorbing the funds that government sponsored enterprises are trying to unload will increase the balance sheets of the accepting depository institutions, which will generate higher costs of deposit insurance (which are now based on asset size rather than deposit liabilities) and increase the capital requirements of these institutions. Thus, arbitrage activity will be limited and the gap between IOER and the federal funds rate will exist in most circumstances.

## Money Market Rates



Source: Federal Reserve Board via Haver Analytics

Thus, taking account of regulatory issues, IOER is likely to be higher than FFR. This does not make the rate on reserves a ceiling. Rather, it is an imperfect floor, one that lacks precision and is likely to show some variation. We should not be puzzled that the relationship between these rates jumps around; noise happens. The government sponsored enterprises will be less active at times, which will limit downward pressure on the federal funds rate. Alternatively, while reserves in the banking system might be abundant in total, they could become mal-distributed at times, which might require some institutions to bid actively for funds which would lift FFR. Another possibility: perhaps the reserve market is becoming tight. That is, depository institutions might be demanding a large volume of excess reserves, perhaps to help meet liquidity requirements imposed after the financial crisis (another regulatory influence pushing markets away from laboratory-like perfection). If this is the case, the Fed will have to add more reserves by expanding its portfolio. Quantitative tightening might have gone too far.

The Fed seemed to expect some noise in the relationship between IOER and FFR. That is why it uses another tool -- the rate on reverse repurchase agreements -- to secure a floor on the federal funds rate. The Fed offers this investment outlet to a long list of counterparties, and its widespread availability at a rate fixed by the Fed tends to prevent money market rates in general from moving to low levels. The combination of these two administered interest rates -- a belt and suspenders approach -- should serve as an effective floor on the federal funds rate, while abundant reserves limit upside pressure. The Fed is not losing control over short-term interest rates.

## Review

Week of April 29, 2019	Actual	Consensus	Comments
<b>Personal Income, Consumption, and Prices (March)</b>	<b>0.1%, 0.9%, 0.0%</b>	<b>0.4%, 0.7%, 0.1%</b>	Wages and salaries rose moderately in March (0.4%), but a drop in farm income (-40.7%) restrained the overall advance. Although total income rose only slightly, individuals spent actively after slow results in the prior three months. The March reading has implications for Q2, as the sharp advance left a high jumping-off point for the second quarter. That is, the level of consumption in March was well above the average in Q1. The core PCE price index was unchanged after increasing only 0.1% per month in the prior two months. The year-over-year change in the core index totaled 1.6%, down from a recent high of 2.0% in July.
<b>Employment Cost Index (2019-Q1)</b>	<b>0.7%</b>	<b>0.7%</b>	The Q1 increase in the employment cost index was in the upper end of its recent range, but it was not firm enough to boost the underlying trend (year-over-year growth was steady at 2.9%). With the labor market tight and productivity growth possibly picking up (see below), one might have expected better results.
<b>Consumer Confidence (April)</b>	<b>129.2 (+4.0%)</b>	<b>126.8 (+2.2%)</b>	The advance in the Conference Board's index of consumer confidence left the measure in the upper portion of its recent range, although shy of the lofty readings in late 2018 (average of 136.1 from August through November). Assessments of the labor market played a role in boosting attitudes, as the share of respondents reporting that jobs were plentiful rose 4.3 percentage points to 46.8%, matching the high for the current cycle. The share indicating that jobs were hard to get dipped 0.5 percentage point to 13.3%. The net reading of 33.5% (plentiful less hard to get) was only a touch below the cyclical high of 34.2% in November.
<b>ISM Manufacturing Index (April)</b>	<b>52.8% (-2.5 Pct. Pts.)</b>	<b>55.0% (-0.3 Pct. Pt.)</b>	The drop in the ISM index in April pushed the measure well below the average of 58.8% in 2018. The new orders component led the retreat in April (-5.7 percentage points to 51.7%). This measure has been moving irregularly lower since early 2018. The slow order flow led to a drop in production (-3.5 percentage points to 52.3%), well below the average of 60.7% from last year. Manufacturers also slowed the pace of hiring, with the employment index dropping 5.1 percentage points to 52.4%.
<b>Construction Spending (March)</b>	<b>-0.9%</b>	<b>0.0%</b>	Private residential activity led the decline in total construction in March with a drop of 1.8%. Government-related construction fell 1.3%, but the decline represented only a modest offset to a combined increase of 9.2% in January and February. Business-related activity rose 0.5%. This area has jumped around from month-to-month in the past year, but it has shown little net change.

## Review Continued

Week of April 29, 2019	Actual	Consensus	Comments
<b>Nonfarm Productivity (2019-Q1)</b>	<b>3.6%</b>	<b>2.2%</b>	A jump in output (4.1%, annual rate) and only a modest increase in labor input (0.5%) led to one of the sharpest quarterly increases in productivity during the current expansion. Productivity growth has been sluggish for most of the current expansion, but it has stirred more recently. Year-over-year growth totaled 2.4% in Q1, notably faster than annual growth of 1.3% in 2018.
<b>Factory Orders (March)</b>	<b>1.9%</b>	<b>1.6%</b>	An aircraft-led increase of 2.6% in durable goods orders (published last week) led the advance in total factory orders in March. Durable bookings excluding transportation rose modestly (0.3%). Nondurable bookings provided an upside surprise with an increase of 1.1%, but the advance was the result of a price-led surge of 6.0% in the petroleum and coal category. Nondurables ex-petrol and coal slipped 0.2%, continuing the flat performance since last fall.
<b>Payroll Employment (April)</b>	<b>263,000</b>	<b>190,000</b>	Nonfarm payrolls jumped 263,000 in April, with the results joined by net upward revisions of 16,000 in the prior two months. Other elements of the report were less impressive than the brisk increase in payrolls. The unemployment rate fell 0.2 percentage point to 3.6%, but the drop was driven by a sharp decline in the size of the labor force (off 490,000) that exceeded the decline in employment as measured by the household survey (off 103,000). In addition, average hourly earnings rose 0.2%, a light increase for a labor market that appears tight. The latest increase left the year-over-year change at 3.2%, the same as in March.
<b>U.S. International Trade in Goods (March)</b>	<b>-\$71.4 Billion (\$0.5 Billion Wider Deficit)</b>	<b>-\$73.0 Billion (\$2.1 Billion Wider Deficit)</b>	Both exports and imports rose in March (up 1.0% 0.9%, respectively), which left a slight widening in the trade deficit. The results were close to the assumption in the initial estimate of Q1 GDP, implying a modest revision.
<b>ISM Nonmanufacturing Index (April)</b>	<b>55.5% (-0.6 Pct. Pt.)</b>	<b>57.0% (+0.9 Pct. Pt.)</b>	The decline in the ISM nonmanufacturing index in April marked the fourth drop in the past five months, which left the measure in the low portion of the range from the past two years. The employment component made the most notable negative contribution (-2.2 percentage points to 53.7%). The new reading was 3.2 percentage points below the average in 2018. The new orders index also was disappointing (-0.9 percentage point to 58.1%), with the latest observation 3.2 percentage points below last year's average. The business activity component registered a gain (up 2.1 percentage points to 59.5%), but this component still lagged last year's results (average of 61.5% in 2018).

Source: Bureau of Economic Analysis (Personal Income, Consumption, Core Prices); Bureau of Labor Statistics (Employment Cost Index, Nonfarm Productivity, Payroll Employment); Institute for Supply Management (ISM Manufacturing Index, ISM Nonmanufacturing Index); U.S. Census Bureau (Construction Spending, Factory Orders, U.S. International Trade in Goods); Consensus forecasts are from Bloomberg

## Preview

Week of May 6, 2019	Projected	Comments
<b>Trade Balance (March) (Thursday)</b>	<b>-\$50.0 billion (\$0.6 billion Wider Deficit)</b>	The trade surplus in services typically shows little month-to-month variation. Thus, the already reported slippage in the goods deficit (off \$0.5 billion in March) will probably be the dominant influence on the overall trade balance.
<b>PPI (April) (Thursday)</b>	<b>0.4% Total, 0.3% Core*</b>	Higher prices of gasoline will probably lead to a sharp increase in the headline PPI. The core component also could contribute, led by the construction component, which often jumps in the first month of a quarter.
<b>CPI (April) (Friday)</b>	<b>0.3% Total, 0.2% Core*</b>	We look for food prices to cool after sharp increases in three of the past four months, but this softness is likely to be swamped by a gasoline-led jump in the energy component. Transitory restraints on the CPI could fade in April (apparel, airfares), but underlying price pressure also seems muted. We suspect that the core index will round up to the expected increase of 0.2%.
<b>Federal Budget (April) (Friday)</b>	<b>\$150.0 billion Surplus</b>	The effects of last year's tax cuts were apparent in the April results, as nonwithheld receipts from individuals were lighter than they were last year while refunds (for both individuals and businesses) were firmer. However, withholdings from paychecks were strong, as were collections of customs duties, which should lead to a respectable increase in total federal revenue (approximately 5%). The limited data on outlays suggests that spending was in line with the recent average, but such results represent a marked increase from the unusually light outlays in the same month last year. The hefty year-over-year increase in spending will probably result in a monthly surplus well below the \$214 billion registered last year.

\* The core PPI excludes food, energy, and trade services.

Source: Forecasts provided by Daiwa Capital Markets America

## Economic Indicators

April/May 2019																																																																																																																																																																																								
Monday	Tuesday	Wednesday	Thursday	Friday																																																																																																																																																																																				
29	30	1	2	3																																																																																																																																																																																				
<b>PERSONAL INCOME, CONSUMPTION, AND CORE PRICE INDEX</b> <table border="1"> <thead> <tr> <th></th> <th>Inc.</th> <th>Cons.</th> <th>Core</th> </tr> </thead> <tbody> <tr> <td>Jan</td> <td>-0.1%</td> <td>0.3%</td> <td>0.1%</td> </tr> <tr> <td>Feb</td> <td>0.2%</td> <td>0.1%</td> <td>0.1%</td> </tr> <tr> <td>Mar</td> <td>0.1%</td> <td>0.9%</td> <td>0.0%</td> </tr> </tbody> </table>		Inc.	Cons.	Core	Jan	-0.1%	0.3%	0.1%	Feb	0.2%	0.1%	0.1%	Mar	0.1%	0.9%	0.0%	<b>EMPLOYMENT COST INDEX</b> <table border="1"> <thead> <tr> <th></th> <th>Comp.</th> <th>Wages</th> </tr> </thead> <tbody> <tr> <td>18-Q3</td> <td>0.8%</td> <td>0.9%</td> </tr> <tr> <td>18-Q4</td> <td>0.7%</td> <td>0.7%</td> </tr> <tr> <td>19-Q1</td> <td>0.7%</td> <td>0.7%</td> </tr> </tbody> </table> <b>S&amp;P CORELOGIC CASE-SHILLER 20-CITY HOME PRICE INDEX</b> <table border="1"> <thead> <tr> <th></th> <th>SA</th> <th>NSA</th> </tr> </thead> <tbody> <tr> <td>Dec</td> <td>0.2%</td> <td>-0.2%</td> </tr> <tr> <td>Jan</td> <td>0.1%</td> <td>-0.2%</td> </tr> <tr> <td>Feb</td> <td>0.2%</td> <td>0.2%</td> </tr> </tbody> </table> <b>CHICAGO PURCHASING MANAGERS' INDEX</b> <table border="1"> <thead> <tr> <th></th> <th>Index</th> <th>Prices</th> </tr> </thead> <tbody> <tr> <td>Feb</td> <td>64.7</td> <td>71.2</td> </tr> <tr> <td>Mar</td> <td>58.7</td> <td>64.5</td> </tr> <tr> <td>Apr</td> <td>52.6</td> <td>50.8</td> </tr> </tbody> </table> <b>PENDING HOMES SALES</b> <table border="1"> <thead> <tr> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>Jan</td> <td>4.3%</td> </tr> <tr> <td>Feb</td> <td>-1.0%</td> </tr> <tr> <td>Mar</td> <td>3.8%</td> </tr> </tbody> </table> <b>CONFERENCE BOARD CONSUMER CONFIDENCE</b> <table border="1"> <thead> <tr> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>Feb</td> <td>131.4</td> </tr> <tr> <td>Mar</td> <td>124.2</td> </tr> <tr> <td>Apr</td> <td>129.2</td> </tr> </tbody> </table> <b>FOMC MEETING</b>		Comp.	Wages	18-Q3	0.8%	0.9%	18-Q4	0.7%	0.7%	19-Q1	0.7%	0.7%		SA	NSA	Dec	0.2%	-0.2%	Jan	0.1%	-0.2%	Feb	0.2%	0.2%		Index	Prices	Feb	64.7	71.2	Mar	58.7	64.5	Apr	52.6	50.8			Jan	4.3%	Feb	-1.0%	Mar	3.8%			Feb	131.4	Mar	124.2	Apr	129.2	<b>ADP EMPLOYMENT REPORT</b> <table border="1"> <thead> <tr> <th></th> <th>Private Payrolls</th> </tr> </thead> <tbody> <tr> <td>Feb</td> <td>220,000</td> </tr> <tr> <td>Mar</td> <td>151,000</td> </tr> <tr> <td>Apr</td> <td>275,000</td> </tr> </tbody> </table> <b>ISM INDEX</b> <table border="1"> <thead> <tr> <th></th> <th>Index</th> <th>Prices</th> </tr> </thead> <tbody> <tr> <td>Feb</td> <td>54.2</td> <td>49.4</td> </tr> <tr> <td>Mar</td> <td>55.3</td> <td>54.3</td> </tr> <tr> <td>Apr</td> <td>52.8</td> <td>50.0</td> </tr> </tbody> </table> <b>CONSTRUCTION SPEND.</b> <table border="1"> <thead> <tr> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>Jan</td> <td>0.7%</td> </tr> <tr> <td>Feb</td> <td>0.7%</td> </tr> <tr> <td>Mar</td> <td>-0.9%</td> </tr> </tbody> </table> <b>FOMC DECISION</b> <b>POWELL PRESS CONFERENCE</b> <b>VEHICLE SALES</b> <table border="1"> <thead> <tr> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>Feb</td> <td>16.4 million</td> </tr> <tr> <td>Mar</td> <td>17.4 million</td> </tr> <tr> <td>Apr</td> <td>16.4 million</td> </tr> </tbody> </table>		Private Payrolls	Feb	220,000	Mar	151,000	Apr	275,000		Index	Prices	Feb	54.2	49.4	Mar	55.3	54.3	Apr	52.8	50.0			Jan	0.7%	Feb	0.7%	Mar	-0.9%			Feb	16.4 million	Mar	17.4 million	Apr	16.4 million	<b>INITIAL CLAIMS</b> <table border="1"> <thead> <tr> <th></th> <th>Payrolls</th> <th>Un. Rate</th> </tr> </thead> <tbody> <tr> <td>Apr 13</td> <td>193,000</td> <td></td> </tr> <tr> <td>Apr 20</td> <td>230,000</td> <td></td> </tr> <tr> <td>Apr 27</td> <td>230,000</td> <td></td> </tr> </tbody> </table> <b>PRODUCTIVITY &amp; COSTS</b> <table border="1"> <thead> <tr> <th></th> <th>Productivity</th> <th>Unit Labor Costs</th> </tr> </thead> <tbody> <tr> <td>18-Q3</td> <td>1.9%</td> <td>1.6%</td> </tr> <tr> <td>18-Q4</td> <td>1.3%</td> <td>2.5%</td> </tr> <tr> <td>19-Q1</td> <td>3.6%</td> <td>-0.9%</td> </tr> </tbody> </table> <b>FACTORY ORDERS</b> <table border="1"> <thead> <tr> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>Jan</td> <td>0.0%</td> </tr> <tr> <td>Feb</td> <td>-0.3%</td> </tr> <tr> <td>Mar</td> <td>1.9%</td> </tr> </tbody> </table>		Payrolls	Un. Rate	Apr 13	193,000		Apr 20	230,000		Apr 27	230,000			Productivity	Unit Labor Costs	18-Q3	1.9%	1.6%	18-Q4	1.3%	2.5%	19-Q1	3.6%	-0.9%			Jan	0.0%	Feb	-0.3%	Mar	1.9%	<b>EMPLOYMENT REPORT</b> <table border="1"> <thead> <tr> <th></th> <th>Payrolls</th> <th>Un. Rate</th> </tr> </thead> <tbody> <tr> <td>Feb</td> <td>56,000</td> <td>3.8%</td> </tr> <tr> <td>Mar</td> <td>189,000</td> <td>3.8%</td> </tr> <tr> <td>Apr</td> <td>263,000</td> <td>3.6%</td> </tr> </tbody> </table> <b>U.S. INTERNATIONAL TRADE IN GOODS</b> <table border="1"> <thead> <tr> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>Jan</td> <td>-\$72.1 billion</td> </tr> <tr> <td>Feb</td> <td>-\$70.9 billion</td> </tr> <tr> <td>Mar</td> <td>-\$71.4 billion</td> </tr> </tbody> </table> <b>ADVANCE INVENTORIES REPORT</b> <table border="1"> <thead> <tr> <th></th> <th>Wholesale</th> <th>Retail</th> </tr> </thead> <tbody> <tr> <td>Jan</td> <td>1.2%</td> <td>0.8%</td> </tr> <tr> <td>Feb</td> <td>0.1%</td> <td>0.2%</td> </tr> <tr> <td>Mar</td> <td>0.0%</td> <td>-0.3%</td> </tr> </tbody> </table> <b>ISM NON-MFG INDEX</b> <table border="1"> <thead> <tr> <th></th> <th>Index</th> <th>Prices</th> </tr> </thead> <tbody> <tr> <td>Feb</td> <td>59.7</td> <td>54.4</td> </tr> <tr> <td>Mar</td> <td>56.1</td> <td>58.7</td> </tr> <tr> <td>Apr</td> <td>55.5</td> <td>55.7</td> </tr> </tbody> </table>		Payrolls	Un. Rate	Feb	56,000	3.8%	Mar	189,000	3.8%	Apr	263,000	3.6%			Jan	-\$72.1 billion	Feb	-\$70.9 billion	Mar	-\$71.4 billion		Wholesale	Retail	Jan	1.2%	0.8%	Feb	0.1%	0.2%	Mar	0.0%	-0.3%		Index	Prices	Feb	59.7	54.4	Mar	56.1	58.7	Apr	55.5	55.7
	Inc.	Cons.	Core																																																																																																																																																																																					
Jan	-0.1%	0.3%	0.1%																																																																																																																																																																																					
Feb	0.2%	0.1%	0.1%																																																																																																																																																																																					
Mar	0.1%	0.9%	0.0%																																																																																																																																																																																					
	Comp.	Wages																																																																																																																																																																																						
18-Q3	0.8%	0.9%																																																																																																																																																																																						
18-Q4	0.7%	0.7%																																																																																																																																																																																						
19-Q1	0.7%	0.7%																																																																																																																																																																																						
	SA	NSA																																																																																																																																																																																						
Dec	0.2%	-0.2%																																																																																																																																																																																						
Jan	0.1%	-0.2%																																																																																																																																																																																						
Feb	0.2%	0.2%																																																																																																																																																																																						
	Index	Prices																																																																																																																																																																																						
Feb	64.7	71.2																																																																																																																																																																																						
Mar	58.7	64.5																																																																																																																																																																																						
Apr	52.6	50.8																																																																																																																																																																																						
Jan	4.3%																																																																																																																																																																																							
Feb	-1.0%																																																																																																																																																																																							
Mar	3.8%																																																																																																																																																																																							
Feb	131.4																																																																																																																																																																																							
Mar	124.2																																																																																																																																																																																							
Apr	129.2																																																																																																																																																																																							
	Private Payrolls																																																																																																																																																																																							
Feb	220,000																																																																																																																																																																																							
Mar	151,000																																																																																																																																																																																							
Apr	275,000																																																																																																																																																																																							
	Index	Prices																																																																																																																																																																																						
Feb	54.2	49.4																																																																																																																																																																																						
Mar	55.3	54.3																																																																																																																																																																																						
Apr	52.8	50.0																																																																																																																																																																																						
Jan	0.7%																																																																																																																																																																																							
Feb	0.7%																																																																																																																																																																																							
Mar	-0.9%																																																																																																																																																																																							
Feb	16.4 million																																																																																																																																																																																							
Mar	17.4 million																																																																																																																																																																																							
Apr	16.4 million																																																																																																																																																																																							
	Payrolls	Un. Rate																																																																																																																																																																																						
Apr 13	193,000																																																																																																																																																																																							
Apr 20	230,000																																																																																																																																																																																							
Apr 27	230,000																																																																																																																																																																																							
	Productivity	Unit Labor Costs																																																																																																																																																																																						
18-Q3	1.9%	1.6%																																																																																																																																																																																						
18-Q4	1.3%	2.5%																																																																																																																																																																																						
19-Q1	3.6%	-0.9%																																																																																																																																																																																						
Jan	0.0%																																																																																																																																																																																							
Feb	-0.3%																																																																																																																																																																																							
Mar	1.9%																																																																																																																																																																																							
	Payrolls	Un. Rate																																																																																																																																																																																						
Feb	56,000	3.8%																																																																																																																																																																																						
Mar	189,000	3.8%																																																																																																																																																																																						
Apr	263,000	3.6%																																																																																																																																																																																						
Jan	-\$72.1 billion																																																																																																																																																																																							
Feb	-\$70.9 billion																																																																																																																																																																																							
Mar	-\$71.4 billion																																																																																																																																																																																							
	Wholesale	Retail																																																																																																																																																																																						
Jan	1.2%	0.8%																																																																																																																																																																																						
Feb	0.1%	0.2%																																																																																																																																																																																						
Mar	0.0%	-0.3%																																																																																																																																																																																						
	Index	Prices																																																																																																																																																																																						
Feb	59.7	54.4																																																																																																																																																																																						
Mar	56.1	58.7																																																																																																																																																																																						
Apr	55.5	55.7																																																																																																																																																																																						
6	7	8	9	10																																																																																																																																																																																				
	<b>JOLTS DATA (10:00)</b> <table border="1"> <thead> <tr> <th></th> <th>Openings (000)</th> <th>Quit Rate</th> </tr> </thead> <tbody> <tr> <td>Jan</td> <td>7,625</td> <td>2.3%</td> </tr> <tr> <td>Feb</td> <td>7,087</td> <td>2.3%</td> </tr> <tr> <td>Mar</td> <td>--</td> <td>--</td> </tr> </tbody> </table> <b>CONSUMER CREDIT (3:00)</b> <table border="1"> <thead> <tr> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>Jan</td> <td>\$17.7 billion</td> </tr> <tr> <td>Feb</td> <td>\$15.2 billion</td> </tr> <tr> <td>Mar</td> <td>--</td> </tr> </tbody> </table>		Openings (000)	Quit Rate	Jan	7,625	2.3%	Feb	7,087	2.3%	Mar	--	--			Jan	\$17.7 billion	Feb	\$15.2 billion	Mar	--		<b>INITIAL CLAIMS (8:30)</b> <b>TRADE BALANCE (8:30)</b> <table border="1"> <thead> <tr> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>Jan</td> <td>-\$51.1 billion</td> </tr> <tr> <td>Feb</td> <td>-\$49.4 billion</td> </tr> <tr> <td>Mar</td> <td>-\$50.0 billion</td> </tr> </tbody> </table> <b>PPI (8:30)</b> <table border="1"> <thead> <tr> <th></th> <th>Final Demand</th> <th>Core*</th> </tr> </thead> <tbody> <tr> <td>Feb</td> <td>0.1%</td> <td>0.1%</td> </tr> <tr> <td>Mar</td> <td>0.6%</td> <td>0.0%</td> </tr> <tr> <td>Apr</td> <td><b>0.4%</b></td> <td><b>0.3%</b></td> </tr> </tbody> </table> <b>WHOLESALE TRADE (10:00)</b> <table border="1"> <thead> <tr> <th></th> <th>Inventories</th> <th>Sales</th> </tr> </thead> <tbody> <tr> <td>Jan</td> <td>1.2%</td> <td>0.5%</td> </tr> <tr> <td>Feb</td> <td>0.1%</td> <td>0.3%</td> </tr> <tr> <td>Mar</td> <td><b>0.0%</b></td> <td><b>0.3%</b></td> </tr> </tbody> </table>			Jan	-\$51.1 billion	Feb	-\$49.4 billion	Mar	-\$50.0 billion		Final Demand	Core*	Feb	0.1%	0.1%	Mar	0.6%	0.0%	Apr	<b>0.4%</b>	<b>0.3%</b>		Inventories	Sales	Jan	1.2%	0.5%	Feb	0.1%	0.3%	Mar	<b>0.0%</b>	<b>0.3%</b>	<b>CPI (8:30)</b> <table border="1"> <thead> <tr> <th></th> <th>Total</th> <th>Core</th> </tr> </thead> <tbody> <tr> <td>Feb</td> <td>0.2%</td> <td>0.1%</td> </tr> <tr> <td>Mar</td> <td>0.4%</td> <td>0.1%</td> </tr> <tr> <td>Apr</td> <td><b>0.3%</b></td> <td><b>0.2%</b></td> </tr> </tbody> </table> <b>FEDERAL BUDGET (2:00)</b> <table border="1"> <thead> <tr> <th></th> <th>2019</th> <th>2018</th> </tr> </thead> <tbody> <tr> <td>Feb</td> <td>-\$234.0B</td> <td>-\$215.2B</td> </tr> <tr> <td>Mar</td> <td>-\$146.9B</td> <td>-\$208.7B</td> </tr> <tr> <td>Apr</td> <td><b>\$150.0B</b></td> <td>\$214.3B</td> </tr> </tbody> </table>		Total	Core	Feb	0.2%	0.1%	Mar	0.4%	0.1%	Apr	<b>0.3%</b>	<b>0.2%</b>		2019	2018	Feb	-\$234.0B	-\$215.2B	Mar	-\$146.9B	-\$208.7B	Apr	<b>\$150.0B</b>	\$214.3B																																																																																																								
	Openings (000)	Quit Rate																																																																																																																																																																																						
Jan	7,625	2.3%																																																																																																																																																																																						
Feb	7,087	2.3%																																																																																																																																																																																						
Mar	--	--																																																																																																																																																																																						
Jan	\$17.7 billion																																																																																																																																																																																							
Feb	\$15.2 billion																																																																																																																																																																																							
Mar	--																																																																																																																																																																																							
Jan	-\$51.1 billion																																																																																																																																																																																							
Feb	-\$49.4 billion																																																																																																																																																																																							
Mar	-\$50.0 billion																																																																																																																																																																																							
	Final Demand	Core*																																																																																																																																																																																						
Feb	0.1%	0.1%																																																																																																																																																																																						
Mar	0.6%	0.0%																																																																																																																																																																																						
Apr	<b>0.4%</b>	<b>0.3%</b>																																																																																																																																																																																						
	Inventories	Sales																																																																																																																																																																																						
Jan	1.2%	0.5%																																																																																																																																																																																						
Feb	0.1%	0.3%																																																																																																																																																																																						
Mar	<b>0.0%</b>	<b>0.3%</b>																																																																																																																																																																																						
	Total	Core																																																																																																																																																																																						
Feb	0.2%	0.1%																																																																																																																																																																																						
Mar	0.4%	0.1%																																																																																																																																																																																						
Apr	<b>0.3%</b>	<b>0.2%</b>																																																																																																																																																																																						
	2019	2018																																																																																																																																																																																						
Feb	-\$234.0B	-\$215.2B																																																																																																																																																																																						
Mar	-\$146.9B	-\$208.7B																																																																																																																																																																																						
Apr	<b>\$150.0B</b>	\$214.3B																																																																																																																																																																																						
13	14	15	16	17																																																																																																																																																																																				
	<b>NFIB SMALL BUSINESS OPTIMISM INDEX</b> <b>IMPORT/EXPORT PRICES</b>	<b>RETAIL SALES</b> <b>EMPIRE MFG INDEX</b> <b>IP &amp; CAP-U</b> <b>NAHB HOUSING INDEX</b> <b>BUSINESS INVENTORIES</b> <b>TIC DATA</b>	<b>INITIAL CLAIMS</b> <b>HOUSING STARTS</b> <b>PHILLY FED INDEX</b>	<b>CONSUMER SENTIMENT</b> <b>LEADING INDICATORS</b>																																																																																																																																																																																				
20	21	22	23	24																																																																																																																																																																																				
<b>CHICAGO FED NAT'L ACTIVITY INDEX</b>	<b>EXISTING HOME SALES</b>	<b>FOMC MINUTES</b>	<b>INITIAL CLAIMS</b> <b>NEW HOME SALES</b>	<b>DURABLE GOODS ORDERS</b>																																																																																																																																																																																				

Forecasts in Bold. \* The core PPI excludes food, energy, and trade services.



## Treasury Financing

April/May 2019																									
Monday	Tuesday	Wednesday	Thursday	Friday																					
29	30	1	2	3																					
<b>AUCTION RESULTS:</b> <table border="1"> <thead> <tr> <th></th> <th>Rate</th> <th>Cover</th> </tr> </thead> <tbody> <tr> <td>13-week bills</td> <td>2.385%</td> <td>3.08</td> </tr> <tr> <td>26-week bills</td> <td>2.395%</td> <td>3.01</td> </tr> </tbody> </table>		Rate	Cover	13-week bills	2.385%	3.08	26-week bills	2.395%	3.01	<b>ANNOUNCE:</b> \$50 billion 4-week bills for auction on May 2 \$35 billion 8-week bills for auction on May 2 \$20 billion 37-day CMBs for auction on May 2 <b>SETTLE:</b> \$50 billion 4-week bills \$35 billion 8-week bills \$17 billion 5-year TIPS \$20 billion 2-year FRNs \$40 billion 2-year notes \$41 billion 5-year notes \$32 billion 7-year notes	<b>ANNOUNCE:</b> \$38 billion 3-year notes for auction on May 7 \$27 billion 10-year notes for auction on May 8 \$19 billion 30-year bonds for auction on May 9	<b>AUCTION RESULTS:</b> <table border="1"> <thead> <tr> <th></th> <th>Rate</th> <th>Cover</th> </tr> </thead> <tbody> <tr> <td>4-week bills</td> <td>2.390%</td> <td>2.70</td> </tr> <tr> <td>8-week bills</td> <td>2.390%</td> <td>2.70</td> </tr> <tr> <td>37-day CMB</td> <td>2.385%</td> <td>3.27</td> </tr> </tbody> </table> <b>ANNOUNCE:</b> \$75 billion 13-,26-week bills for auction on May 6 <b>SETTLE:</b> \$75 billion 13-,26-week bills		Rate	Cover	4-week bills	2.390%	2.70	8-week bills	2.390%	2.70	37-day CMB	2.385%	3.27	
	Rate	Cover																							
13-week bills	2.385%	3.08																							
26-week bills	2.395%	3.01																							
	Rate	Cover																							
4-week bills	2.390%	2.70																							
8-week bills	2.390%	2.70																							
37-day CMB	2.385%	3.27																							
6	7	8	9	10																					
<b>AUCTION:</b> \$75 billion 13-,26-week bills	<b>AUCTION:</b> \$38 billion 3-year notes <b>ANNOUNCE:</b> \$50 billion* 4-week bills for auction on May 9 \$35 billion* 8-week bills for auction on May 9 <b>SETTLE:</b> \$50 billion 4-week bills \$35 billion 8-week bills \$20 billion 37-day CMBs	<b>AUCTION:</b> \$27 billion 10-year notes	<b>AUCTION:</b> \$50 billion* 4-week bills \$35 billion* 8-week bills \$19 billion 30-year bonds <b>ANNOUNCE:</b> \$75 billion* 13-,26-week bills for auction on May 13 <b>SETTLE:</b> \$75 billion 13-,26-week bills																						
13	14	15	16	17																					
<b>AUCTION:</b> \$75 billion* 13-,26-week bills	<b>ANNOUNCE:</b> \$50 billion* 4-week bills for auction on May 16 \$35 billion* 8-week bills for auction on May 16 <b>SETTLE:</b> \$50 billion* 4-week bills \$35 billion* 8-week bills	<b>SETTLE:</b> \$38 billion 3-year notes \$27 billion 10-year notes \$19 billion 30-year bonds	<b>AUCTION:</b> \$50 billion* 4-week bills \$35 billion* 8-week bills <b>ANNOUNCE:</b> \$75 billion* 13-,26-week bills for auction on May 20 \$26 billion* 52-week bills for auction on May 21 \$11 billion* 10-year TIPS for auction on May 23 <b>SETTLE:</b> \$75 billion* 13-,26-week bills																						
20	21	22	23	24																					
<b>AUCTION:</b> \$75 billion* 13-,26-week bills	<b>AUCTION:</b> \$26 billion* 52-week bills <b>ANNOUNCE:</b> \$50 billion* 4-week bills for auction on May 23 \$35 billion* 8-week bills for auction on May 23 <b>SETTLE:</b> \$50 billion* 4-week bills \$35 billion* 8-week bills		<b>AUCTION:</b> \$50 billion* 4-week bills \$35 billion* 8-week bills \$11 billion* 10-year TIPS <b>ANNOUNCE:</b> \$75 billion* 13-,26-week bills for auction on May 28 \$18 billion* 2-year FRNs for auction on May 29 \$40 billion* 2-year notes for auction on May 28 \$41 billion* 5-year notes for auction on May 28 \$32 billion* 7-year notes for auction on May 29 <b>SETTLE:</b> \$75 billion* 13-,26-week bills \$26 billion* 52-week bills																						

\*Estimate