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Fed Report

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The Fed's monetary policy has important implications for the bond, stock, and currency markets, and the economic cycle generally. In this report my goal is to track the data that I think Fed officials, and Chair Powell specifically, are most focused on based on ongoing public communications.

Fed's Dual Mandate

Established Objectives of Federal Reserve Monetary Policy:

Stable Prices ("Price Stability"): 2 percent inflation rate as measured by the annual change in the price index for personal consumption expenditures (Headline PCE YoY). The Powell Fed views the core (excluding food and energy) PCE as a better indication of future inflation. It is worth noting that the Fed interprets the inflation objective as symmetric, meaning they are trying to prevent persistent deviations, either above or below, from their 2 percent inflation target.

Maximum Employment: The highest utilization of labor resources that is sustainable over time, i.e., the unemployment rate that is consistent with low and stable inflation over the longer term- often estimated as the "natural rate of unemployment." The natural rate of unemployment comprises both the "frictional" unemployment of people who are temporarily between jobs or searching as they have reentered the labor force and the more "structural" unemployment of people whose skills or physical location are not a good match for the jobs available. In other words, the Fed aims to reduce "cyclical" unemployment. As Powell likes to point out, the unemployment rate that is consistent with maximum employment is largely determined by nonmonetary factors (i.e., not heavily influenced by Fed policy). The Fed has no fixed goal for this rate, the current longer run estimate for unemployment is 4.4%, from Fed's Summary of Economic Projections.

Fed Policy Tools

Federal Funds Rate: the primary policy tool of the Fed, it is the overnight benchmark interest rate. The Powell Fed aims for this rate to be at the estimated normal longer-run level when the policy objectives are met (i.e., when inflation is running at the target rate of 2% and the economy is operating at maximum employment).

Fed Balance Sheet: Quantitative Easing ("QE") is Fed balance sheet expansion via bond purchases using "printed money," Quantitative Tightening ("QT") is essentially the opposite, i.e., Fed balance sheet contraction via allowing bonds to mature without reinvesting the proceeds.

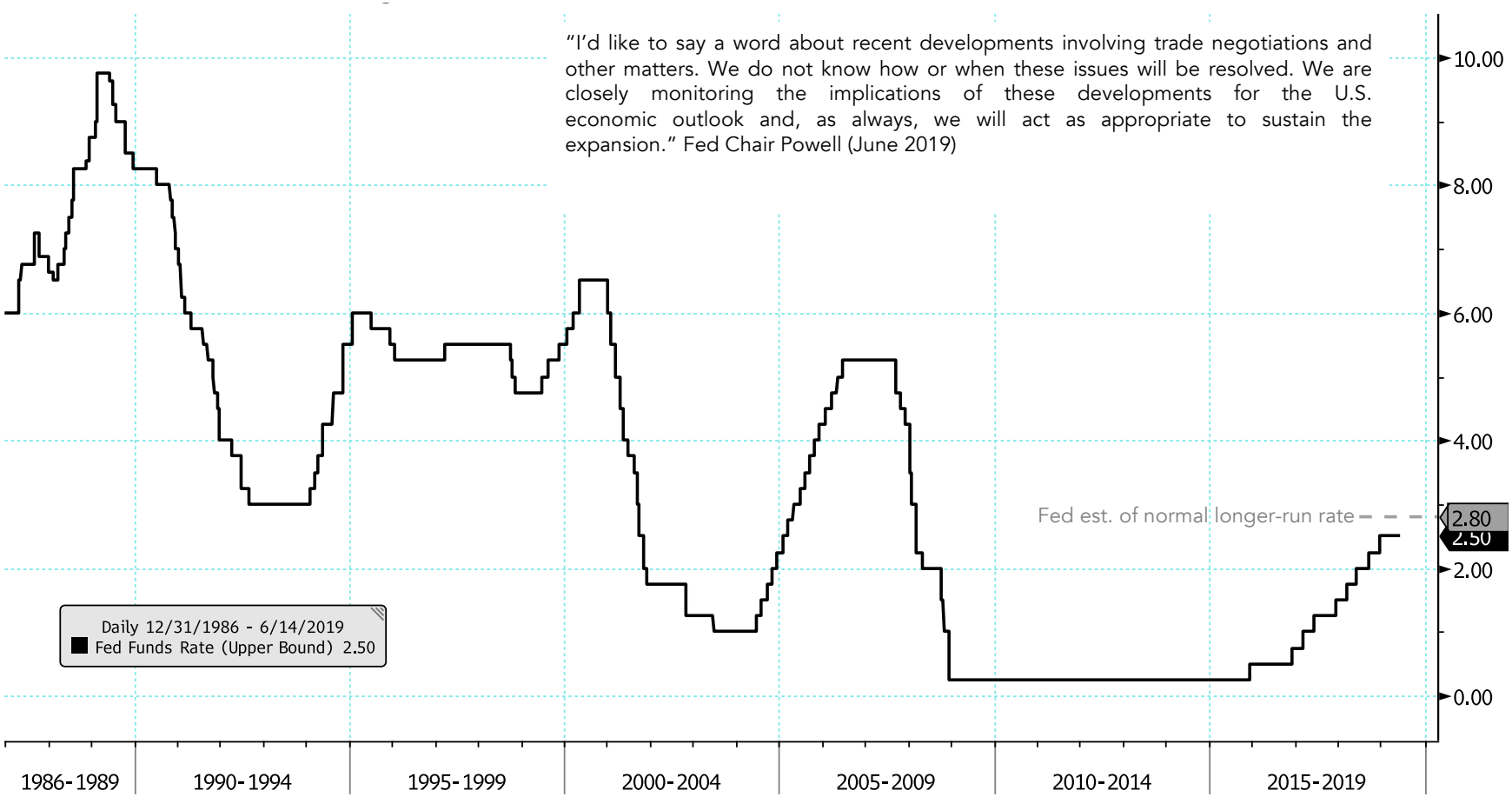
Forward Guidance: a commitment to hold rates at a certain level (e.g., zero) over a certain period of time.

Fed Key Concepts

Data Dependency: The Fed describes its policy making process as data dependent, which might be best summarized by Chair Powell's words: "Our views about appropriate monetary policy in the months and years ahead will be informed by incoming economic data and the evolving outlook. If the outlook changes, so too will monetary policy." Many of the following charts represent the relevant data followed by the Fed, and specifically by Chair Powell.

Fed Funds Rate

Fund funds rate (black) and Fed estimate (based on median dot) of normal longer run rate (grey)

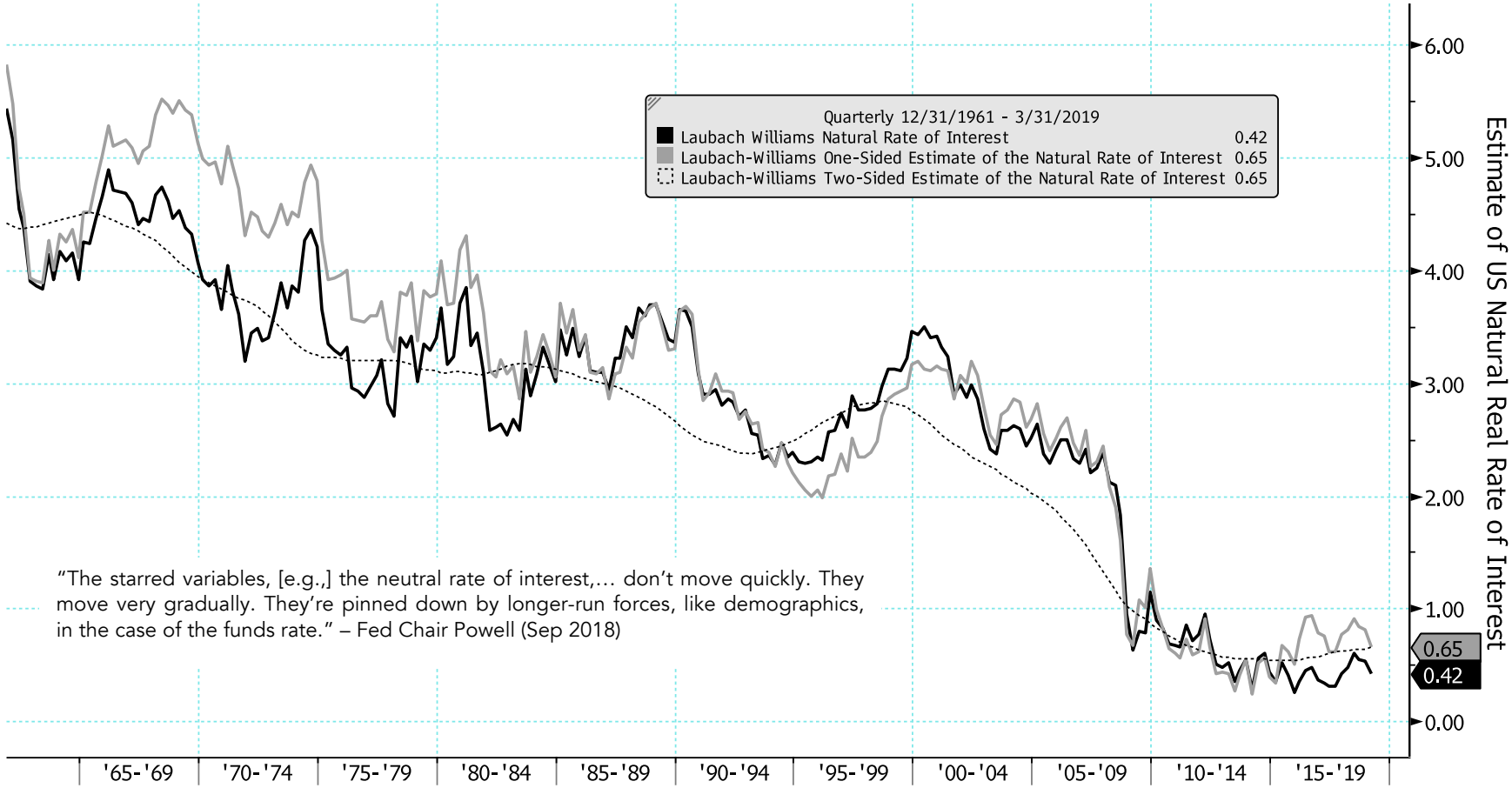


Source: © Merk Investments, Bloomberg

Analysis: Powell has dropped the reference to being "patient" with regards to the next move in interest rates, and emphasized that the Fed will act as needed to sustain the expansion— interpreted by many to imply that the Fed will cut rates in the near future.

Fed Estimate of the Natural Real Rate of Interest

"R-star" is the natural real rate of interest



Source: © Merk Investments, Bloomberg

Analysis: Estimates of the natural real rate of interest have declined somewhat over the past quarter. As a general framework: if the natural real rate of interest is about 1% and inflation is about 2%, the neutral nominal rate should be about 3% (1% + 2%), which is roughly consistent with the Fed's longer run normal rate estimate shown on the previous slide.

Market Expectations of Fed Funds Rate in 1 year

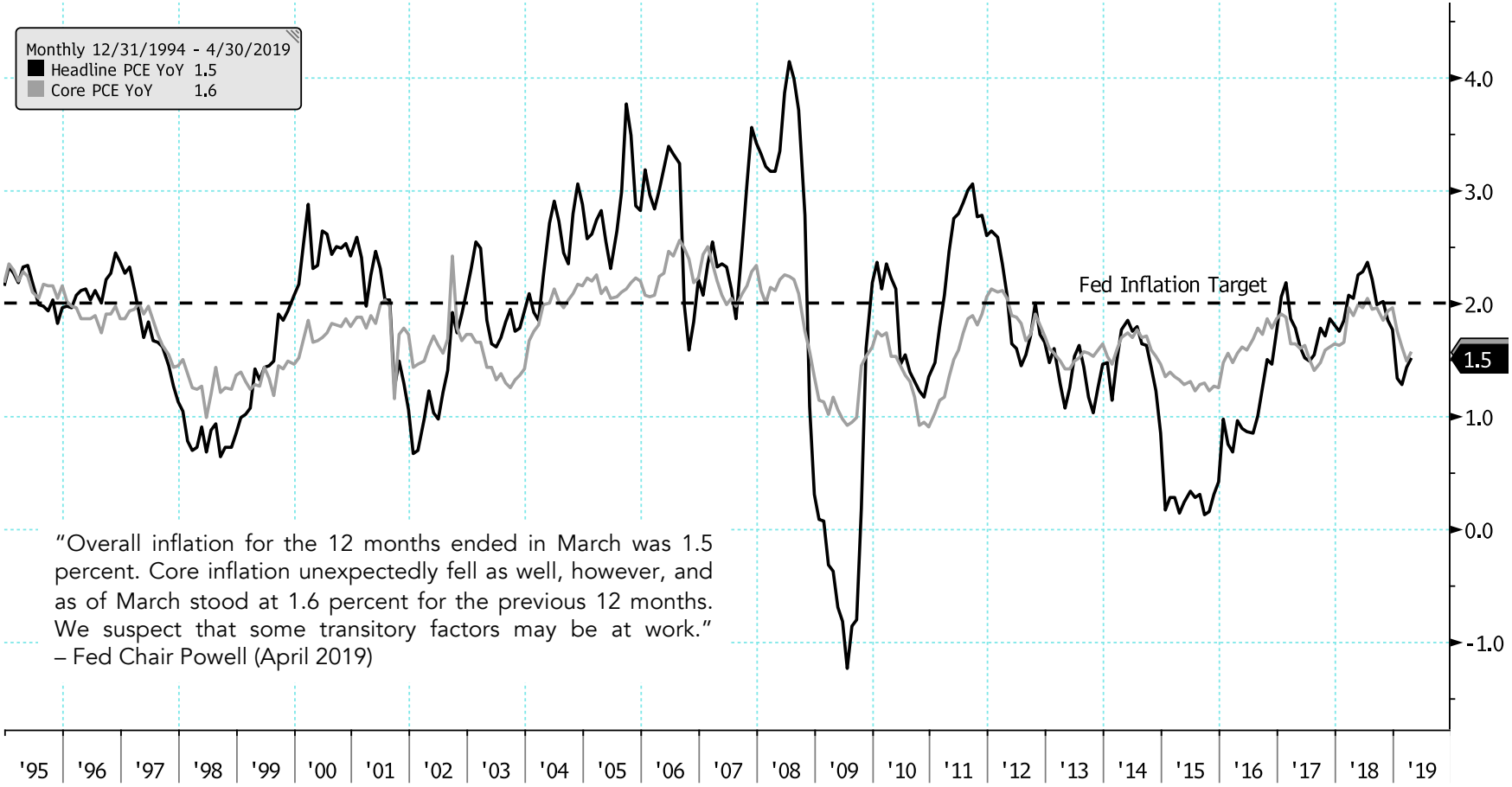
What's Priced-in based on the +1-year Fed Funds Futures contract

Source: © Merk Investments, Bloomberg

Analysis: Market expectations of Fed rate cuts have increased dramatically since the Fed's last meeting in April. The market is pricing the Fed Funds rate in 1 year at 1.51%, which implies over three rate cuts in the coming year. (Fed funds futures are priced on the effective rate which is between the upper and lower bounds of the target range, the current Fed funds target midpoint is at 2.375% (between 2.25 and 2.50)

Inflation Readings

The Headline and Core (excluding volatile food and energy prices) Personal Consumption Expenditures (PCE) Index YoY Seasonally Adjusted



"Overall inflation for the 12 months ended in March was 1.5 percent. Core inflation unexpectedly fell as well, however, and as of March stood at 1.6 percent for the previous 12 months. We suspect that some transitory factors may be at work." – Fed Chair Powell (April 2019)

Source: © Merk Investments, Bloomberg

*Analysis: The April PCE data shows the headline inflation rate at 1.5%, below the target of 2.0%. The Core PCE YoY, Chair Powell's preferred measure, is at 1.6%. The Fed expects PCE YoY to run at 1.8% and 2.0% in 2019 and 2020 respectively according to the Fed's latest Summary of Economic Projections. *This chart relates to the price stability mandate**

Market-based Inflation Expectations

10-year "breakeven" refers to the inflation rate implied by 10 year Treasury Inflation Protected Securities (TIPS)

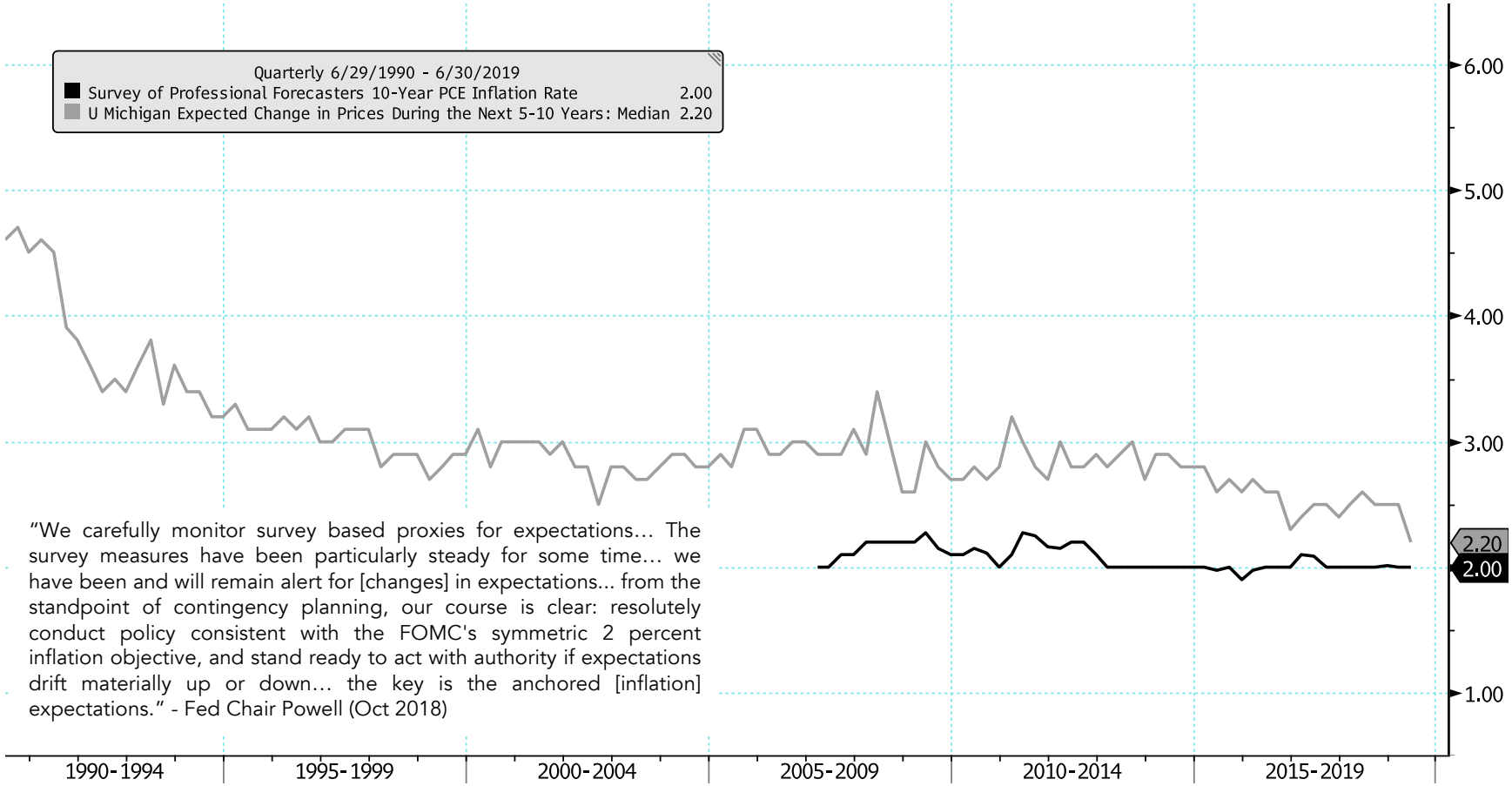
Source: © Merk Investments, Bloomberg

Analysis: Market based inflation expectations have come down substantially since the Fed's last meeting in April. The market is suggesting average annual inflation over the next 10 years might be around 1.6%, based on the TIPS. This inflation expectation is calculated by subtracting the 10yr TIPS yield (real rate) from the 10yr US Treasury yield (nominal rate). This is considered a market-based measure, the Fed also looks at other market-based measures as well as survey-based measures. In my view market based inflation expectations have fallen over the past year in large part due to the recent decline in oil prices.

This chart relates to the price stability mandate

Survey-based Inflation Expectations

University of Michigan Consumer Inflation Expectations and Survey of Professional Forecasters Expectations



"We carefully monitor survey based proxies for expectations… The survey measures have been particularly steady for some time… we have been and will remain alert for [changes] in expectations... from the standpoint of contingency planning, our course is clear: resolutely conduct policy consistent with the FOMC's symmetric 2 percent inflation objective, and stand ready to act with authority if expectations drift materially up or down… the key is the anchored [inflation] expectations." - Fed Chair Powell (Oct 2018)

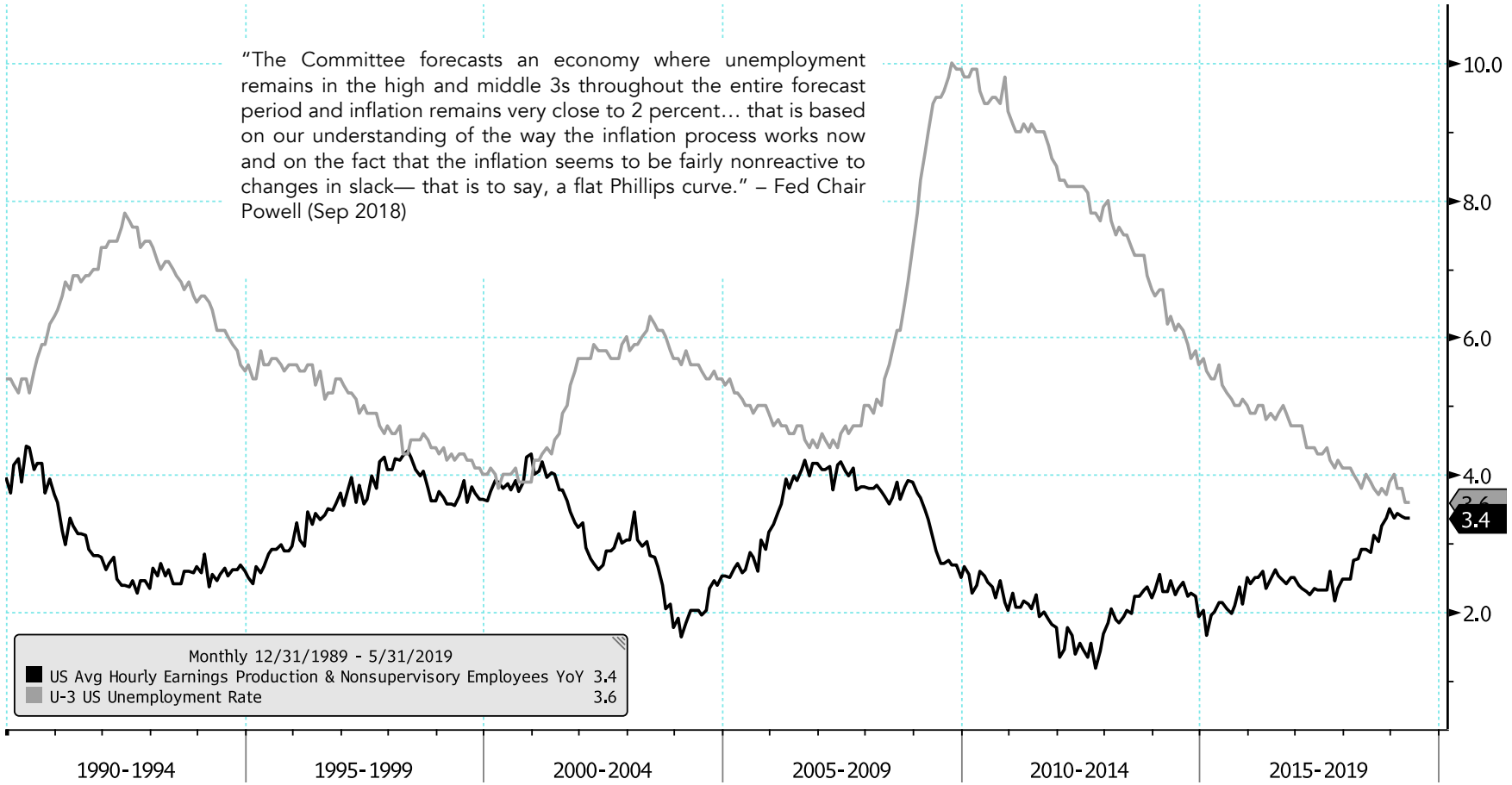
Source: © Merk Investments, Bloomberg

Analysis: Recently the University of Michigan inflation expectations survey reading ticked down to all time lows. Powell is particularly focused on the role of anchored inflation expectations in terms of meeting the Fed's price stability mandate over the medium term. Based on a speech and presentation given in October 2018, it appears he watches the above survey based indicators to monitor for material changes.

This chart relates to the price stability mandate

Unemployment Rate and Wages

The relationship between the unemployment rate and wages is referred to as the "Phillips Curve"



Source: © Merk Investments, Bloomberg

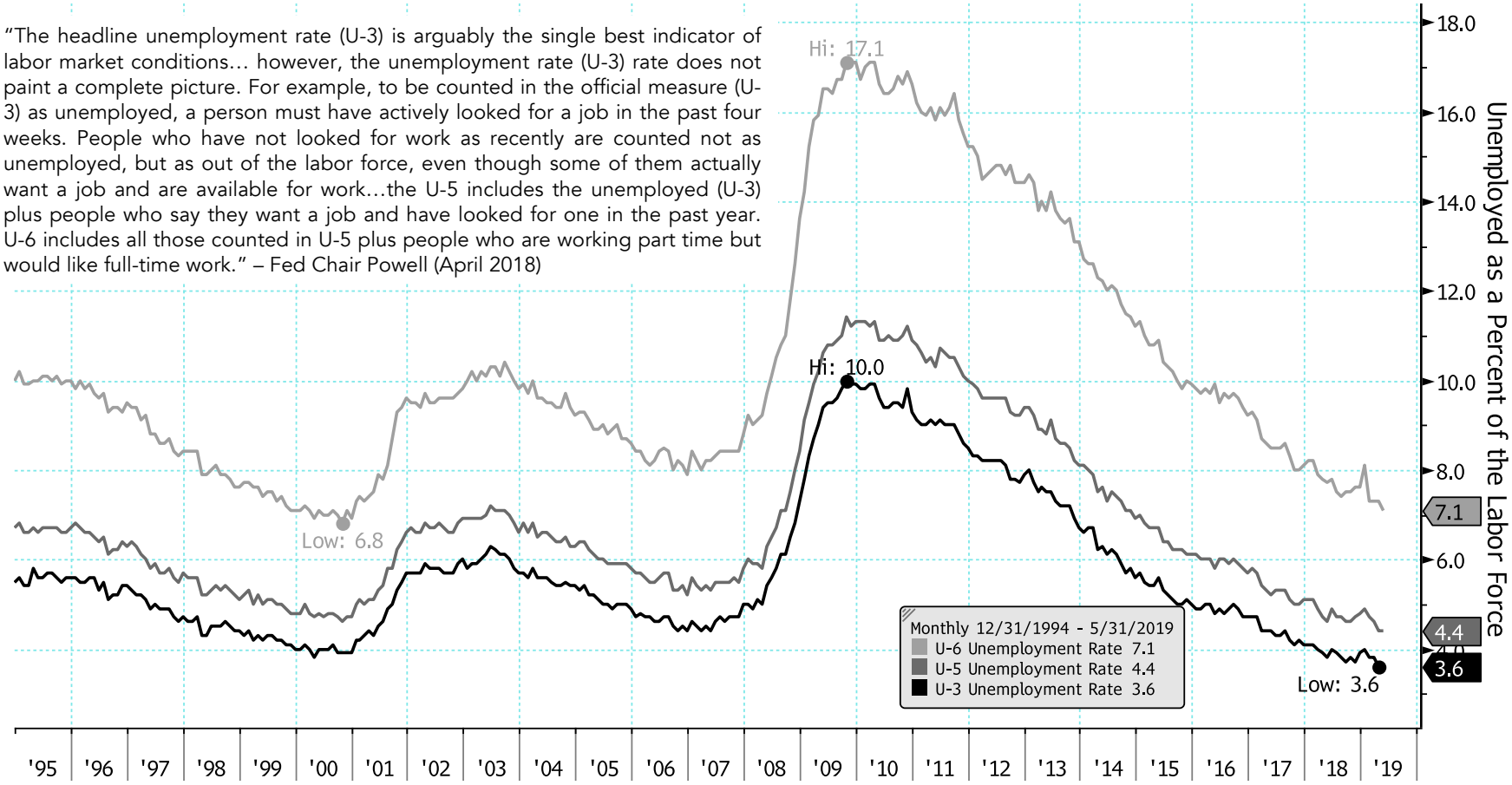
Analysis: Fed policy makers have been surprised by the lack of wage inflation (and general inflation) in recent years. I think in Powell's mind that suggests the labor market might not be at maximum employment yet. Having said that, the wage inflation rate seems to have started to pick up over the past year or so.

This chart relates to both the price stability mandate and the maximum employment mandate

Unemployment Rate Measures

U-3, U-5, U-6 Unemployment Rates

"The headline unemployment rate (U-3) is arguably the single best indicator of labor market conditions… however, the unemployment rate (U-3) rate does not paint a complete picture. For example, to be counted in the official measure (U-3) as unemployed, a person must have actively looked for a job in the past four weeks. People who have not looked for work as recently are counted not as unemployed, but as out of the labor force, even though some of them actually want a job and are available for work…the U-5 includes the unemployed (U-3) plus people who say they want a job and have looked for one in the past year. U-6 includes all those counted in U-5 plus people who are working part time but would like full-time work." – Fed Chair Powell (April 2018)

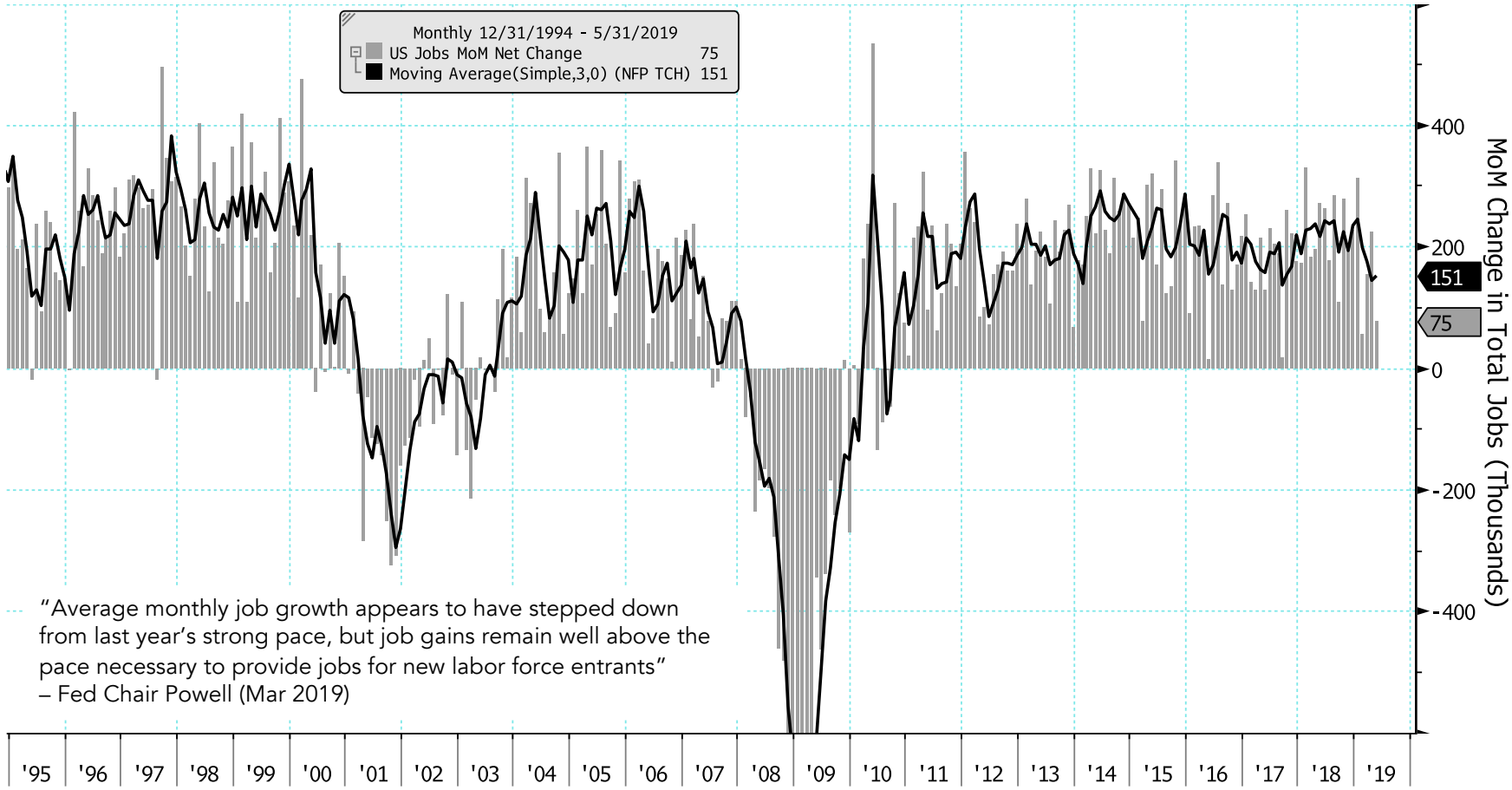


Source: © Merk Investments, Bloomberg

Analysis: The U-3 rate remained stable at 3.6% in the latest jobs report, the cycle low.
This chart relates to the maximum employment mandate

Job Gains

The Net Monthly Change in Non-farm Payrolls (grey) with 3-month Moving Average (black)



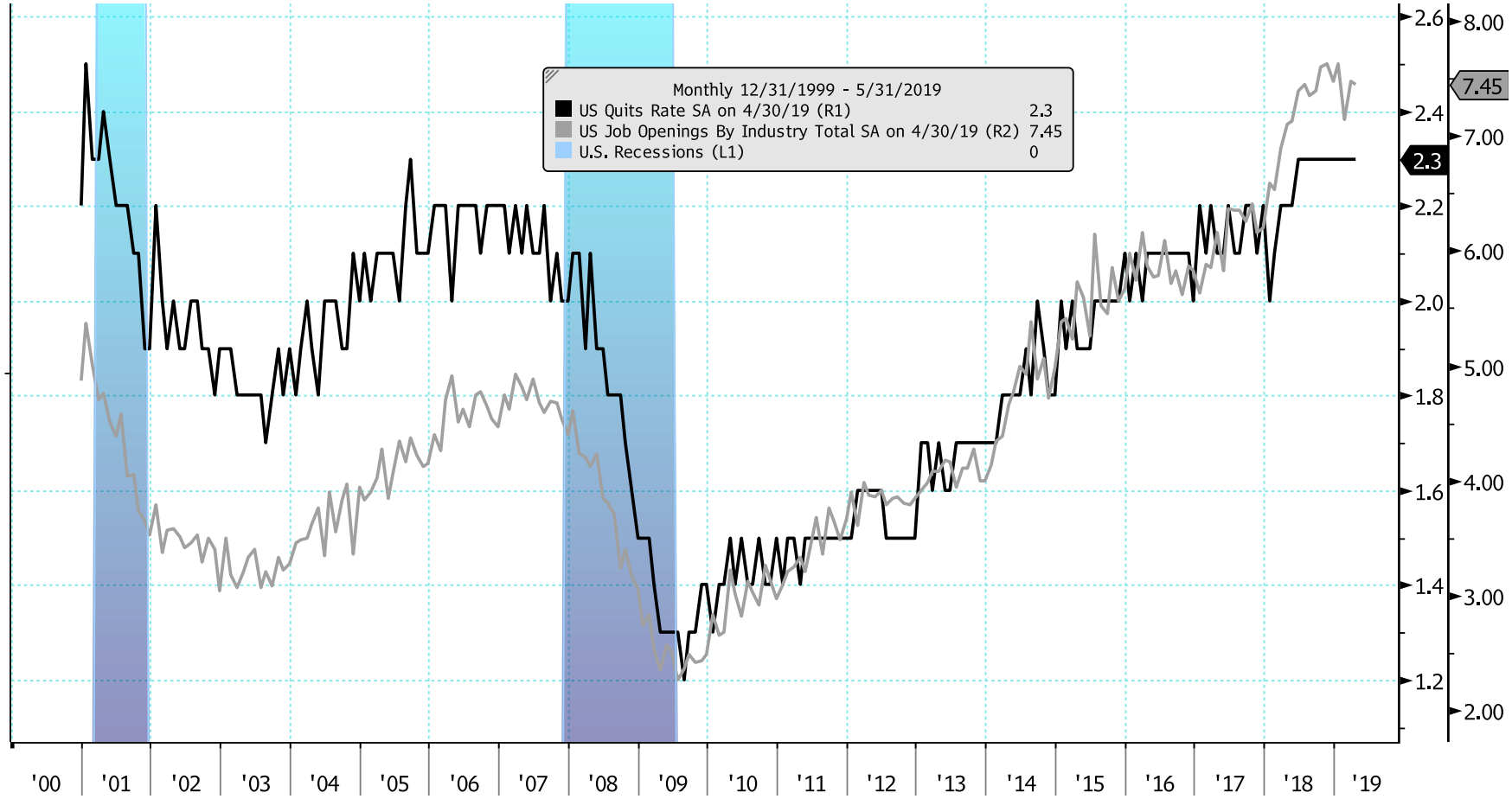
Source: © Merk Investments, Bloomberg

Analysis: The 3-month moving average of the change in non-farm payrolls is 151k, likely above the pace needed to provide jobs to new entrants into the labor force. This picture currently suggests strength in the U.S. labor market, however, there has been a down trend of the 3m MA so far this year.

This chart relates to the maximum employment mandate

Jobs Openings and Labor Turnover Survey (JOLTS)

Jobs Openings (millions) and Quits Rate (percent)



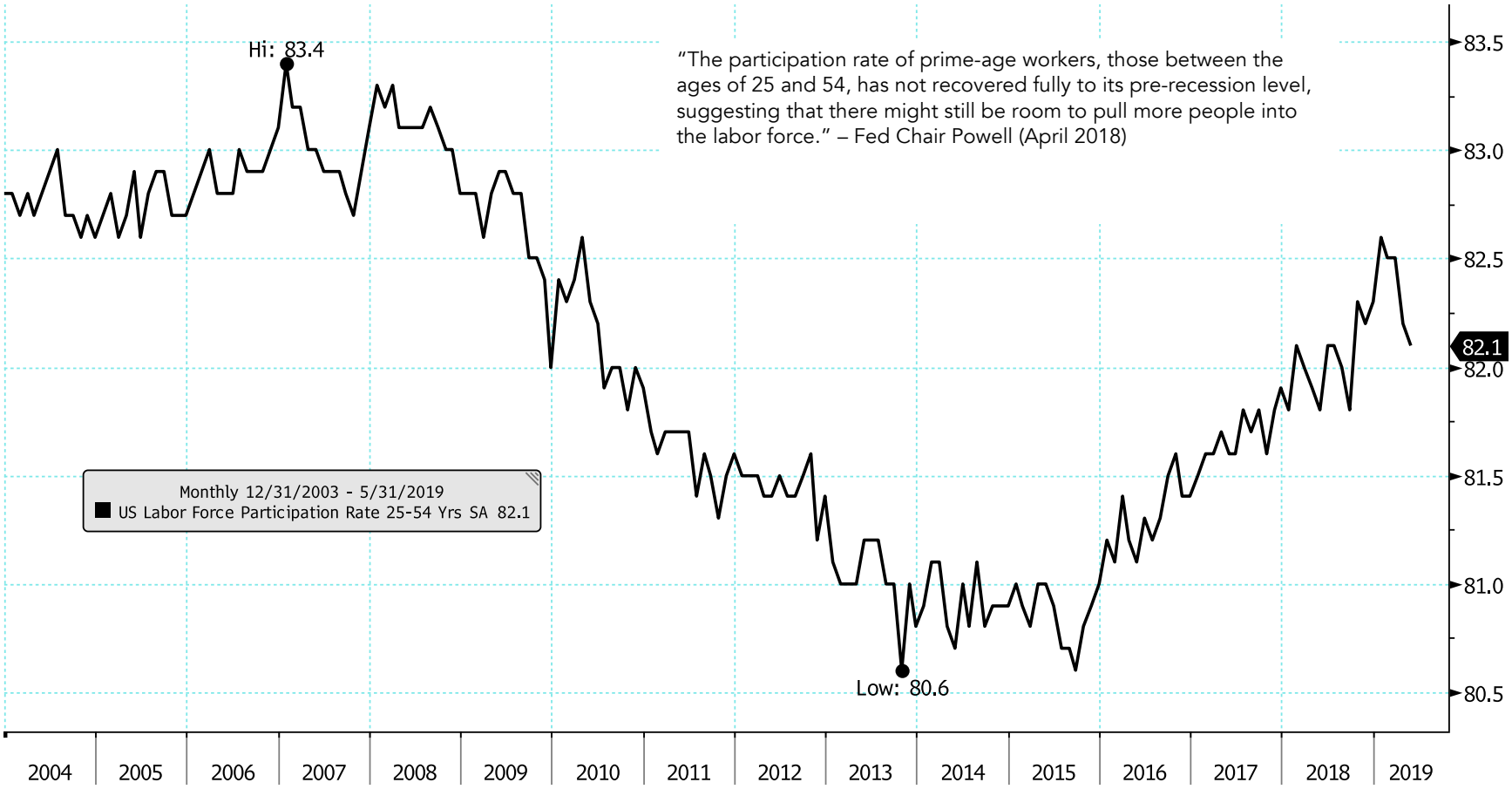
Source: © Merk Investments, Bloomberg

Analysis: Former Fed Chair Yellen was an advocate of looking at the JOLTS report for guidance on the labor market. For the time being the JOLTS report continues to look positive as the Job Openings and Quits Rate are high and generally trending higher still- typically a strong sign for the labor market.

This chart relates to the maximum employment mandate

Prime-age (25-54) Labor Force Participation Rate

The labor force is the percent of the population that is either working or actively looking for work, in this case between the ages of 25-54

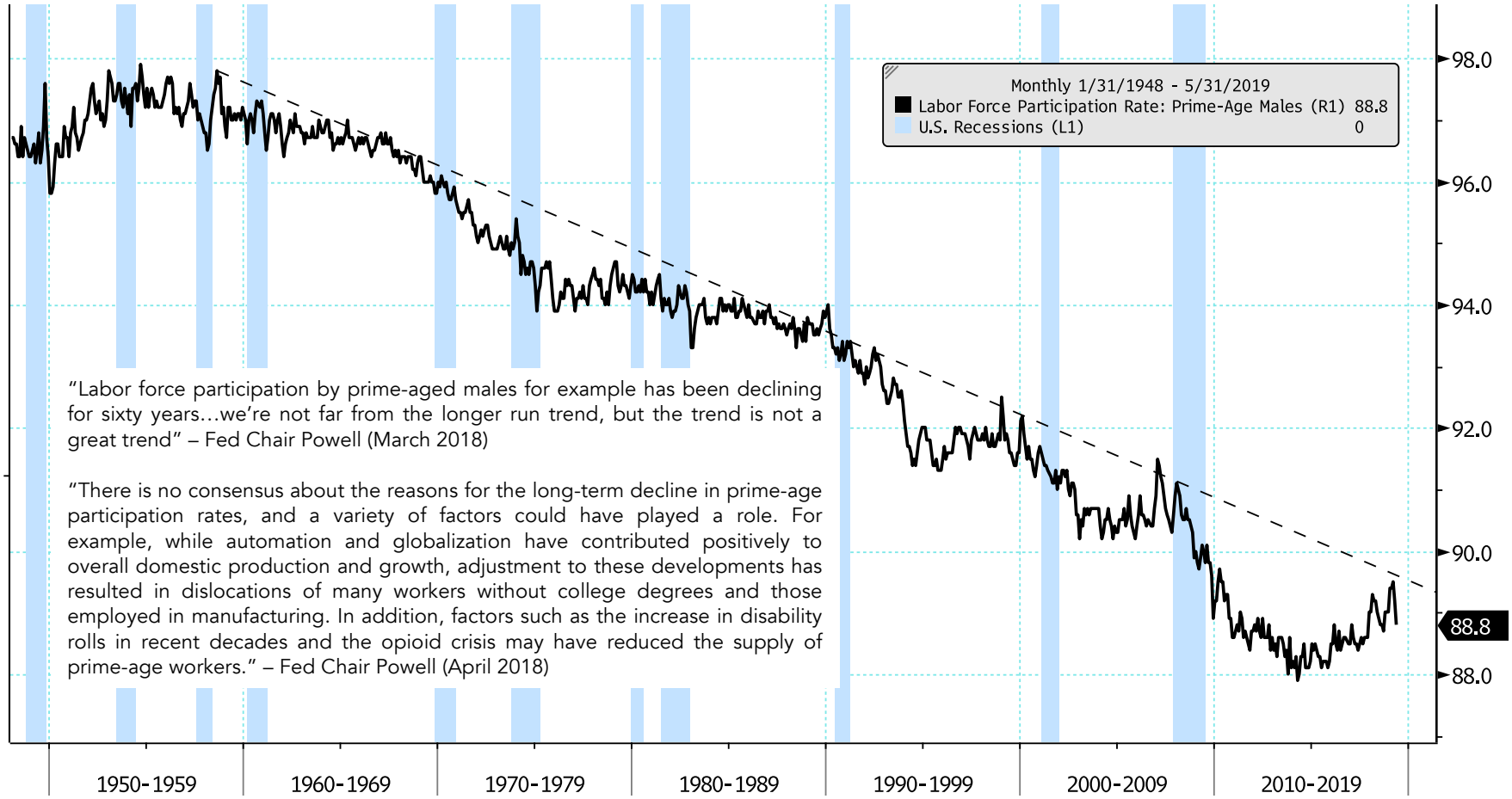


Source: © Merk Investments, Bloomberg

*Analysis: The prime-age participation rate is below the previous cycle high (although generally trending higher). I think in Powell's mind this picture suggests the labor market might not be at maximum employment yet. *This chart relates to the maximum employment mandate**

Prime-age (25-54) Male Labor Force Participation Rate

The labor force is the percent of the population that is either working or actively looking for work, in this case males between the ages of 25-54



"Labor force participation by prime-aged males for example has been declining for sixty years…we're not far from the longer run trend, but the trend is not a great trend" – Fed Chair Powell (March 2018)

"There is no consensus about the reasons for the long-term decline in prime-age participation rates, and a variety of factors could have played a role. For example, while automation and globalization have contributed positively to overall domestic production and growth, adjustment to these developments has resulted in dislocations of many workers without college degrees and those employed in manufacturing. In addition, factors such as the increase in disability rolls in recent decades and the opioid crisis may have reduced the supply of prime-age workers." – Fed Chair Powell (April 2018)

Source: © Merk Investments, Bloomberg

Analysis: A prime-age male labor force participation rate above the dotted line might represent a labor market that is close to maximum employment in Powell's framework. The latest data point shows a downtick.
This chart relates to the maximum employment mandate

Fed Funds Rate and Financial Conditions

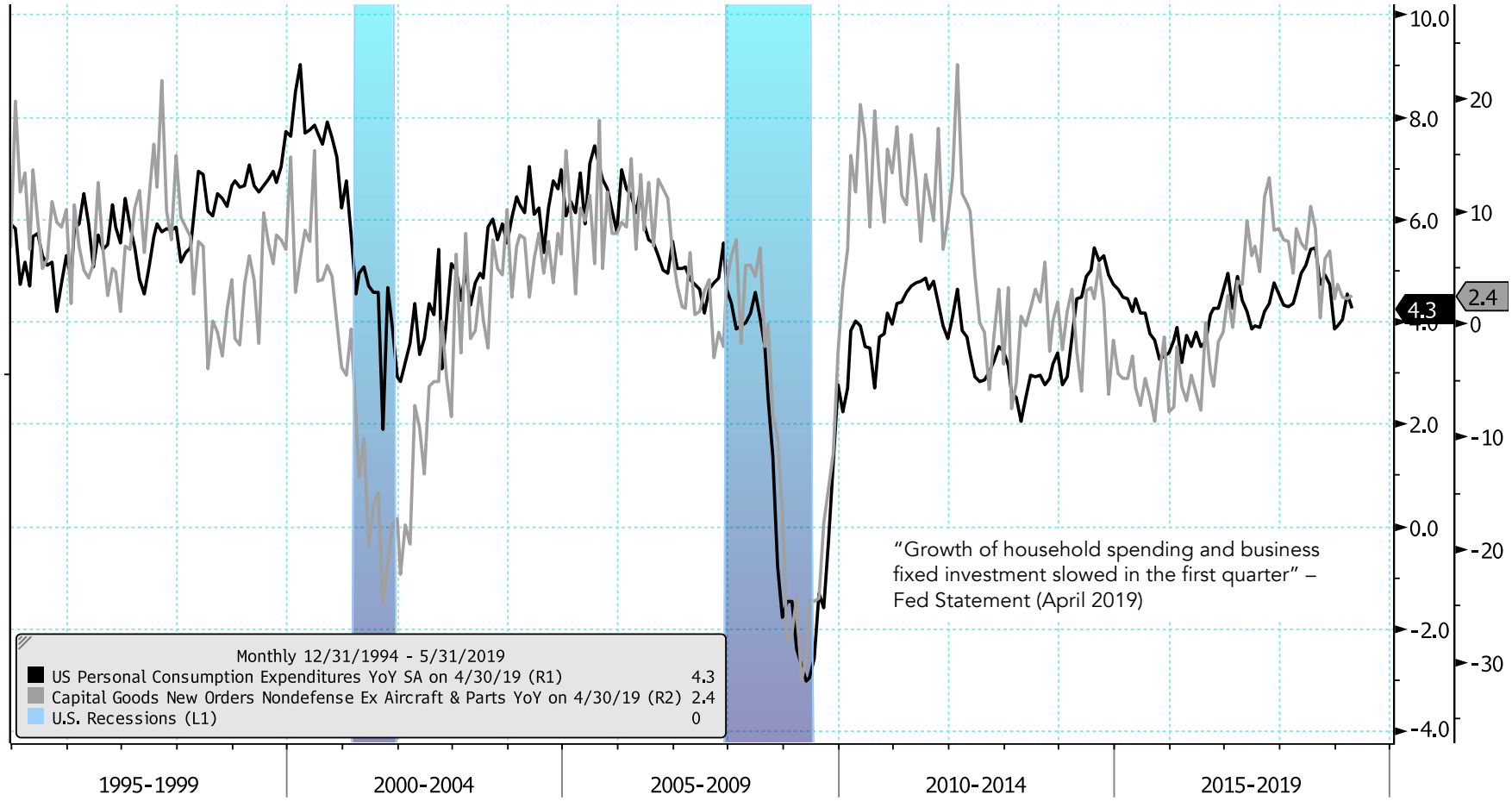
Chicago Fed National Financial Conditions Index and the Fed Funds Rate

Source: © Merk Investments, Bloomberg

Analysis: Financial stability, which can be measured by financial conditions, is sometimes thought of as an implicit third mandate of the Fed. Fed hikes so far have had little impact on financial conditions, although Fed officials have historically commented that monetary policy acts with a lag (some estimates suggest an 18 month lag). The financial conditions index has recently made new cycle lows.

Household Spending and Business Fixed Investment

U.S. Personal Consumption expenditures (black) and U.S. Capital Goods New Orders (grey)

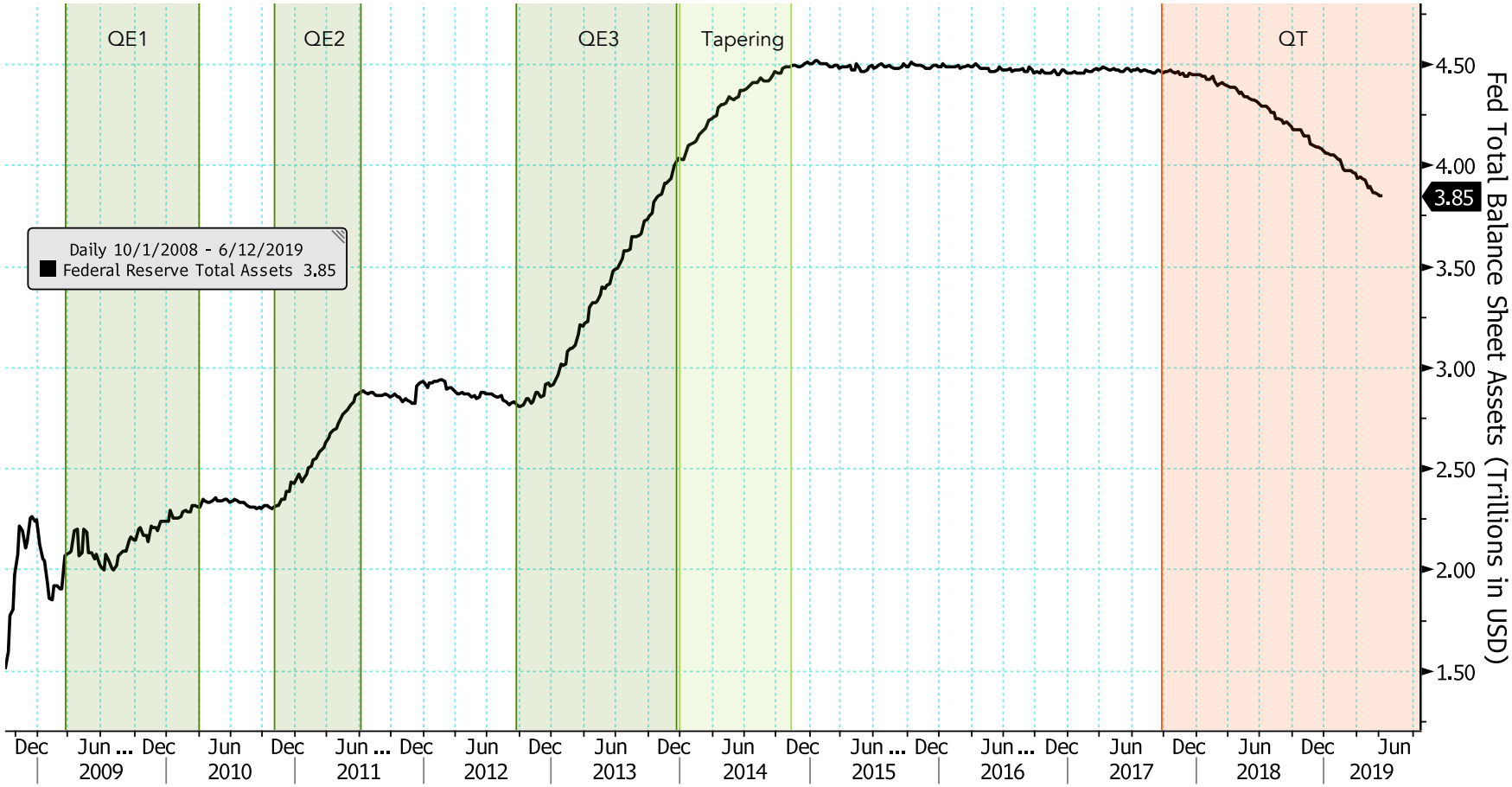


Source: © Merk Investments, Bloomberg

Analysis: Powell has commented more frequently recently about the slowdown in both household spending and business investment, which is illustrated in the above chart.

Fed Balance Sheet

Federal Reserve Balance Sheet Total Assets and QE/QT Operation Phases



Source: © Merk Investments, Bloomberg

Analysis: Recent announcements regarding the Fed's balance sheet suggest that the balance sheet size will slowly start to level off again. Balance sheet run-off ("Quantitative Tightening (QT)") will end in September 2019. Some high ranking Fed officials have suggested that the Fed will want to leave about 1 trillion in excess reserves (as a "liquidity overhang" in the banking system), currently excess reserves are around 1.4 trillion.

Excess Reserves

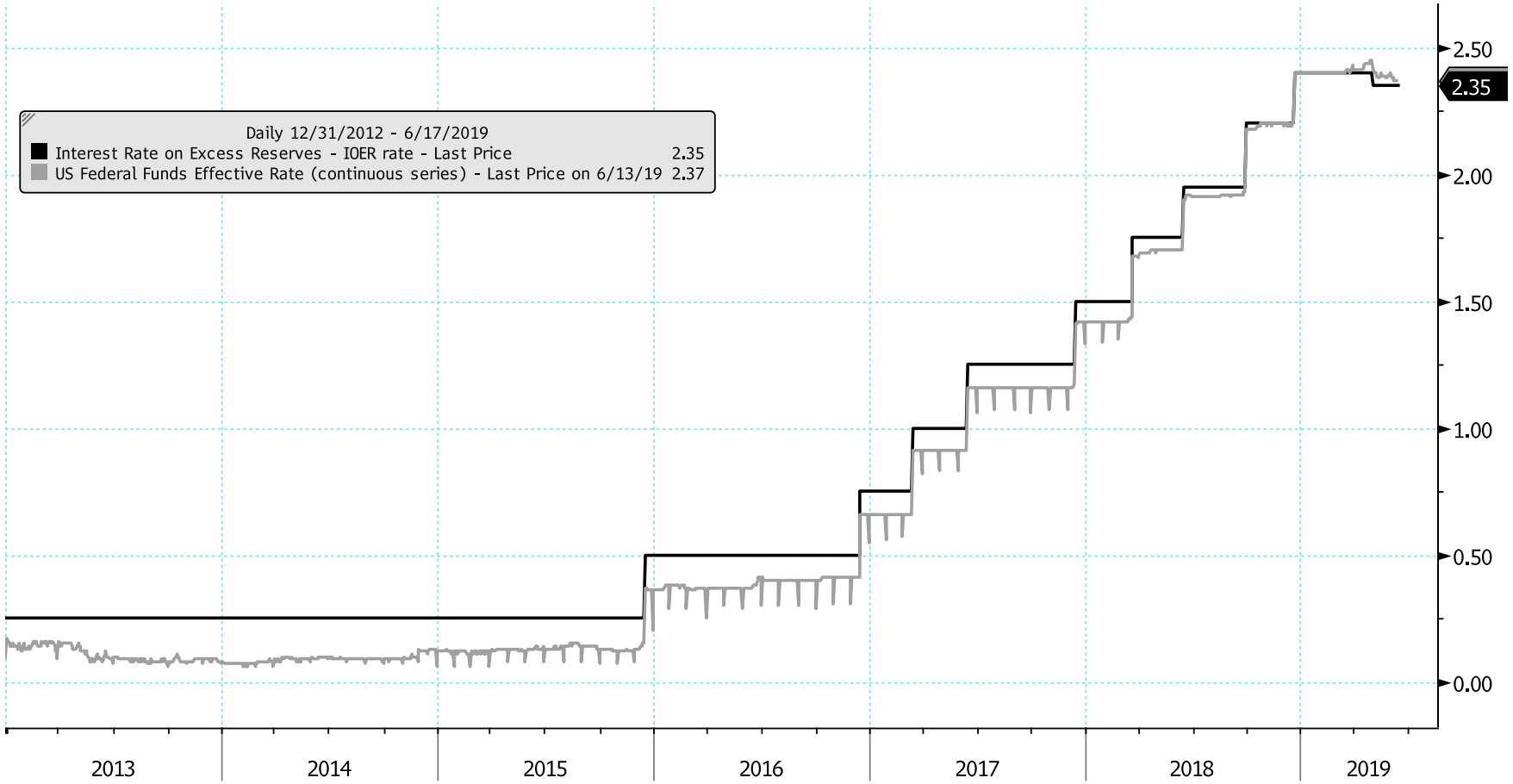
Total Excess Reserve in the U.S. Banking System

Source: © Merk Investments, Bloomberg

Analysis: Excess reserves are the reserves held in the U.S. commercial banking system that are in excess of the required reserves (i.e., reserves needed to meet regulatory requirements for liquidity in the case of depositor withdrawals). NY Fed President Williams has suggested that the Fed will gradually allow excess reserves to decline (via increased commercial bank aggregate balance sheet and increase currency in circulation) until around 1 trillion, and then the Fed would likely maintaining a liquidity buffer of 1 trillion in the system.

Fed Effective Rate Control (IOER)

Interest on Excess Reserves (IOER) rate (black) and the Effective Fed Funds Rate (grey)

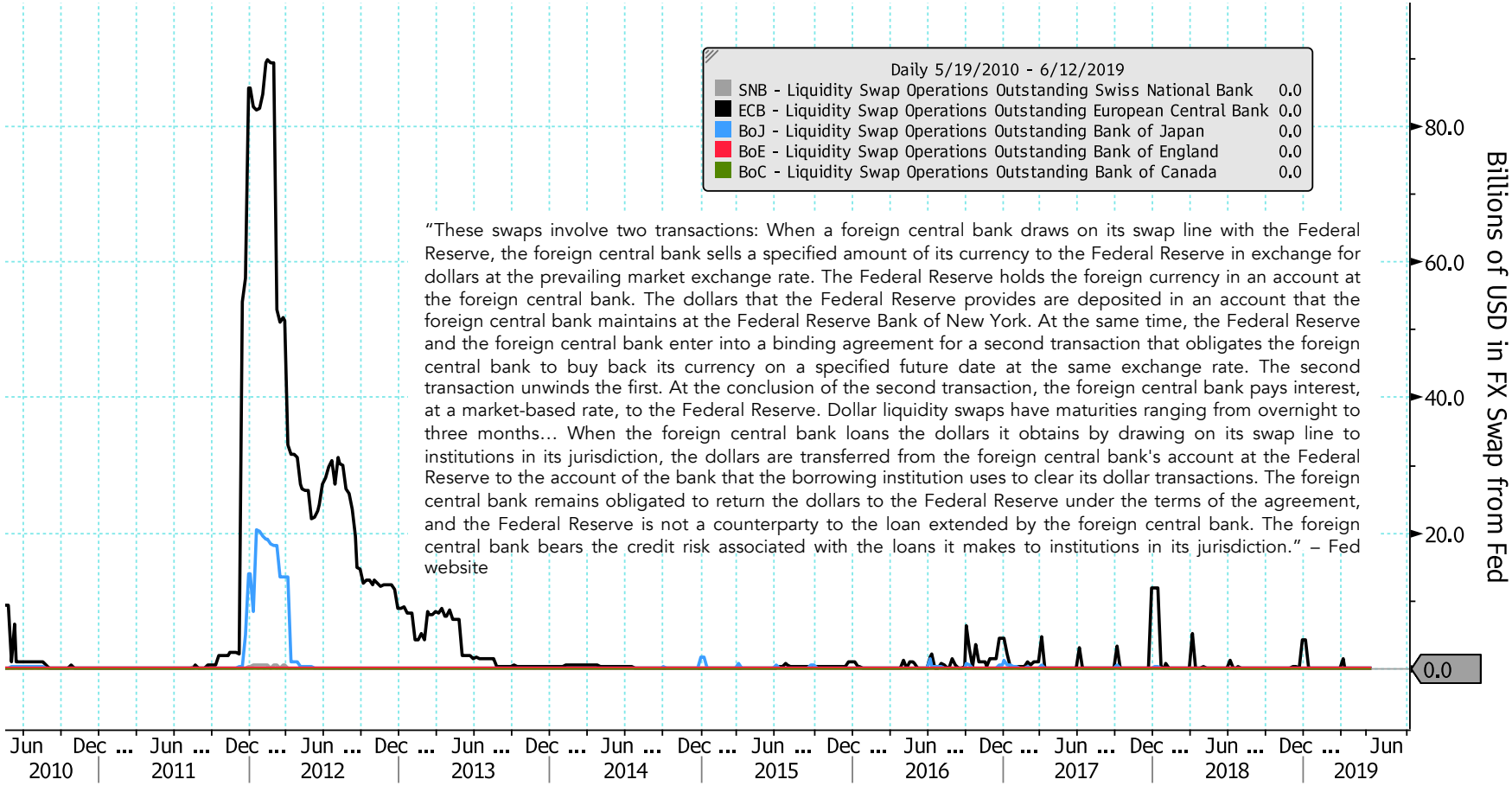


Source: © Merk Investments, Bloomberg

Analysis: Given that the Fed no longer controls the Fed funds rate via open market operations (i.e., buying and selling U.S. treasury securities with banks such that supply and demand for Fed funds balances at or near the target rate), they control the effective fund rate, keeping it near the midpoint of the target range, via the reverse repo rate and the interest on excess reserves (IOER), which they have lowered three times (by 5bp increments) relative to the upper bound of the Fed funds rate target range.

Fed U.S. Dollar Swap Line Lending to Foreign Central Banks

Billions in USD Swap agreements outstanding to foreign central banks



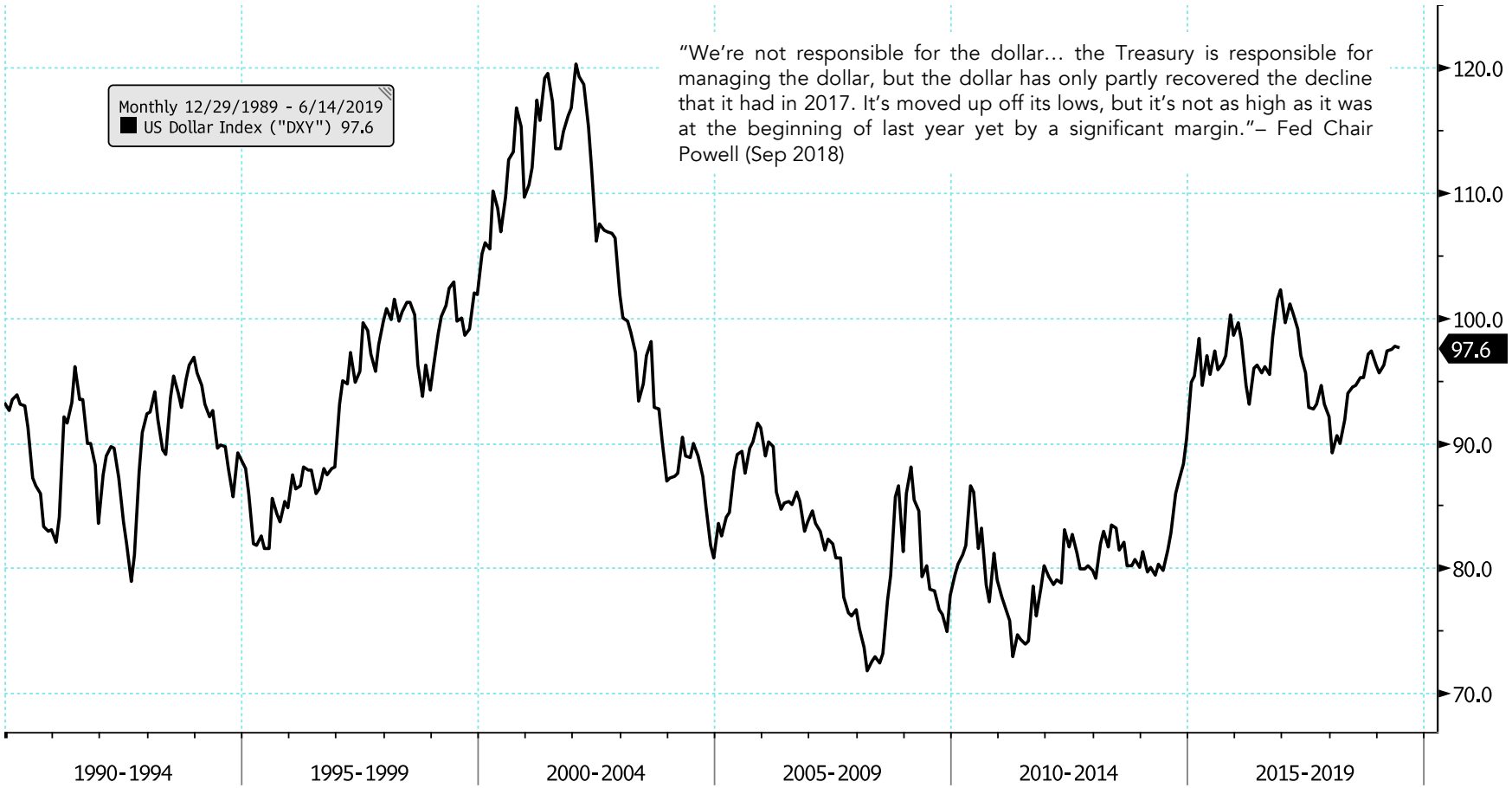
Source: © Merk Investments, Bloomberg

Analysis: The Fed set up temporary U.S. Dollar swap lines with several major foreign central banks in late 2007, which were used heavily to alleviate U.S. dollar funding stress overseas in 2008 and 2009 (with a peak of over 500 billion in swap line borrowing in late 08/early 09). In 2010 (when the above data series began) the Fed formed standing arrangements for dollar liquidity swap lines with the Bank of Canada, the Bank of England, the European Central Bank, the Bank of Japan, and the Swiss National Bank. Fed dollar swap lines were used again in 2011-2013 (primarily by the ECB due to stress in the Eurozone). It seems likely that Fed swap lines will be used heavily again in future crises. Yellen has argued it is within the Fed's congressional mandate to respond to global developments given the potential spillover to the US. The IMF's Lagarde has encouraged extending the U.S. dollar swap lines to emerging market central banks as an additional crisis fighting tool.

Link: https://www.federalreserve.gov/monetarypolicy/bst_liquidityswaps.htm

U.S. Dollar

Dollar Index ("DXY")

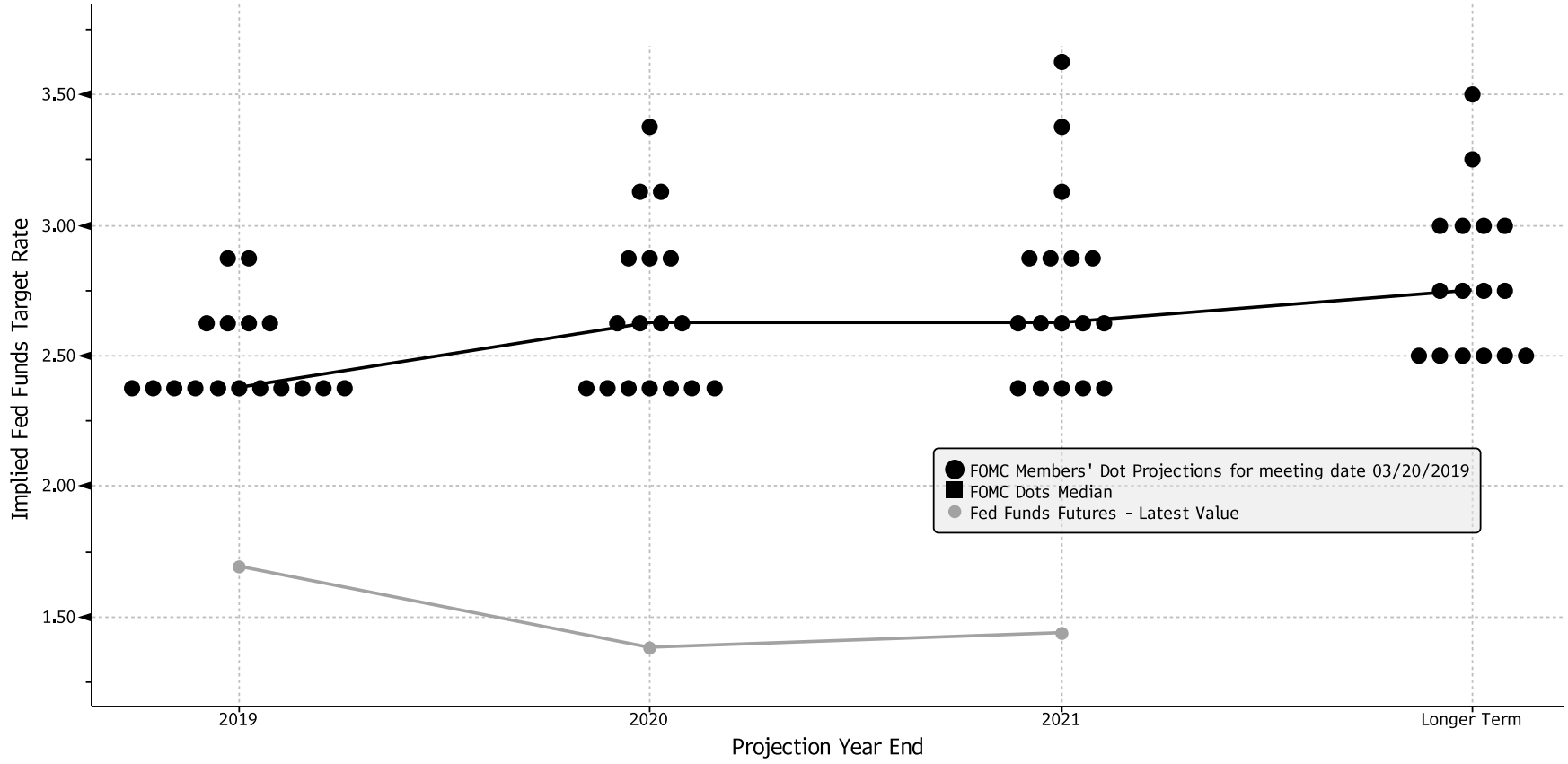


Source: © Merk Investments, Bloomberg

Analysis: The Powell Fed does not seem to be concerned about the value of the dollar currently, which is still below its multi year highs, and trending sideways recently.

Fed "Dot Plot"

FOMC participants' assessments of appropriate monetary policy from March 2019 Meeting (black), and Fed Funds Futures from 4/26/19 (grey)



Source: © Merk Investments, Bloomberg

Analysis: The dots represent FOMC participants' assessments of appropriate monetary policy. The market pricing, represented by the Fed Funds Futures (grey line) is substantially below the median dots for year end 2019 and 2020, and reflects the expectation for rate cuts. The Fed shifted their dots lower at the March meeting, suggesting no hikes in 2019, as opposed to the two hikes for 2019 suggested in the December dot plot.

Fed Median Economic Projections: March 2019

FOMC participants' economic projections are under their individual assessments of projected appropriate monetary policy

Variable	2019	2020	2021	Longer run
Change in Real GDP	2.1%	1.9%	1.8%	1.9%
Unemployment Rate	3.7%	3.8%	3.9%	4.3%
PCE Inflation	1.8%	2.0%	2.0%	2.0%
Core PCE Inflation	2.0%	2.0%	2.0%	N/A
Fed Funds Rate	2.4%	2.6%	2.6%	2.8%

Source: Federal Reserve, © Merk Investments LLC

Analysis: Compared to the December meeting, the median projections shifted lower for growth, inflation, and the fed funds rate path.

The above economic projections of Federal Reserve Board members and Federal Reserve Bank presidents are made under their individual assessments of projected appropriate monetary policy, which are represented in the previous dot chart.

The longer run inflation expectation is 2.0%, the longer run Fed Funds rate projection is 2.8% (3.0% in terms of the upper range of the Fed funds target rate), which represents the Fed's best guess of the natural rate of interest. The natural rate can be disaggregated into a natural real rate (i.e., net of inflation) and an inflation rate. The Fed's longer run inflation projection is 2.0% which suggests they view the natural real rate of interest around 1.0%, which is roughly consistent with NY Fed President Williams' academic work on estimating the natural real rate of interest.

The longer run unemployment rate projection is 4.3%, which is the Fed's best guess of the natural unemployment rate. At the current rate of 3.8% there is some chance that the economy is operating above capacity.

Who's Who at the Fed

Category	Name	Role	Status	Dove-Hawk Scale*
Board of Governors	Jerome Powell	Chair	Voter	Neutral
Board of Governors	Richard Clarida	Vice Chair	Voter	Neutral
Board of Governors	Lael Brainard	Governor	Voter	Neutral/Dovish
Board of Governors	Randal Quarles	Governor	Voter	Neutral
Board of Governors	Michelle Bowman	Governor	Voter	Neutral/Hawkish
Board of Governors	[vacant]	Governor	[Voter]	
Board of Governors	[vacant]	Governor	[Voter]	
Regional President	John Williams	New York Fed President	Voter	Neutral/Hawkish
Regional President	Eric Rosengren	Boston Fed President	Voter	Neutral/Hawkish
Regional President	Patrick Harker	Philadelphia Fed President		Neutral
Regional President	Loretta Mester	Cleveland Fed President		Neutral/Hawkish
Regional President	Thomas Barkin	Richmond Fed President		Neutral/Hawkish
Regional President	Raphael Bostic	Atlanta Fed President		Neutral/Dovish
Regional President	Charles Evans	Chicago Fed President	Voter	Neutral/Dovish
Regional President	James Bullard	St. Louis Fed President	Voter	Dovish
Regional President	Neel Kashkari	Minneapolis Fed President		Dovish
Regional President	Esther George	Kansas City Fed President	Voter	Hawkish
Regional President	Robert Kaplan	Dallas Fed President		Neutral/Hawkish
Regional President	Mary Daly	San Francisco Fed President		Neutral/Dovish

Source: Bloomberg, © Merk Investments LLC

Analysis: All board members vote. The NY Fed President always votes, and then four rotating regional presidents vote. There are two vacancies on the board.

**The dove-hawk scale relates to the views on appropriate monetary policy: with hawks likely representing the upper end of the spectrum on the dot plot and the doves likely representing the lower end of the spectrum.*

Conclusion/Thoughts

Fed Chair Powell has emphasized his intentions to use monetary policy tools to sustain the economic expansion and has recently dropped any mention of being "patient" with regards to the next move in rates. Given inflation readings below target and the notable decline in both market-based and survey-based inflation expectations, it seems likely the Fed will cut rates in the second half of the year. Furthermore, the balance of risks regarding trade policy appears to have shifted to the downside.

Some Fed officials, notably Bullard of the St. Louis Fed (a voting member this year), have expressed concern about the yield curve inversion—suggesting that monetary policy is currently too tight. Fed rate cuts might un-invert the 10yr-3m yield curve, if only temporarily. Conversely, Esther George of the Kansas City Fed (also a voting member this year) has suggested that rate cuts might fuel asset bubbles and create financial imbalances.

While the last Fed hiking cycle (from 2004 to 2006) was a constant move higher in rates, historically it is not uncommon for hiking cycles to have periodic phases of rate cuts. A rate cut from the Fed does not necessarily signal the end of the economic expansion. For example the Fed cut rates in 1998, and then resumed hikes to the rate cycle peak in 2000.

-Nick Reece, CFA

Disclosure

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