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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.

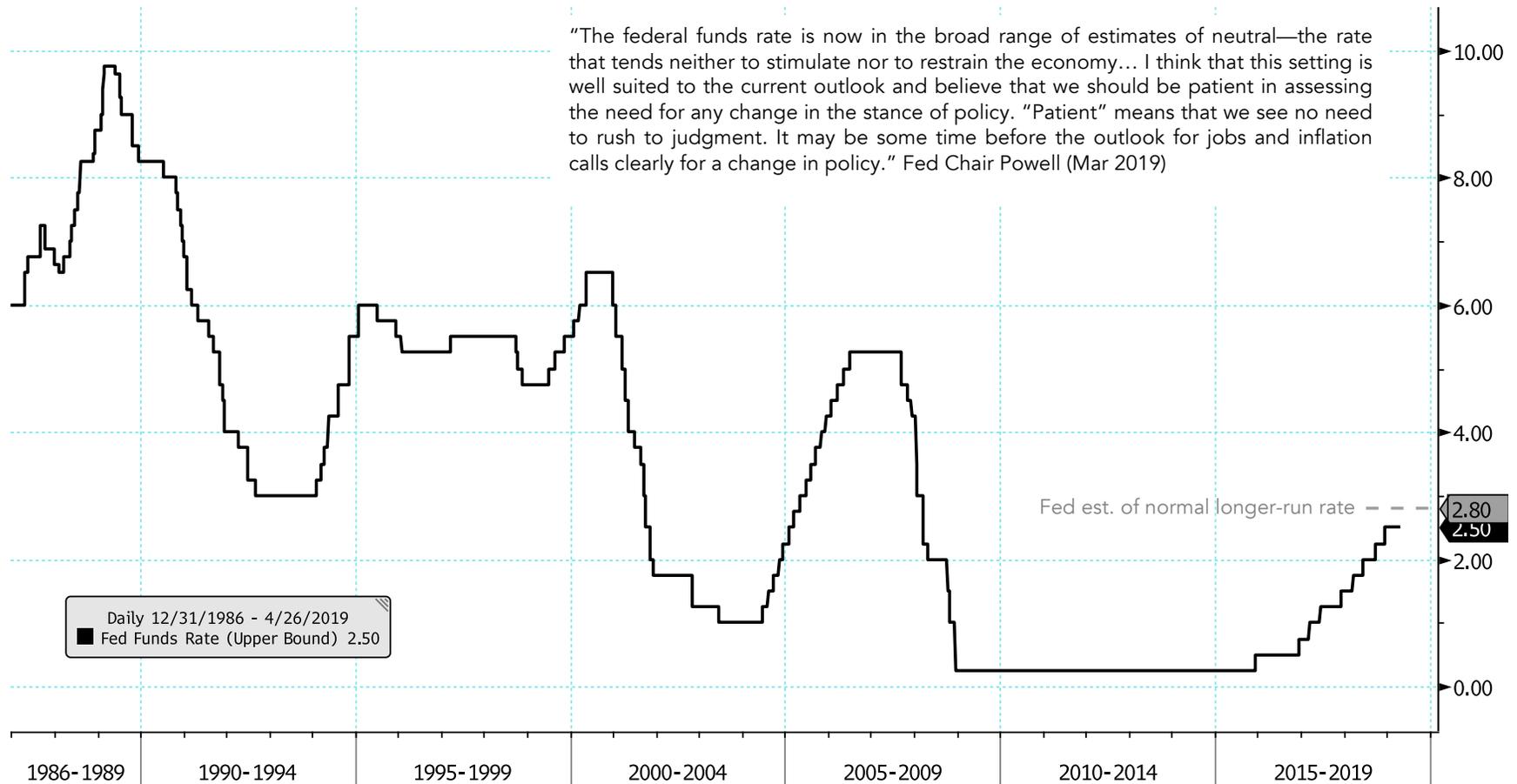
**Forward Guidance:** a commitment to hold rates at a certain level (e.g., zero) over a certain period of time.

## 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)

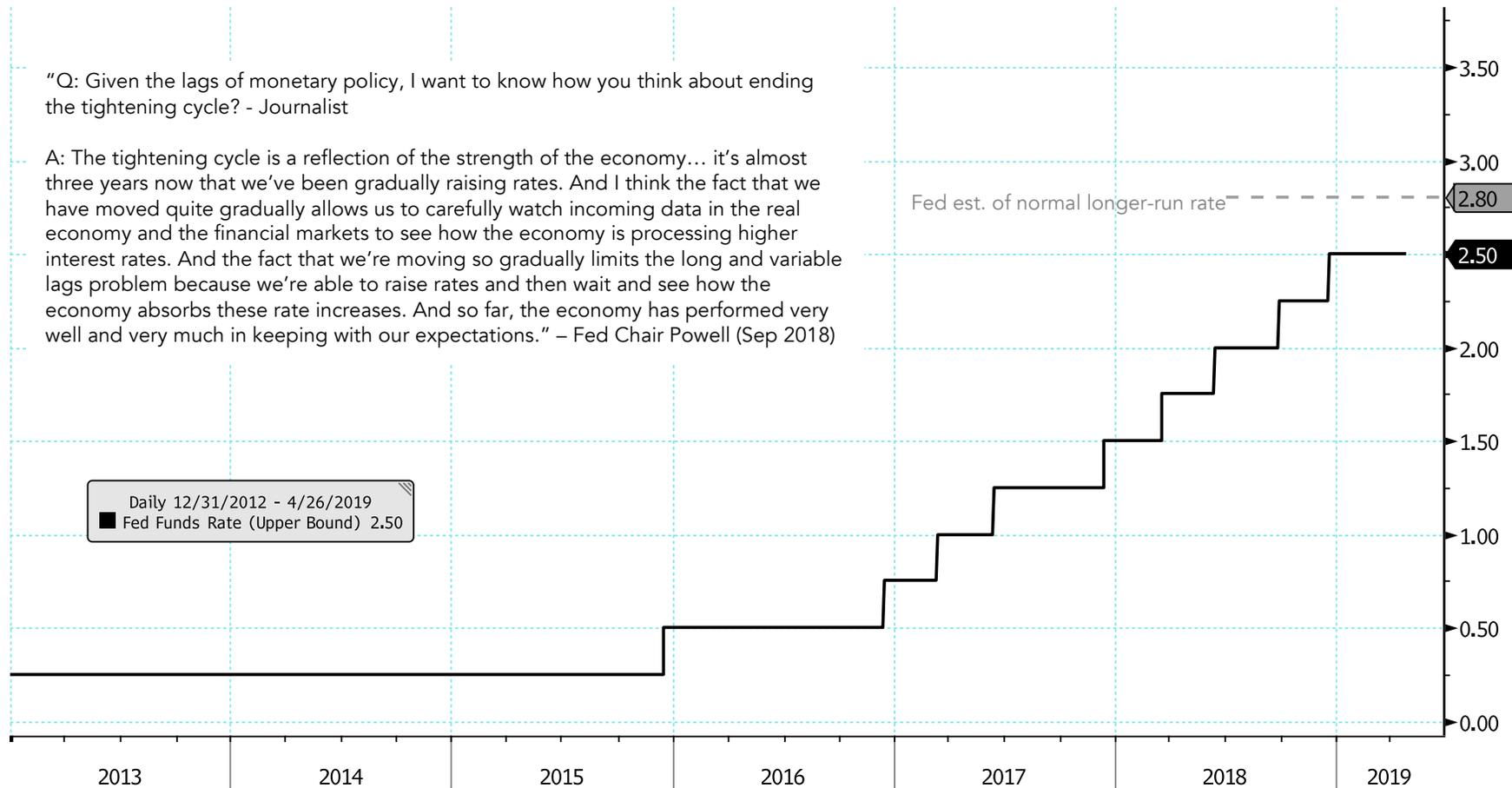


Source: Bloomberg, © Merk Investments LLC

*Analysis: Powell is patiently waiting for economic data to come in to determine the next move in interest rates. Specifically, the Fed is concerned about the potential for continued muted inflation.*

## Fed Rate Hiking Cycle

The summary of economic projections from the Mar 2019 Fed meeting show a median longer-run projection of 2.80%



Source: Bloomberg, © Merk Investments LLC

*Analysis:* With the current setting very close to the estimate of neutral, and softer than expected data in the U.S. and globally, Powell seems willing to patiently watch data come in over the coming months, and is likely going to be on hold with respect to rates through the summer.

## Fed Estimate of the Natural Real Rate of Interest

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



Source: Bloomberg, © Merk Investments LLC

*Analysis: 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

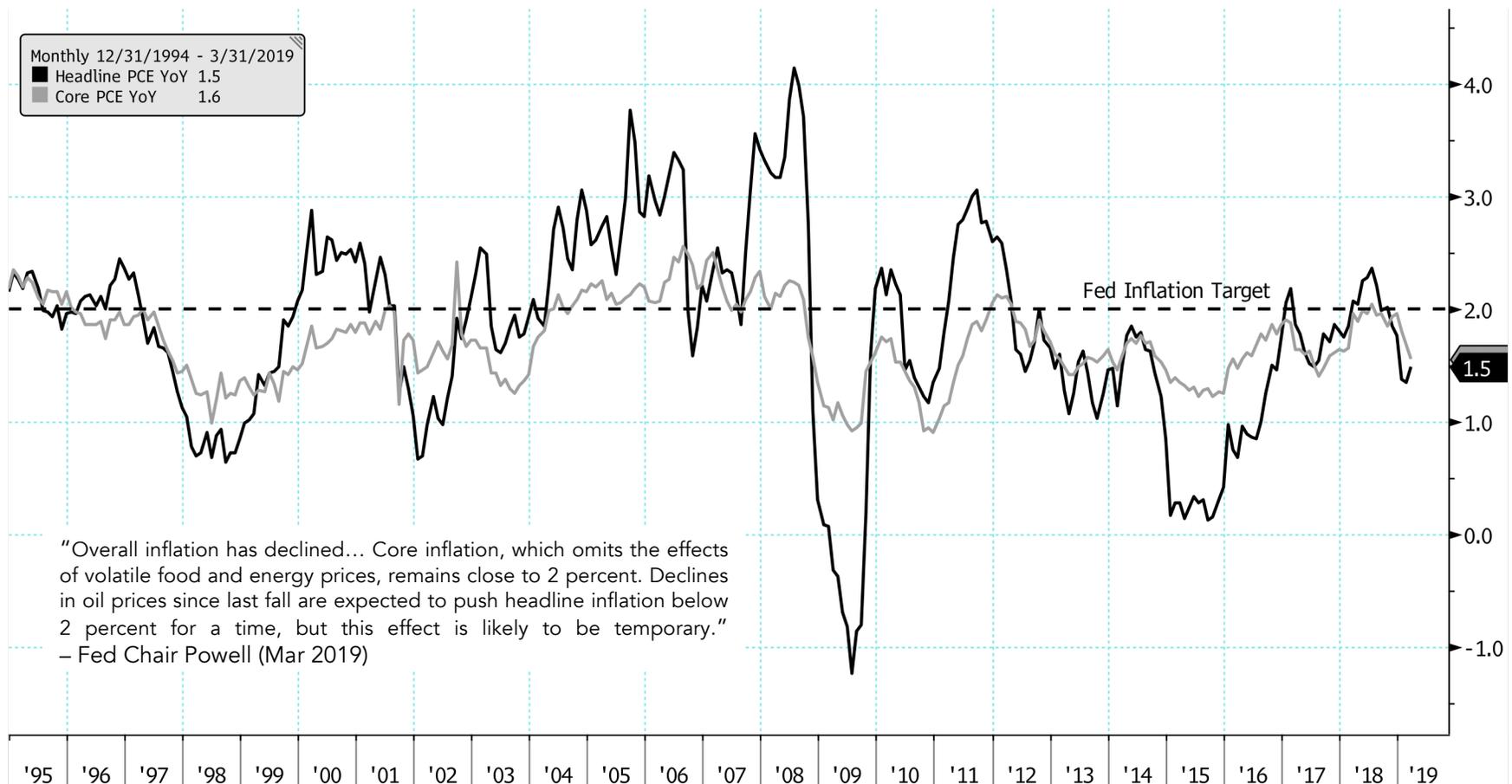


Source: Bloomberg, © Merk Investments LLC

*Analysis: The market is pricing the Federal Funds rate in 1 years time at 2.12%.  
 (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



Source: Bloomberg, © Merk Investments LLC

*Analysis: The March 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)



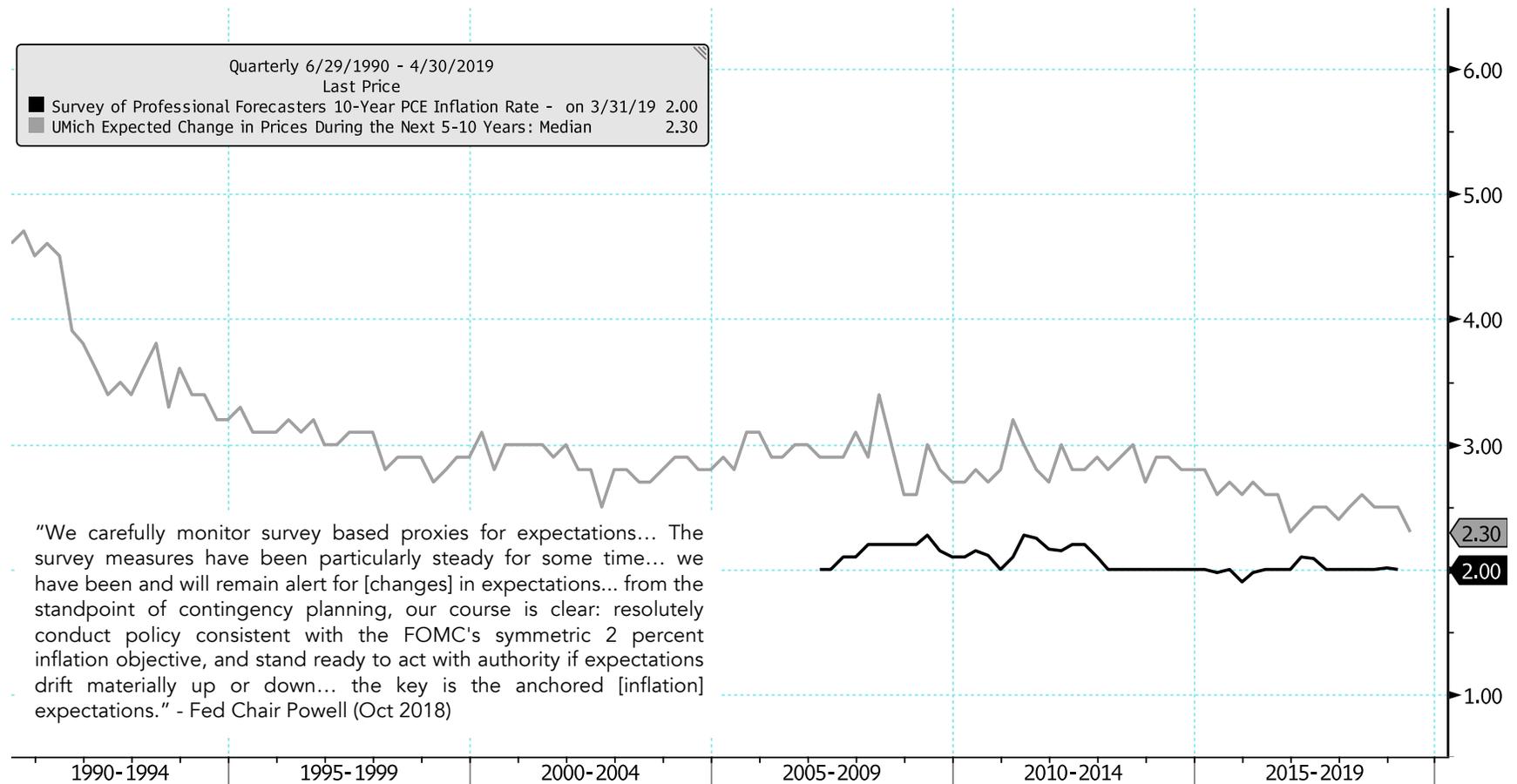
Source: Bloomberg, © Merk Investments LLC

*Analysis: The market is suggesting average annual inflation over the next 10 years might be around 2.0%, 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. Market based inflation expectations have fallen over the past year, in my view 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



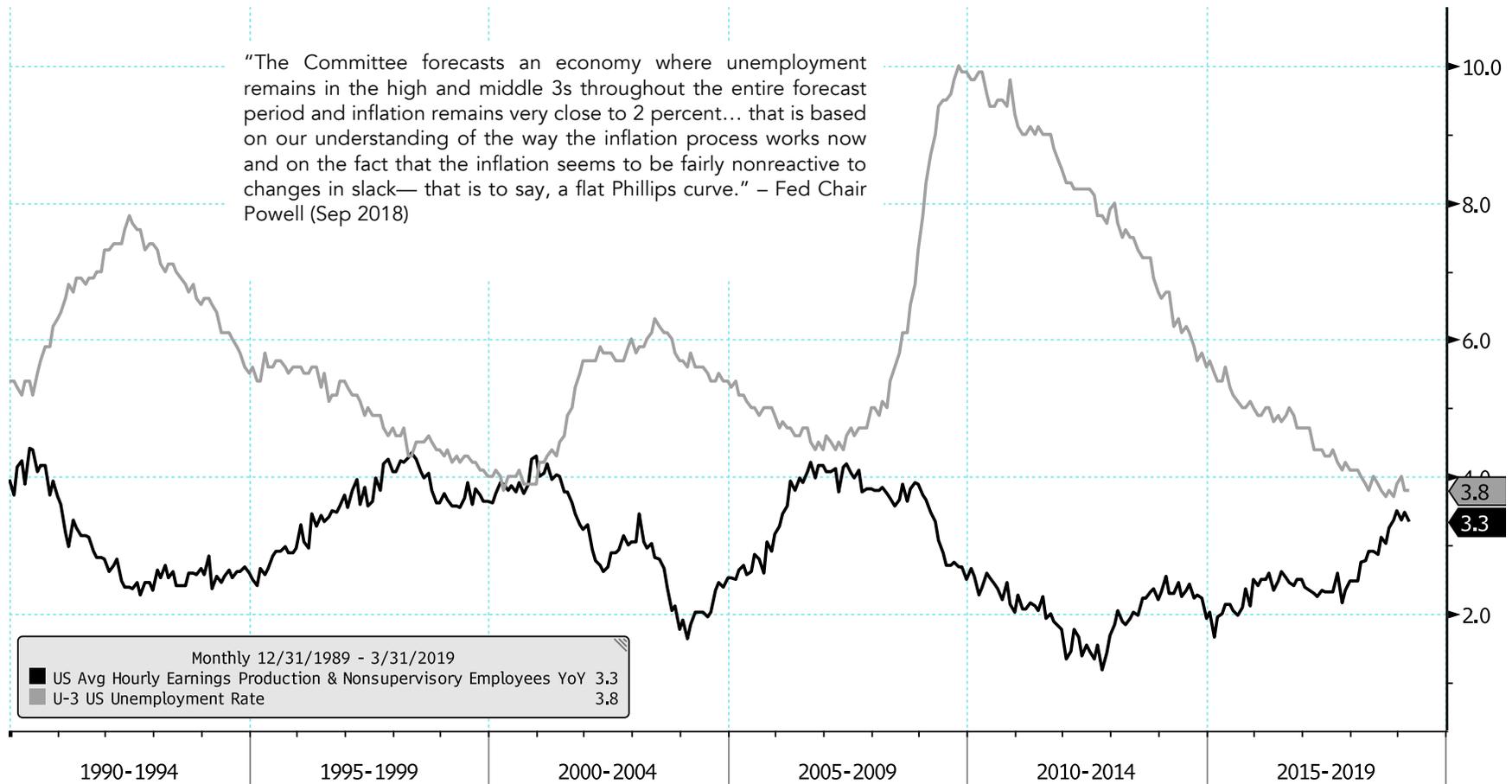
Source: Bloomberg, © Merk Investments LLC

*Analysis: 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: Bloomberg, © Merk Investments LLC

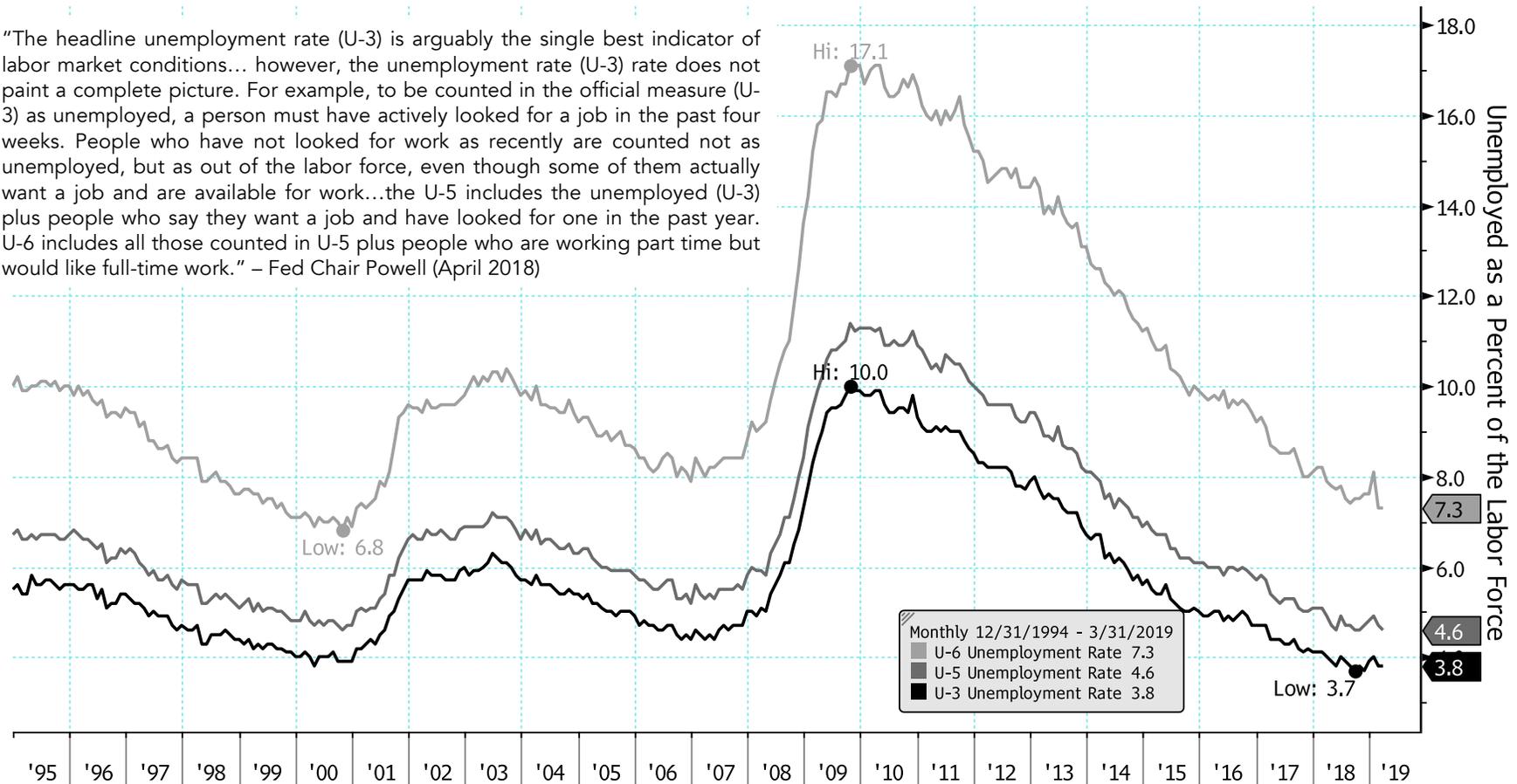
*Analysis: Fed policy makers have been surprised by the lack of wage inflation (and general inflation) in recent years. I think in Powell’s mind that suggests the labor market might not be at maximum employment yet. Having said that, the wage inflation rate seems to have started to pick up over the past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

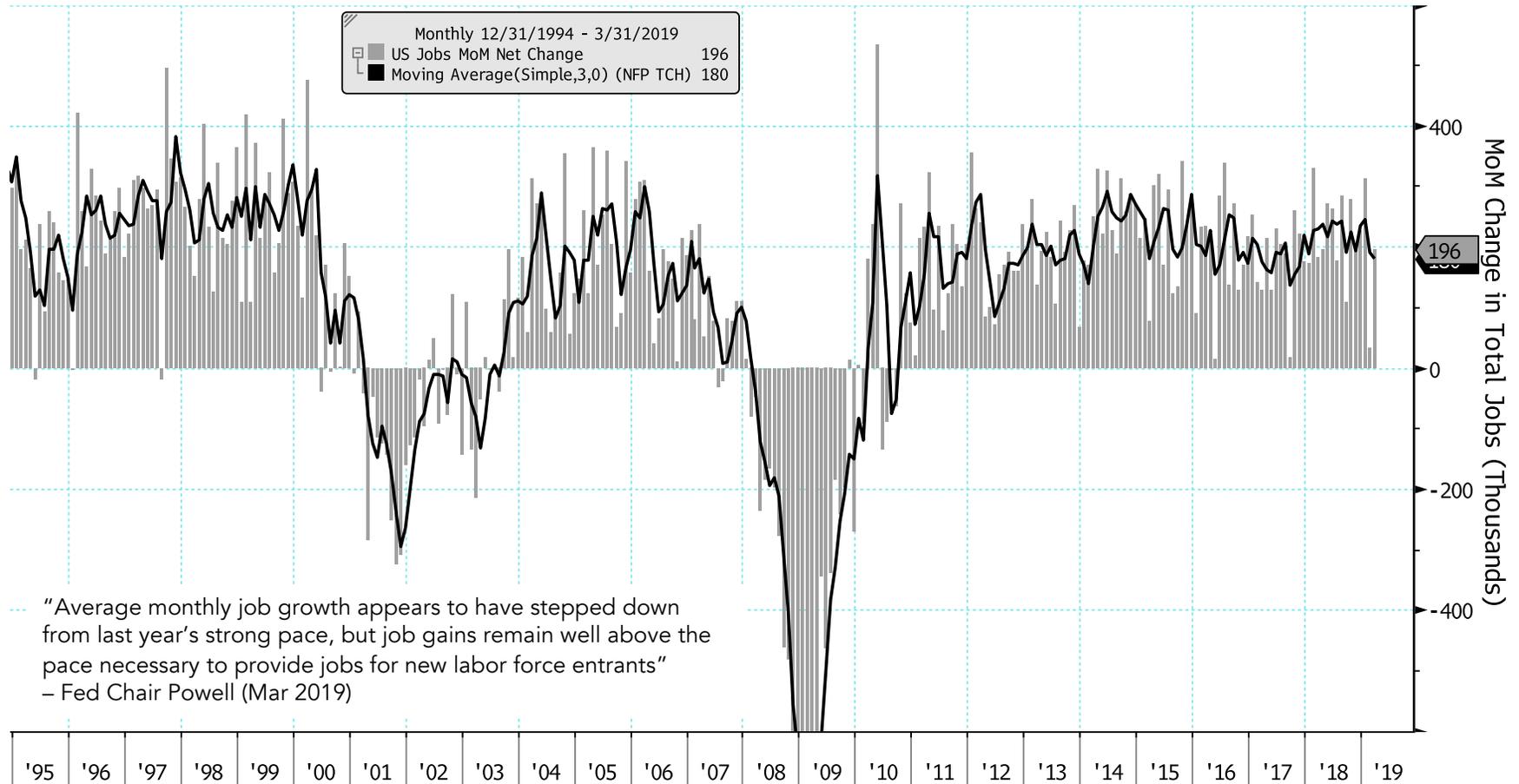


Source: Bloomberg, © Merk Investments LLC

*Analysis: The U-3 rate ticked down to 3.8% in the latest jobs report, still slightly above the recent cycle low of 3.7%.  
\*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)



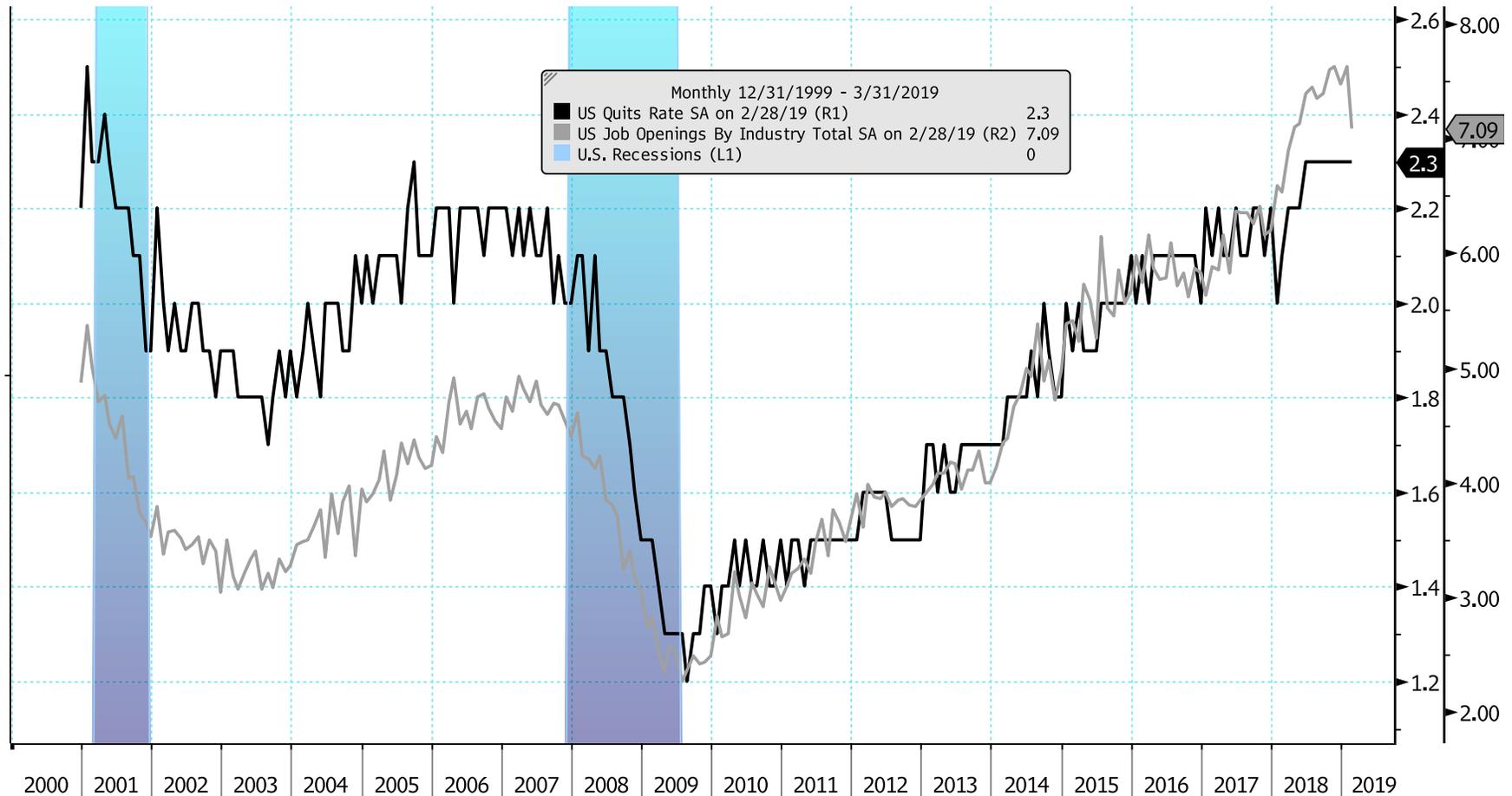
Source: Bloomberg, © Merk Investments LLC

*Analysis: The 3-month moving average of the change in non-farm payrolls is 180k, 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.*

*\*This chart relates to the maximum employment mandate\**

# Jobs Openings and Labor Turnover Survey (JOLTS)

Jobs Openings (millions) and Quits Rate (percent)



Source: Bloomberg, © Merk Investments LLC

*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



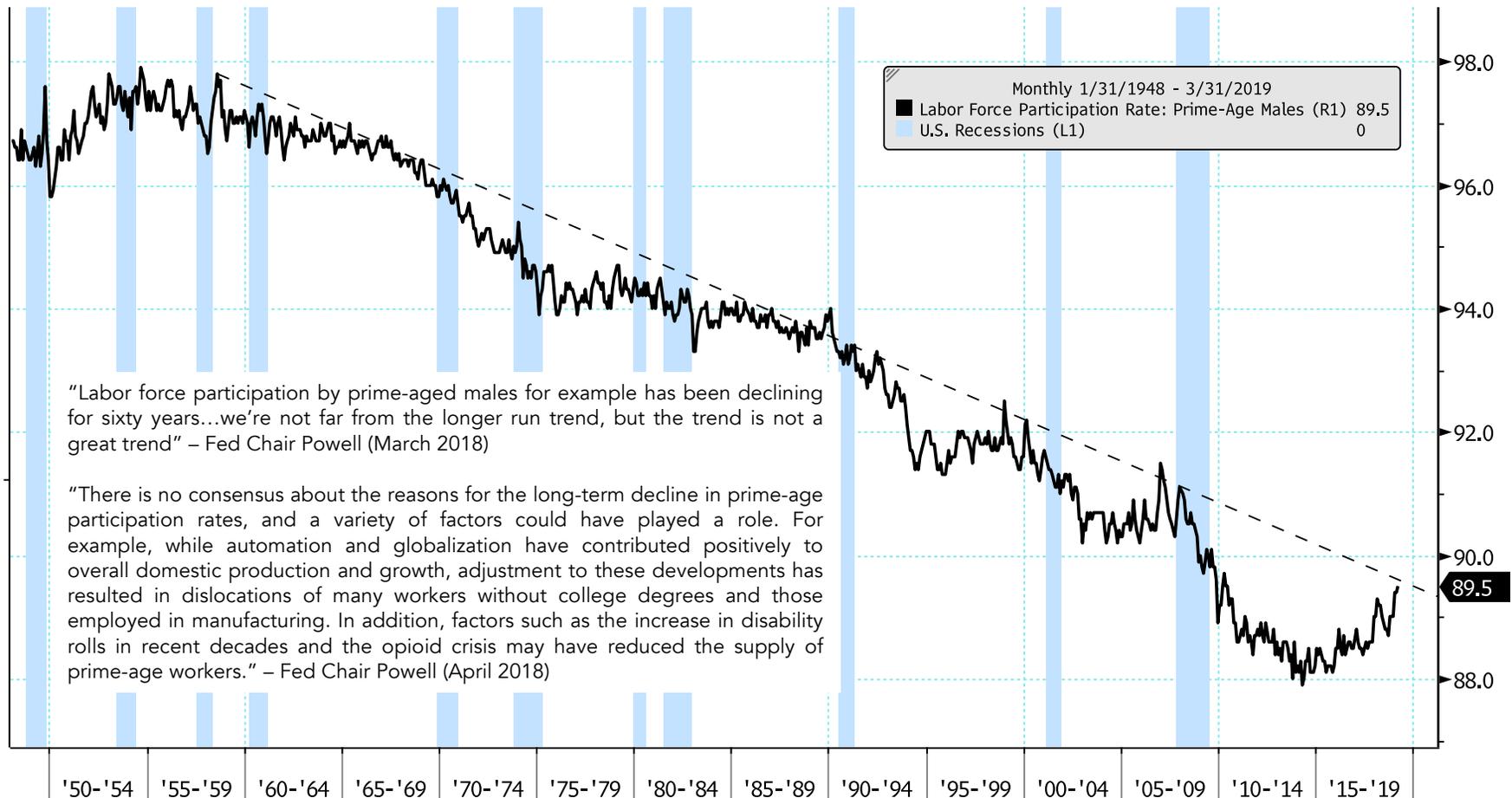
Source: Bloomberg, © Merk Investments LLC

*Analysis: The prime-age participation rate is below the previous cycle high (although 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



Source: Bloomberg, © Merk Investments LLC

*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 an uptick.*

*\*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

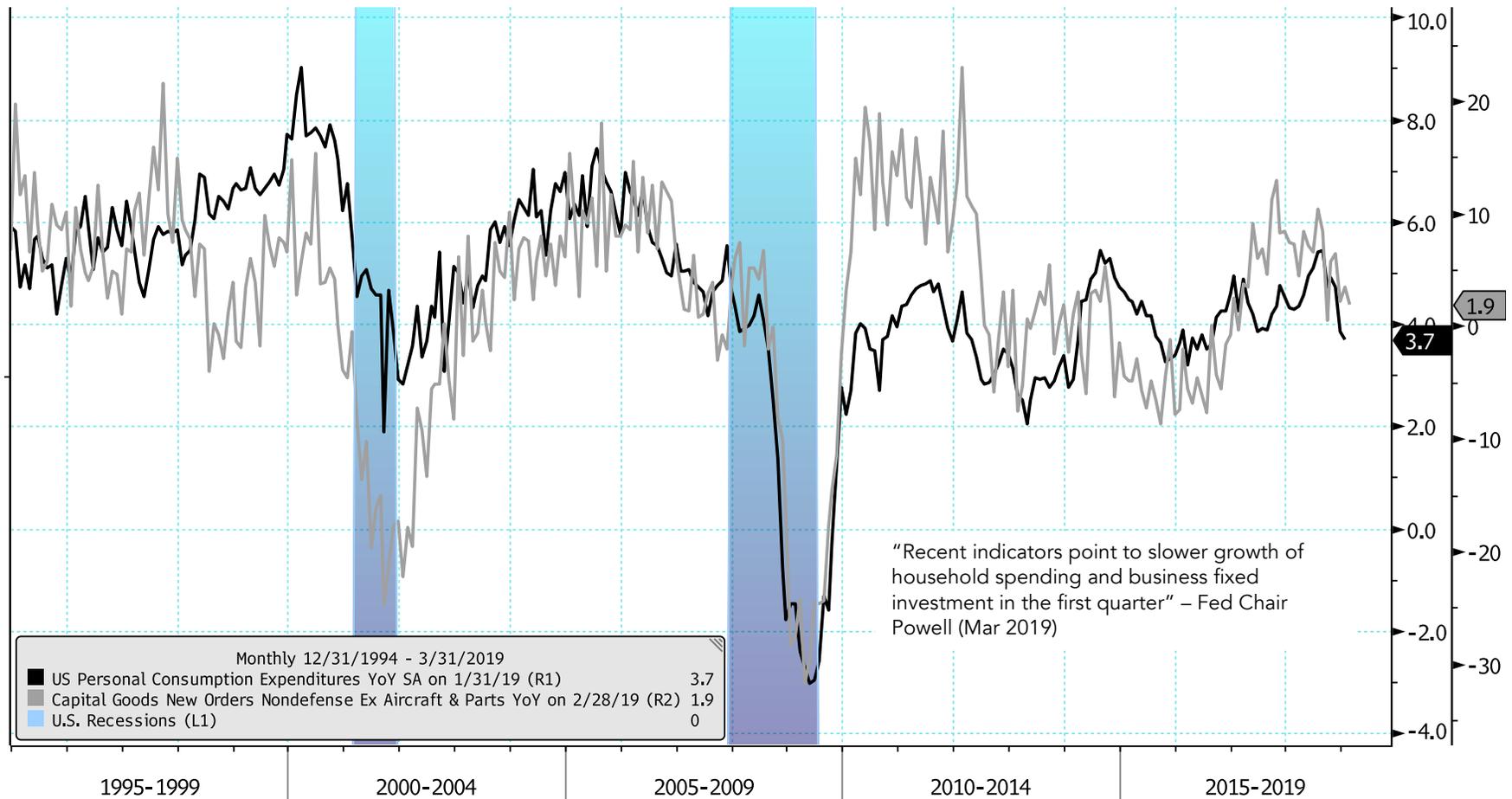


Source: Bloomberg, © Merk Investments LLC

*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)

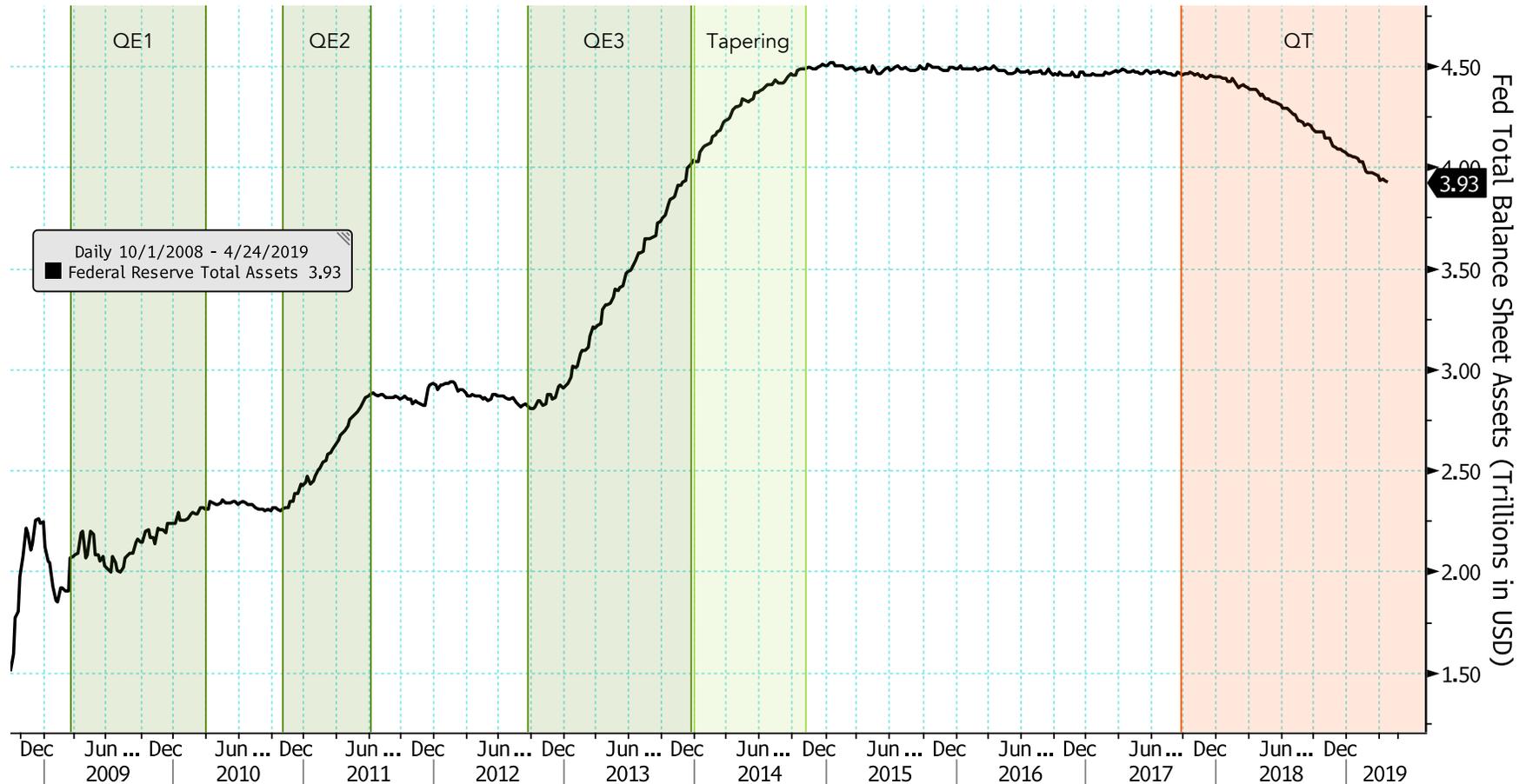


Source: Bloomberg, © Merk Investments LLC

*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

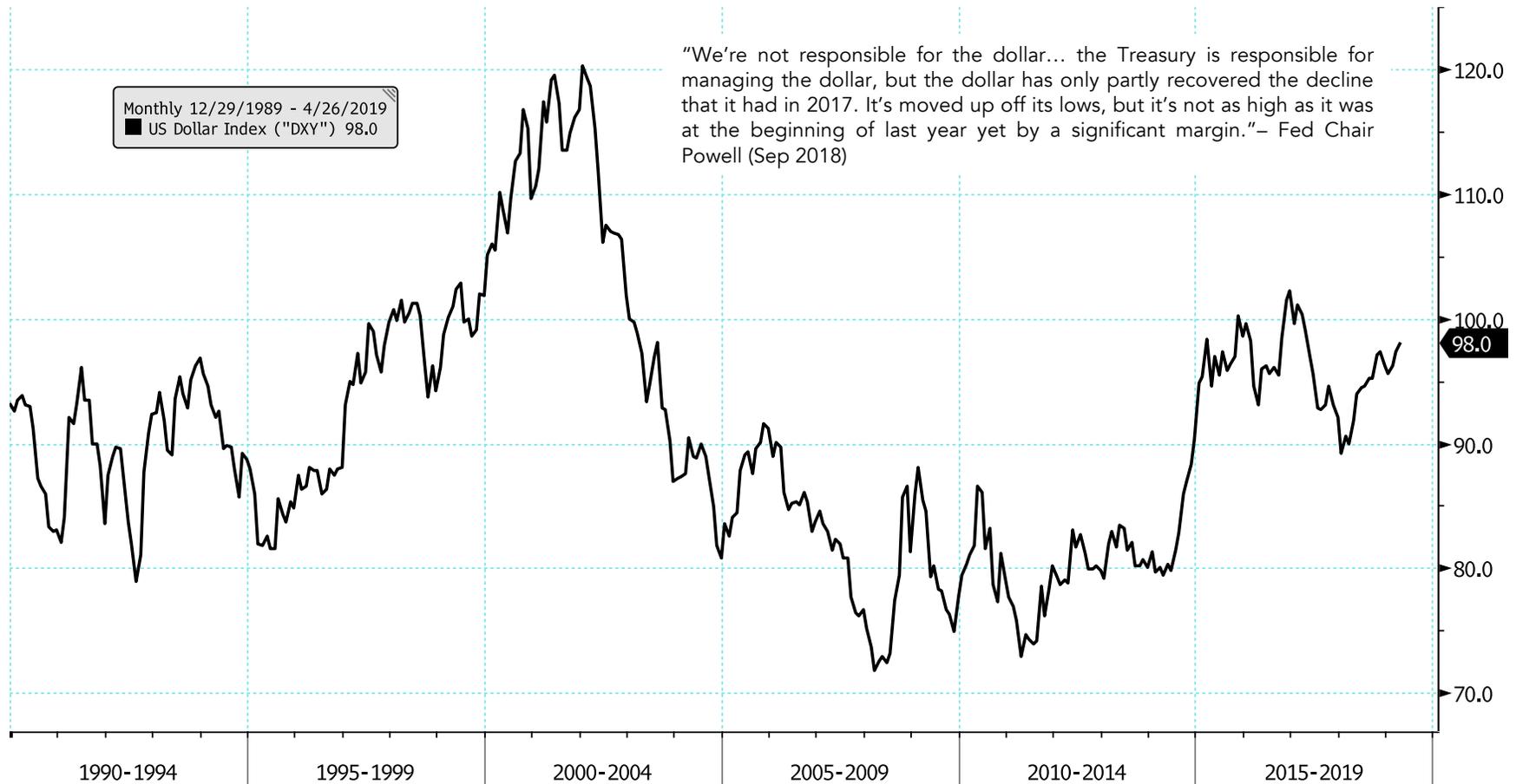
Federal Reserve Balance Sheet Total Assets and QE/QT Operation Phases



Source: Bloomberg, © Merk Investments LLC

*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.*

## U.S. Dollar Dollar Index ("DXY")

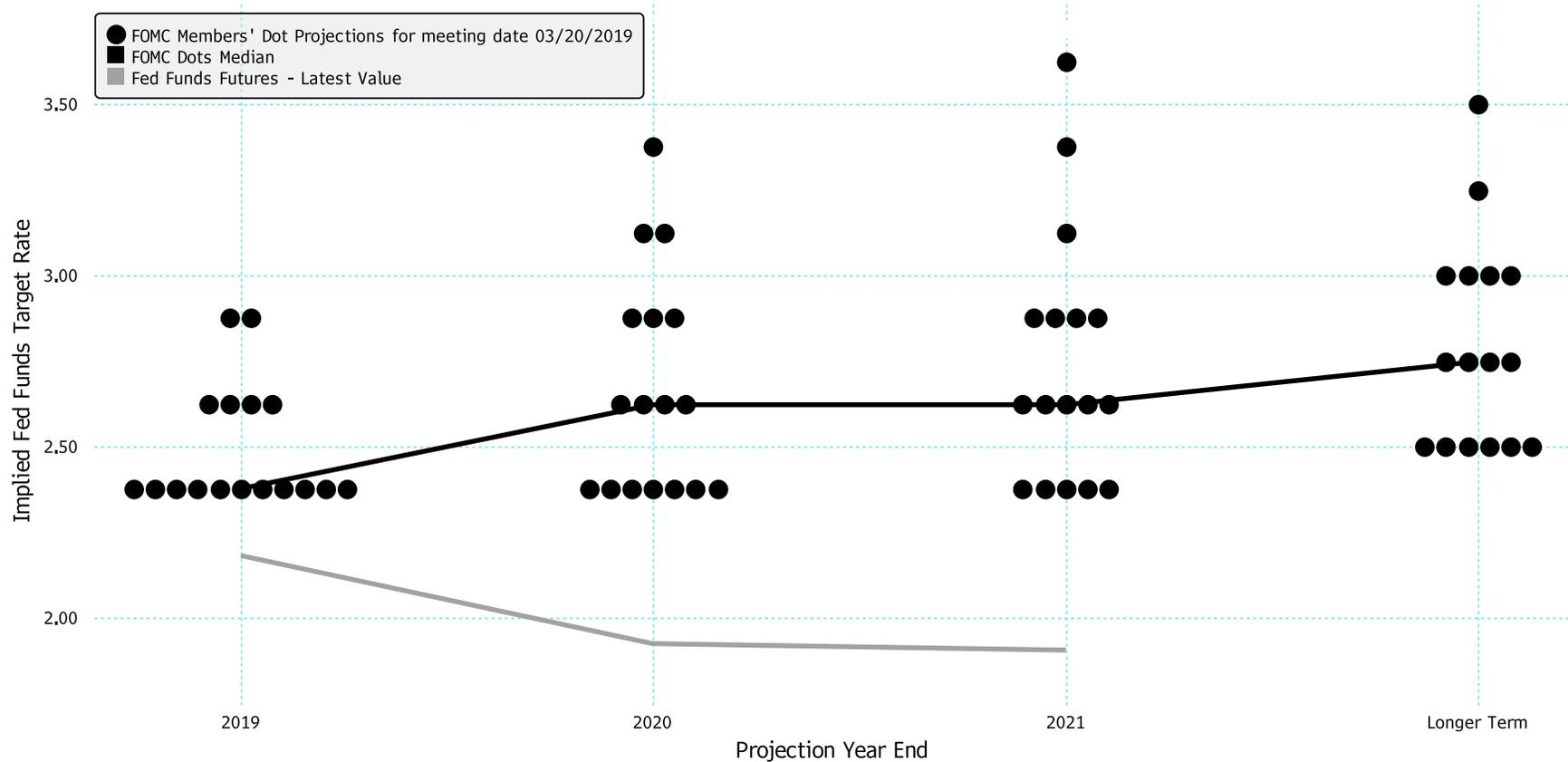


Source: Bloomberg, © Merk Investments LLC

*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, although trending higher more 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: Bloomberg, © Merk Investments LLC

*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. The Fed shifted their dots a little lower at the December meeting, now suggesting only two rate hikes in 2019, as opposed to the three hikes for 2019 suggested in the September 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

The March meeting represented a loosening of monetary policy via the balance sheet (ending quantitative tightening by the end of September 2019) and via a downgrade of the economic assessment in the FOMC statement. Powell emphasized "My colleagues and I have one overarching goal: to sustain the economic expansion, with a strong job market and stable prices, for the benefit of the American people."

On the balance sheet, the Fed noted: "The Committee intends to slow the reduction of its holdings of Treasury securities by reducing the cap on monthly redemptions from the current level of \$30 billion to \$15 billion beginning in May 2019. The Committee intends to conclude the reduction of its aggregate securities holdings in the System Open Market Account (SOMA) at the end of September 2019."

In the FOMC Statement the Fed noted: "growth of economic activity has slowed... Recent indicators point to slower growth of household spending and business fixed investment in the first quarter... overall inflation has declined... market-based measures of inflation compensation have remained low."

While there was also a downgrade of forecasted growth and inflation in the Summary of Economic Projections published at the March meeting, Powell reiterated that "historical experience reminds us that growth and inflation this year could be stronger or weaker than what we now project" and noted that "the data are not currently sending a signal that we need to move [rates] in one direction or another... We see a positive outlook for this year... the underlying economic fundamentals for growth this year are still very positive... We feel our policy rate is in the range of neutral. The economy is growing at about trend. Inflation is close to target. Unemployment is under 4 percent. It's a time for us to be patient and watch and wait and see how things evolve."

-Nick Reece, CFA

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**Disclosure**

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