GLOBAL PERSPECTIVES

JANUARY 2022

BY WILLIAM P. STERLING, PH.D.

Global Strategist

HIGHLIGHTS

THE FED'S BALANCE SHEET: WHY THE RUSH TO RUNOFF?

- It now looks increasingly likely that the Fed will start to shrink its balance sheet later this year in a process known as Quantitative Tightening (QT).
- That would be a marked shift in behavior from the previous rate hiking cycle, when it waited almost two years after its first rate hike to begin QT.
- Although concerns about QT help explain recent upward pressure on bond yields, history shows that Fed balance sheet policies can have counter-intuitive effects on bond yields.

THE FED'S BALANCE SHEET: WHY THE RUSH TO RUNOFF?

FROM QUANTITATIVE EASING (QE) TO QUANTITATIVE TIGHTENING (QT)

Surging wages and prices have recently put pressure on the Federal Reserve to curb inflation. In response, officials have signaled that the Fed will soon be exiting from its very easy monetary policy stance. Not only is the Fed planning to end its asset purchase program (Quantitative Easing or QE) in March, but it also looks likely to start a cycle of quarter-point rate hikes at its March policy-making meeting. Investors have now fully priced in four quarter-point rate hikes over the course of this year even as some Fed officials have speculated that more than four rate hikes are warranted.

Against the backdrop of a 7% annual gain in the Consumer Price Index (CPI) in December, the Fed's hawkish pivot is unsurprising. That said, what does seem to have caught investors by surprise were signs from the minutes of the December FOMC meeting that the Fed also intends to begin shrinking its massive $8.9 trillion balance sheet later this year in a process known as Quantitative Tightening (QT). This shift has likely contributed to the sharp upward pressure on bond yields early this year, with the yield on the 10-year U.S. Treasury bond having risen from 1.51% at the end of 2021 to as high as 1.88% over the first three weeks of the year.

In view of this important development, we will use a simple Q & A format to address a number of key issues.

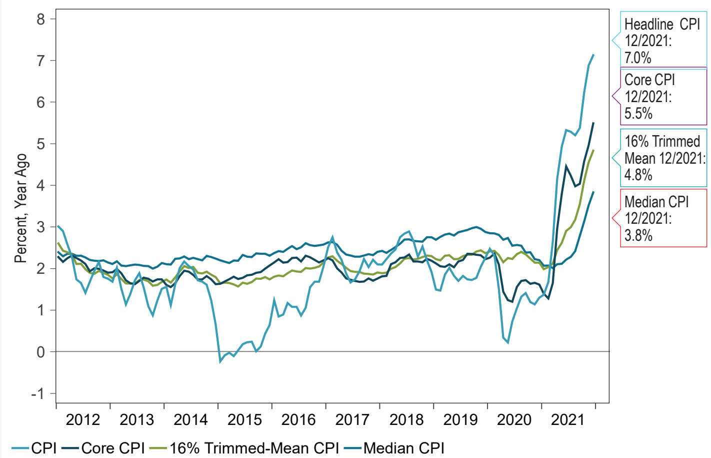
WHY THE RUSH TO RUNOFF?

The Fed made it clear in its December FOMC minutes that almost all committee members agreed that it would likely be appropriate to initiate balance sheet runoff at some point after the first rate hike. That judgement was confirmed in a statement following its January policy-making meeting. Recent Fed statements also note that current conditions include a stronger economic outlook, higher inflation, and a larger balance sheet that could warrant a potentially faster pace of rate hikes.

Recently released data confirms the Fed's observations about strong economic growth and higher inflation. For example, the December CPI report not only delivered the 7% annual gain mentioned above, but the core CPI excluding food and energy was up 5.5% **(Chart 1)**. Likewise, the decline in the unemployment rate to 3.9% in December is also significant. Along with other data reflecting a tight labor market, it is clear that the Fed's commitment to "maximum employment" is no longer an impediment to normalizing monetary policy.

CHART 1

Cleveland Fed Median and 16% Trimmed Mean Measures Show Broadening Inflation Pressures



Source: GW&K Investment Management, BLS, Cleveland Fed, and Macrobond

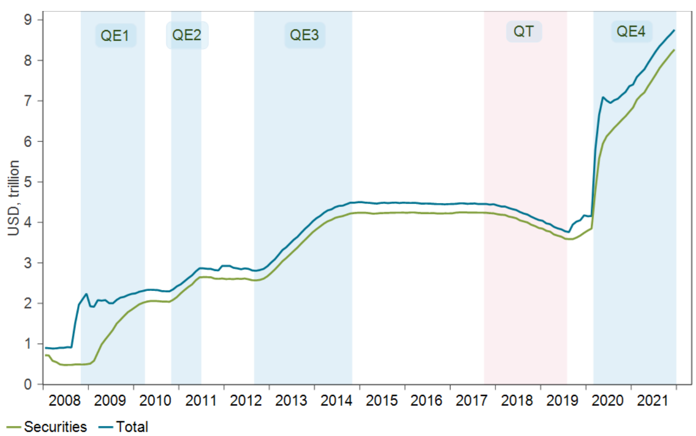
The Fed's hawkish pivot has been prompted not only by the surge in headline CPI inflation to 7% in December, but also by a variety of measures that point to broadening inflation pressures.

HOW WOULD AN EARLY MOVE TOWARD QT COMPARE TO THE MOST RECENT TIGHTENING CYCLE?

If the Fed begins to shrink its balance sheet soon after the presumed first rate hike in March, it would represent a marked shift in its behavior from its past QT program, which dated from October 1, 2017 to July 31, 2019 **(Chart 2)**. That episode of balance sheet runoff did not occur until three years after the Fed had completed its asset purchase program. The Fed also waited until it had completed four quarter-point rate hikes out of a tightening cycle that ended up with nine rate hikes over three years.

CHART 2

Fed Assets
(Trillions of U.S. Dollars, Weekly)



Source: GW&K Investment Management, Federal Reserve, and Macrobond

Fed assets have grown from under $1 trillion in early 2008 to nearly $9 trillion currently, reflecting four rounds of QE (shown in blue). Fed assets shrunk by 17% in the 2017-2019 QT period (shown in pink).

Although Fed officials have been vague about when balance sheet runoff might commence this time around, market participants believe it could commence relatively soon after the first rate hike. June or July seem likely months for QT to begin this time around, which would be just a few months after interest rate liftoff.

WHAT DOES THE FED HOPE TO ACCOMPLISH WITH AN EARLY MOVE TOWARD QT?

QE is meant to ease financial conditions, with Fed asset purchases designed to push bond prices up and yields down. It has been employed to support the economy during periods of economic distress, as in the aftermath of the Global Financial Crisis and in response to the economic shock of the pandemic.

Clearly, QT has the opposite intent, aimed at tightening financial conditions, slowing growth, and curbing inflation. The theory is by reducing the Fed's footprint in bond markets, the impact will push bond prices down and yields up. Rising yields on U.S. Treasury bonds may also create headwinds for stock markets, as well as upward pressure on corporate, municipal, and non-U.S. sovereign bond spreads.

What is less clear is whether the Fed sees QT as a substitute for rate hikes or as a complement to planned rate hikes. In the December FOMC minutes, it was noted that "some participants" thought tightening could proceed by relying more on balance sheet reduction and less on rate hikes. The benefit would be to limit the yield curve flattening that typically occurs as the Fed hikes rates, which tends to squeeze the profits of financial firms and raise the risk of financial accidents.

The prospect of a rapid one-two punch of interest-rate hikes and balance-sheet reduction seem designed to send a message that the Fed is serious about curbing inflation. Even if that risks unsettling bond and stock markets – especially since it hasn't been done this quickly before – that may be in line with the Fed's intention of engineering tighter financial conditions.

HOW IS BALANCE SHEET RUNOFF ACCOMPLISHED?

The mechanics of balance sheet runoff are straightforward, but the effects on markets are tricky to analyze. Here are the basic mechanics: When Treasury securities held by the Fed reach their maturity date, they are paid off by the government. Likewise, mortgage securities are paid off by Fannie Mae and Freddie Mac.[1]

If the Fed wants to keep its balance sheet constant as those securities mature, it needs to go out into the market and replace those securities with the purchase of other securities. Balance sheet runoff simply means stopping the replacement of securities that mature.

In 2017, the monthly amount of securities permitted to mature and not be replaced was capped, while amounts above the maximum were reinvested and left on the balance sheet. That approach ensured a gradual reduction in the balance sheet.

The monthly restrictions for Treasuries and agency debt and mortgage-backed securities were initially set at $6 billion for Treasuries and $4 billion for agency debt and mortgage-backed

1 For mor details see details see Kristie M. Engemann, "What is Quantitative Tightening," St. Louis Federal Reserve Bank Open Vault Blog, July 17, 2019.

securities. However, the caps were increased by those amounts each quarter until they reached $30 billion and $20 billion every month, respectively.

This gradual approach to balance sheet runoff saw the Fed's assets decline by $680 billion from $4.46 over the October 2017 through July 2019 period (Chart 2). The size of the decline sounds modest compared to current Fed assets of nearly $9 trillion, but at the time it represented a 17% decline in the Fed's balance sheet over slightly less than two years.

HOW DOES FED BALANCE SHEET POLICY IMPACT MARKETS?

This is the $9 trillion question and unfortunately has no easy answer. Former Fed Chair Ben Bernanke famously quipped that "The problem with QE is it works in practice, but doesn't work in theory."

His quip refers to the fact that many economists argue that, in theory, the Fed's purchase or sales of Treasury bonds should have no effects.[2] The central bank simply exchanges one type of government debt – money – for another type of government debt – a long-term Treasury bond. That will only matter if investors have a significant preference for one type of debt over the other, which advocates of QE (or QT) believe is true in practice.

There have been dozens of academic studies conducted on the effects of QE. Almost all find some impact on bond yields and, less clearly, on the economy. For example, a 2019 note from the St. Louis Fed suggested that "from 2008-2013 the Fed's asset purchases and forward guidance about future short rates jointly reduced 10-year Treasury yields by 100 to 200 basis points on impact and that this reduction modestly raised overall prices and economic activity."

That said, the same note suggested that balance sheet shrinkage, or QT, may not have equal and opposite effects from QE and that the effects of unwinding the balance sheet may be "relatively minor." The argument is that QE worked mainly as a signal at times of crisis that the Fed would keep the policy rate near zero for an extended period of time. But once the policy rate rises well above zero, the signaling effects of balance sheet changes tend to dissipate.

SHOULD INVESTORS RELAX ABOUT QT, GIVEN THE UNCERTAINTIES?

In the past, Fed officials like former Fed Chair Janet Yellen have described their intention to make balance sheet runoff akin to "watching paint dry" or "something that just runs quietly in the background."[3] This was also the message from a recent article by former New York Fed president William Dudley, whose advice to investors was "don't freak out about the Fed's big balance sheet."[4] It emphasized that the details will be communicated well in advance to investors and will proceed on autopilot once the parameters are established.

That said, it is probably safe for most investors to assume that a shift in Treasury holdings from the Fed to private investors, along with declining bank reserves, will initially put upward pressure on long-term Treasury yields. Indeed, the entire yield curve could shift up as the Fed proceeds with rate hikes, although a typical pattern in rate hiking cycles is that long-term rates do not move up as much as short-term rates, resulting in a flatter yield curve.

However, gauging the likely size of QT effects is a tricky business. Fed officials are the first to admit that they understand the effects of changes in the Federal funds rate much better than changes in the balance sheet. Those economists who are brave enough to quantify the potential impact of balance sheet runoff often try to equate the effects of dollar reductions in the balance sheet with those of quarter-point hikes in the Federal funds rate.

For example, Deutsche Bank economists recently postulated that a $1.5 trillion reduction in the balance sheet by the end of 2023 would equate to between 2.5 and 3.5 quarter-point hikes over the same period.[5] Given the uncertainties, this is just a well-informed guess. It corresponds to a reduction in the balance sheet of roughly 17%, comparable to the 2017-19 QT program.

It should be noted, however, that some Fed officials are talking about a more aggressive approach to balance sheet runoff. For example, Atlanta Fed president Raphael Bostic recently said he

2 See, for example, John Carney, "John Cochrane on why the Fed's QE program has 'no effect,'" CNBC.com, January 3, 2014.
3"Transcript of Chair Yellen's Press Conference," Federal Reserve, June 14, 2017.
4 Bill Dudley, "Don't Freak out about the Fed's Big Balance Sheet," Bloomberg Opinion, January 12, 2022.
5 Jed Graham, "Fed Balance Sheet May Shrink By $100 Billion a Month, Adding Risk to Stock Market, Investor's Business Daily, January 13, 2022.

would like to see the balance sheet shrink by $100 billion a month. That would amount to a decline of $2.4 trillion over two years, which by Deutsche Bank's logic might equate to 4 to 5.5 quarter-point rate hikes.

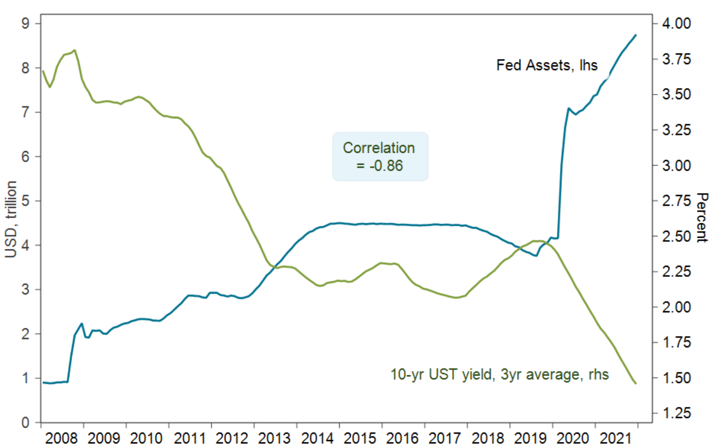
ARE THERE ANY OTHER LESSONS FROM THE RELATIVELY BRIEF HISTORY OF QE AND QT?

For all the ardent commentary about Fed balance sheet issues in the financial press, we do think investors should be aware that Fed balance sheet policy can have very counter-intuitive effects on bond yields.

To be sure, there has been a historical connection between the Fed's balance sheet and bond yields. Since 2008, as the Fed's balance sheet has gone up, the 10-year U.S. Treasury yield has trended down **(Chart 3)**. The inverse correlation between Fed assets and the 10-year Treasury yield on monthly data has been an impressive -0.86.

CHART 3

As the Fed's Balance Sheet Has Gone Up, the 10-Year U.S. Treasury Yield Has Trended Down



Source: GW&K Investment Management and Macrobond

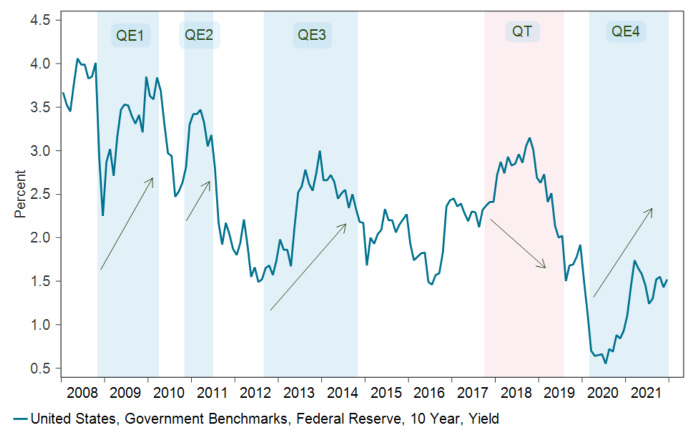
Expansion of the Fed's balance sheet since 2008 has been correlated with a major drop in 10-year U.S. Treasury yields, although lower inflation and Fed rate cuts were also key factors.

Even if that does not prove that QE was the cause of lower rates, it is not inconsistent with the Saint Louis Fed's view that QE, along with dovish forward guidance, helped bring down 10-year Treasury yields by 100 to 200 basis points in the 2008-2013 period.

But there is a very important caveat to keep in mind. Looking at history, if investors thought that each period of QE was going to result in lower bond yields and that QT would result in higher yields, they would have been sorely mistaken. In fact, the opposite was true **(Chart 4)**.

CHART 4

Counterintuitive: 10-Year U.S. Treasury Yields Rose During QE Periods, Fell During QT



Source: GW&K Investment Management and Macrobond

Fed balance sheet shifts can have counter-intuitive effects on bond yields, with 10-year U.S. Treasury yields having risen during every QE period, but having (eventually) fallen during the 2017-19 QT era.

This counter-intuitive observation may reflect the fact that the easing signal of each QE period resulted in improving economic conditions that ultimately put upward pressure on bond yields. Conversely, the tightening signal from the 2017-2019 QT episode, along with higher rates, slowed growth enough that it prompted the Fed to begin cutting rates and ending QT by mid-2019.

CONCLUSIONS

Based on information from the Fed's policy-making meetings in December and January, Fed officials are developing a detailed plan for QT. It is likely to bear similarities to the 2017-2019 episode, but may well be more aggressive in terms of timing and scope. More details should be forthcoming at upcoming FOMC meetings.

The runoff seems likely to begin just a few months after the Fed's rate hiking cycle begins, which is presumably in March. Fed Chair Powell emphasized that they would like the process to be "orderly and predictable," but an FOMC statement left open the option for adjustments to be made to its runoff plan in light of economic and financial developments.

A quick pivot from QE to QT can be viewed as a "whatever it takes" signal that the Fed is serious about curbing inflation. Although this pivot helps explain recent upward pressure on bond yields, investors should keep in mind that Fed balance-sheet shifts can have counter-intuitive effects on bond yields further down the road.

Ultimately, U.S. bond yields are likely to depend less on the Fed's balance sheet policies and more on whether inflation, growth, and fiscal policy normalize after the extraordinary shocks of the pandemic.

William P. Sterling

William P. Sterling, Ph.D.
Global Strategist

www.gwkinvest.com

GW&K INVESTMENT MANAGEMENT

Boston Headquarters
222 Berkeley Street
Boston, Massachusetts 02116
617.236.8900

Other Locations
New York, New York
Winter Park, Florida