

WHAT THE FED'S BALANCE SHEET RUNOFF MEANS FOR BONDS

September 2017

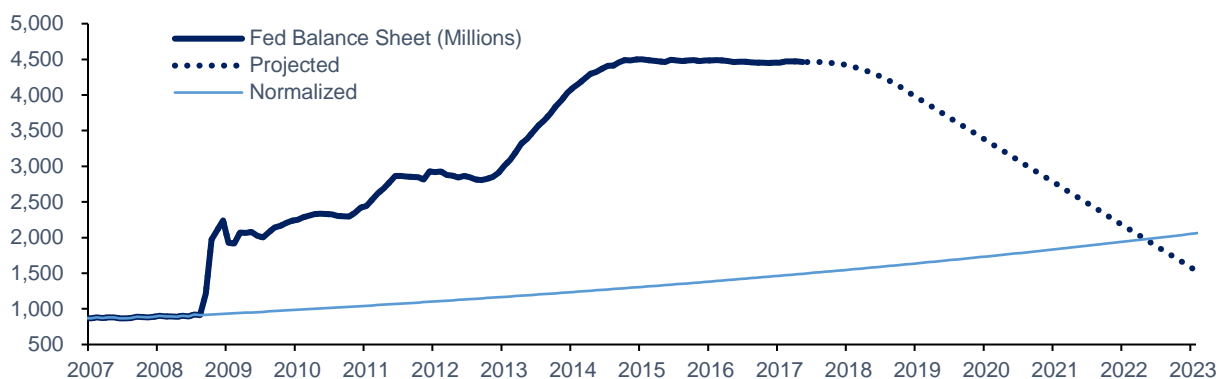
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At the June meeting of the Federal Open Market Committee (FOMC), the Federal Reserve published a plan to reduce the size of its balance sheet by letting bonds mature and not reinvesting the proceeds. At the subsequent meeting in July, the Fed said it plans to begin this runoff process 'relatively soon.' Given recent commentary from Fed officials we expect this process to kick off at the September FOMC meeting. It remains to be seen how this change will impact markets. Patrick Harker, the president of the Federal Reserve Bank of Philadelphia, described it as the policy equivalent of watching paint dry.¹ We suspect the impact on markets may not be so boring.

To understand the impact of balance sheet contraction, we need to first understand the impact on markets of balance sheet expansion. Following the financial crisis, central banks used asset purchases as a way to stimulate their economies once short-term interest rates hit zero. This process, known as quantitative easing, was defended by Fed Chair Ben Bernanke in 2010:

Stock prices rose and long-term interest rates fell when investors began to anticipate the most recent action. Easier financial conditions will promote economic growth. For example, lower mortgage rates will make housing more affordable and allow more homeowners to refinance. Lower corporate bond rates will encourage investment. And higher stock prices will boost consumer wealth and help increase confidence, which can also spur spending.

Figure 1: U.S. Federal Reserve's balance sheet



Source: Federal Reserve, Columbia Threadneedle Investments

If an increase in the Fed balance sheet was indeed an important factor pushing bond and stock prices higher, one might suspect that the same would hold true in reverse. Figure 1 (above) shows the growth of

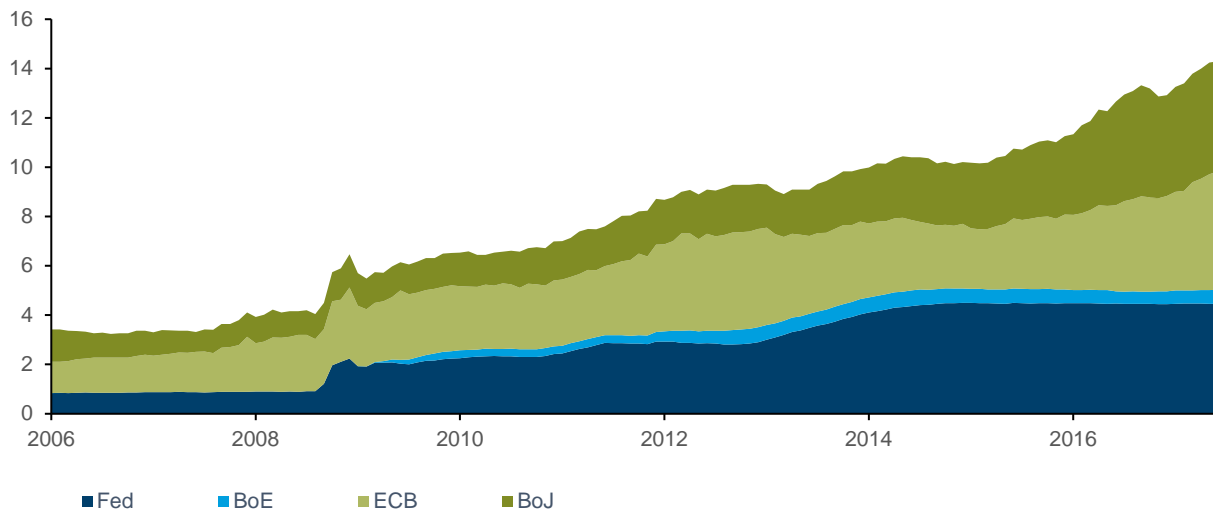
¹ Harker, Patrick, "Economic Outlook: The Labor Market, Rates, and the Balance Sheet." *Market News International Connect Roundtable*, 5/23/2017

the Fed's balance sheet since 2007. These assets consist primarily of U.S. treasury and mortgage-backed securities (MBS). The Fed's normalization plans allow for these assets to decline at a rate no faster than \$50 billion per month once it is fully up and running. This equates to a decline rate of \$600 billion per year on an asset base of \$4.5 trillion.

To understand the impact this has on the bond market, it is instructive to translate this into interest rate terms. When short-term interest rates reached zero in 2008, researchers at the Federal Reserve constructed a so-called 'shadow rate' that translated bond purchases into interest rate equivalent units.² The Fed purchased \$2.2 trillion in assets from 2009 through 2014. Research indicates that the 'shadow rate' reached -2.81% by the time the Fed concluded its asset purchases in September 2014. To extend this analysis, a decline of \$600 billion would be an equivalent increase in the Fed Funds rate of 0.76%, akin to about 3 quarter-point hikes. This could serve to push yields higher in the Treasury market, particularly at the long end of the yield curve where term premium remains depressed.

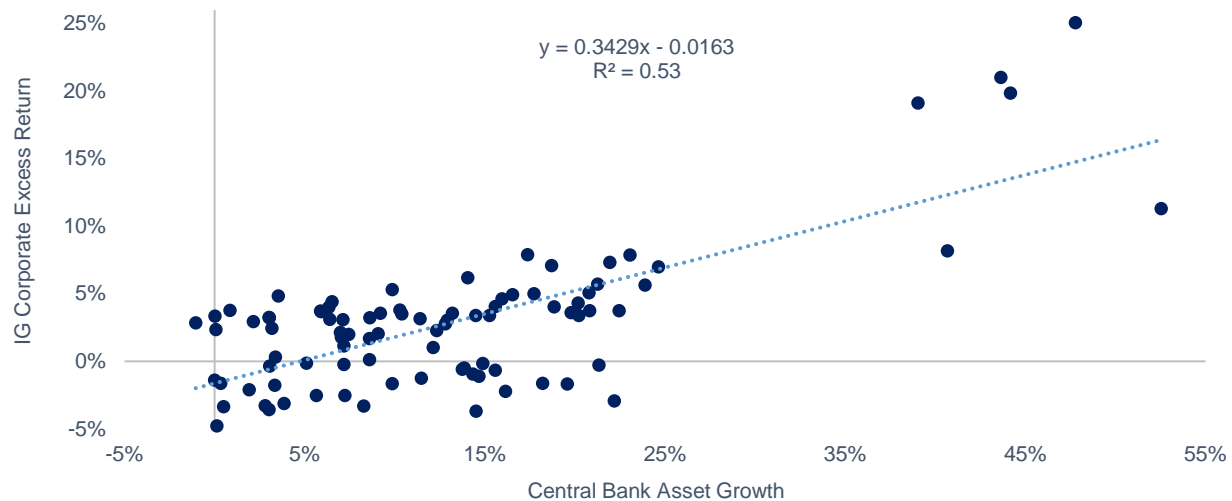
To make the analysis more comprehensive, it is important to have a global perspective. The Bank of Japan (BOJ) was actually the first major central bank to experiment with quantitative easing in 2001. The Fed and the Bank of England (BOE) began asset purchases shortly after the financial crisis, while the European Central Bank (ECB) followed a few years later. Figure 2 shows the asset growth of these 4 major central banks (the G4). In U.S. dollar terms, total assets now exceed \$14 trillion, ballooning 430% over the past decade. Even since the Federal Reserve stopped buying assets in the U.S. in 2014, the other 3 central banks have managed to add over \$4 trillion to this figure.

Figure 2: G4 central bank assets (USD, Trillion)



Source: Federal Reserve, Bank of England, European Central Bank and Bank of Japan; through 8/31/17

² Wu, Jing Cynthia and Xia, Fan Dora, "Measuring the Macroeconomic Impact of Monetary Policy at the Zero Lower Bound," Chicago Booth Research Paper No. 13-77, 5/18/2015

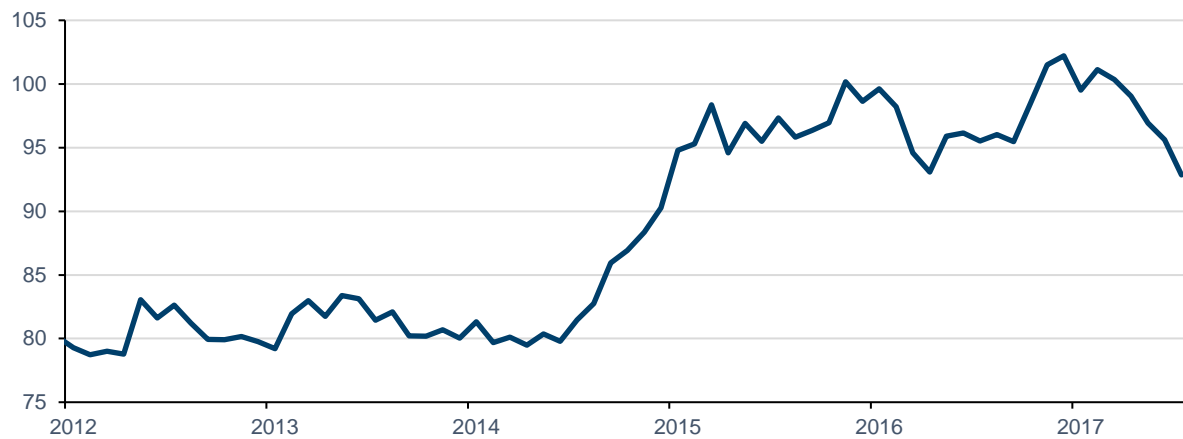
Figure 3: Central bank asset growth and corporate bond performance

Source: Federal Reserve, Bank of England, European Central Bank, Bank of Japan, Bloomberg Barclays, Columbia Threadneedle Investments; January 1, 2010 through August 31, 2017

It appears the cumulative effect of this growth has extended beyond government bonds and has been quite notable in other sectors, as investors have pushed further out the risk spectrum. Our research suggests that the growth rate of central bank balance sheets has been an important factor driving the excess returns of corporate bonds in recent years. Figure 3 illustrates the relationship between central bank asset growth and excess returns of U.S. investment grade corporate bonds. With a nine month lead time, central bank asset growth has explained 53% of the variability in corporate bond performance since 2009.

Given this backdrop, the outlook for global liquidity bears more importance than the U.S. alone. For the remainder of 2017, it is likely that central bank assets will continue to climb in the G4. In 2018, that pace is likely to decline if the ECB decreases its asset purchases while the Fed balance sheet shrinks. In late 2018 and beyond, the outlook is considerably more uncertain, particularly if growth and inflation dynamics no longer warrant monetary accommodation.

While the MBS market sits in the crosshairs of the Fed's portfolio runoff, it may actually be better positioned than some expect. First, risk premiums, or spreads, have actually increased in 2017, unlike many other asset classes which have seen tighter spreads. Second, MBS issuance has been much tamer in recent years as post-crisis regulation has restrained issuance. Over the past 5 years, the total amount of bonds outstanding in the MBS market has increased by only 14%, compared to 30% growth in the U.S. treasury market, and 55% growth in the investment grade corporate bond market (source: Bloomberg Barclays Indices.) This could provide support as the market seeks new buyers to take the place of the Fed.

Figure 4: U.S. dollar index

Source: Bloomberg; through July 31, 2017

From a currency perspective, it would seem that balance sheet normalization would likely have a smaller impact than raising short-term interest rates. In a recent speech, Fed Governor Lael Brainard suggested that central banks ought to think about these tools (assets vs interest rates) separately as it relates to the impact on foreign exchange markets.³ She argues that raising interest rates has a greater effect on foreign exchange rates while asset purchases have a greater effect on term premium. Further, she advocates the Fed transitioning away from raising interest rates in the near future in favor of balance sheet reduction. If this occurs, the U.S. dollar could lose one of the main supporting factors behind its rally in 2014 and 2015 (Figure 4).

The runoff of the Fed's balance sheet is indeed a tightening of monetary policy. The impact is likely to be uneven across markets. Longer maturity treasuries may be most at risk, particularly if supply begins to increase just as the Fed is exiting the market. Corporate bonds may fare better for now given strong demand from overseas. However, foreign central banks are a wildcard for the corporate market, and changes to the ECB's plans are worth watching closely. From a currency perspective, the outlook for the U.S. dollar is less supportive if the Fed is transitioning to focus more on asset reduction than interest rate increases, particularly since the U.S. dollar is starting from a very expensive starting point.

The Fed is hopeful that its balance sheet normalization plan can run on autopilot⁴ – that remains to be seen. The Fed adjusted its asset purchase plan many times post-crisis, altering the size, timing, maturity, and pace of asset purchases along the way. As the economy progresses, it is likely that the asset reduction plan may have to be tweaked as well.

³ Brainard, Lael, "Cross-Border Spillovers of Balance Sheet Normalization," "Normalizing Central Banks' Balance Sheets: What Is the New Normal?" a conference sponsored by Columbia University's School of International and Public Affairs and the Federal Reserve Bank of New York, 7/11/2017

⁴ Harker, Patrick, "Trade and Training," European Economics and Financial Centre, 6/27/2017

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