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THE \$4.2 TRILLION DILEMMA

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KEY TAKEAWAYS

With only \$153 billion of the Fed's \$4.2 trillion bond portfolio due to mature this year, we do not anticipate near term bond market volatility as a result of the Fed's balance sheet normalization.

The reduction of the Fed's balance sheet will take years, not months, due to the maturity schedule of the holdings and the portfolio size.

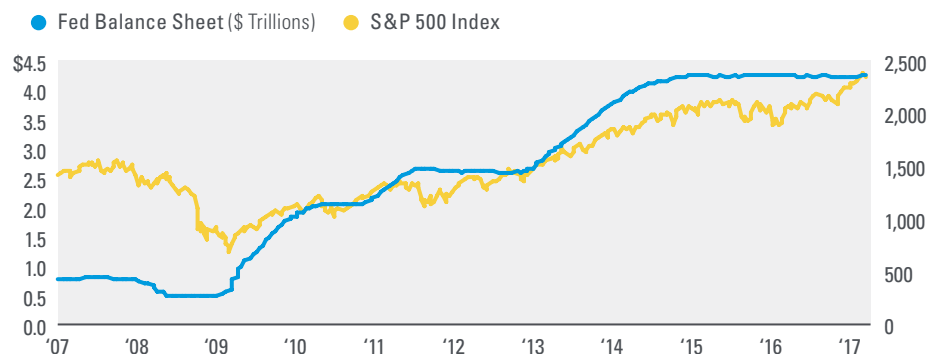
Proper signaling and communication from the Fed may minimize the balance sheet reduction's effect on stocks and bonds.

Minutes from the most recent Federal Reserve (Fed) meeting, released last Wednesday, sparked selling of stocks and bonds, as investors read that the Fed may reduce its \$4.2 trillion balance sheet. Minutes also revealed that "some Fed officials viewed equity prices as quite high relative to standard valuation measures" and that there are "downside risks" if "financial markets were to experience a significant correction." As we mentioned last week, we believe the stock market reaction to the Fed minutes was overdone, but nevertheless, investors should take the ending of Fed accommodation seriously.

We do not believe that balance sheet normalization (reduction) will lead to a stock or bond market sell-off. In fact, we view this similarly to the ending of a quantitative easing (QE) period. Recently, after the Fed halted bond purchases, Treasury prices moved higher and yields lower. For example, in March 2010 after the Fed announced the end of the first phase of QE (QE1), the yield on the 10-year Treasury was 3.83% at month end. By October 2010, the yield was below 2.40%; similarly when QE2 ended in June 2011, the yield on the 10-year fell from 3.16% to below 2% by August of that year. We are not suggesting this big of a move in the Treasury market is forthcoming, only that directionally, we would expect high-quality bonds to be well supported.

Stocks have benefited since the buying program began in 2008, and to some extent there has been positive correlation (similar movement) between the S&P 500 Index and the Fed balance sheet [Figure 1]. As the balance sheet grew,

1 THERE ARE SIGNS OF CORRELATION BETWEEN THE S&P 500 AND THE FED BALANCE SHEET



Source: LPL Research, Bloomberg 04/07/17

Federal Reserve balance sheet represents securities held outright.

The S&P 500 is an unmanaged index which cannot be invested into directly. Past performance is no guarantee of future results.

stocks performed better, although the impact of earnings growth—the key fundamental driver of stock prices—makes it difficult to determine the role of the growing balance sheet. Importantly, the Fed has been clear that they do not want to disrupt markets. Their strategy to reduce the balance sheet begins with communicating policy changes in a clear and timely fashion. The terms “gradual” and “deliberate” were used in the March minutes, and because of this advanced signaling, we think the short-term risk to the stock market is muted. That said, the Fed is serious about reducing the portfolio, so additional analysis is warranted. A thorough look at how the portfolio was built, why the Fed wants to reduce it, and the composition of the holdings can help us to better understand the risks associated with unwinding a portfolio this large.

We believe the normalization of the Fed's \$4.2 trillion portfolio will take time and the stock market reaction may be minimal.

HOW DID WE GET HERE?

In order to decrease supply in the market and push interest rates lower, the Fed has purchased more than \$4.2 trillion of bonds (\$2.46 trillion in Treasury notes and \$1.75 trillion in mortgage-backed securities) since 2008 through multiple QE programs. Although the latest QE program in

the U.S. ended more than two years ago (October 2014), these holdings, known as the Fed's balance sheet, have remained stable. The Fed has rolled proceeds from maturing bonds into new purchases, keeping the size of the Fed's balance sheet relatively constant over the past few years, and also likely keeping rates slightly lower than they otherwise would be.

WHY REDUCE THE BALANCE SHEET?

Prior to the crisis in 2008, banks typically borrowed from the Fed to satisfy reserve requirements or to obtain financing. When the Fed began purchasing bonds on a large scale, they credited the account of the commercial bank that sold the securities. As the portfolio grew and rates moved higher, the Fed's interest costs increased as well. For example, according to the Fed's 2016 financial statement, they paid banks approximately \$12 billion in interest during that year, twice the payment made in 2015. By reducing the balance sheet, the Fed is hoping that they can reduce interest costs and better control short-term rates.

WHAT IS IN THE PORTFOLIO?

The portfolio consists of various maturity dates, with the majority of holdings within the 1–5 year maturity bucket [Figure 2]. Since we expect the Fed to let maturities roll off rather than sell assets outright, the maturity profile is important.

2 FED'S TREASURY AND MORTGAGE-BACKED SECURITY HOLDINGS

Asset Type	Securities Held as of 04/06/17	Maturing Within					
		15 Days or Less	16–90 Days	91 Days to 1 Year	1–5 Years	5–10 Years	Over 10 Years
Treasuries	\$2.4T	\$460M	\$59B	\$202B	\$1.2T	\$381B	\$627B
Mortgage-Backed Securities (MBS)	\$1.8T	\$0	\$0	\$0	\$59M	\$11B	\$1.8T
Total	\$4.2T	\$460M	\$59B	\$202B	\$1.2T	\$392B	\$2.4T

Source: LPL Research, Federal Reserve 04/06/17

With only \$153 billion in bonds maturing this year, the size is not enough to materially impact bond prices. However, the runoff becomes larger after 2018, with \$1.2 trillion maturing between 2018 and 2022. These are primarily Treasury bonds, not mortgage-backed securities (MBS). When a Treasury bond matures, there is a payment made from the Treasury department to the Fed, and the Fed then reduces its assets and liabilities. After paying the Fed, the Treasury can issue new securities to replenish its reserve balances. This process likely adds Treasury supply to the market, which could decrease prices; however we think that the Treasury would favor issuing in the less expensive T-bills market (shorter-maturity Treasuries) if interest rates are higher.

With regards to MBS, the impact may take longer to feel. This is because over 99% of the \$1.7 trillion in MBS on the Fed's balance sheet will mature in more than 10 years. That said, there is potential for mortgage borrowers to pay down their loans early (refinancing, home sales, or even just additional payments), meaning the impact could be felt sooner.

RISKS

As stated in the March minutes, the Fed is concerned that moving too aggressively could lead to volatility. Some have suggested that selling U.S. Treasuries and MBS may cause yields to spike, thus stifling economic growth. At the same time, the purchases have driven rates lower and created excess reserves that banks are holding, and the lack of reinvestment weighs on growth (reserves are cash and cash equivalents held by banks to meet regulatory requirements). Since this difficult balancing act comes as the Fed is raising short-term rates, many feel that when applied together, the combination of higher rates and normalization may be dangerous for the economy. The Fed has

reiterated that they may pause the number of rate hikes as unwinding begins. William Dudley, New York Federal Reserve President, has supported this approach, affirming, "If we start to normalize the balance sheet, that's a substitute for short-term rate hikes," and "we might actually decide at the same time to take a little pause in terms of raising short-term rates." We continue to expect two additional rate hikes for 2017 (three for the full year).

THE FED HAS CHOICES

Besides raising short-term rates, the Fed has other tools in the toolbox to address these concerns. First, they can control the speed and timing of the reductions. For example, if the economy heats up too much, they can sell bonds rather than waiting for bonds to mature (an unlikely scenario). Depending where on the yield curve the sales are derived, yields could rise as a result. Another option they could consider is selling longer-dated bonds, although this might cause a steepening of the yield curve. This is not our base case, as we think it threatens an increase in market volatility. The Fed has been clear that they want the unwind to proceed "in a gradual and predictable manner," by allowing purchased bonds to expire at maturity.

CONCLUSION

It's a daunting task for the Fed to try and understand the effect of a balance sheet reduction of this size, as it has never been done before. However, if former Federal Reserve Chairman Ben Bernanke is correct, then the Fed may not need to reduce the entire \$4.2 trillion. He has estimated the "optimal size" of the Fed's balance sheet may be \$2.5 trillion or more and has argued that that number will grow as the economy becomes larger. If correct, a much less dramatic balance sheet reduction may be needed for the Fed achieve its policy goals. ■

IMPORTANT DISCLOSURES

The opinions voiced in this material are for general information only and are not intended to provide specific advice or recommendations for any individual. To determine which investment(s) may be appropriate for you, consult your financial advisor prior to investing. All performance reference is historical and is no guarantee of future results. All indexes are unmanaged and cannot be invested into directly.

The economic forecasts set forth in the presentation may not develop as predicted.

Bonds are subject to market and interest rate risk if sold prior to maturity. Bond and bond mutual fund values and yields will decline as interest rates rise and bonds are subject to availability and change in price.

Government bonds and Treasury bills are guaranteed by the U.S. government as to the timely payment of principal and interest and, if held to maturity, offer a fixed rate of return and fixed principal value. However, the value of fund shares is not guaranteed and will fluctuate.

Mortgage-backed securities are subject to credit, default, prepayment risk that acts much like call risk when you get your principal back sooner than the stated maturity, extension risk, the opposite of prepayment risk, market and interest rate risk.

Currency risk is a form of risk that arises from the change in price of one currency against another. Whenever investors or companies have assets or business operations across national borders, they face currency risk if their positions are not hedged.

DEFINITIONS

Quantitative easing (QE) refers to the Federal Reserve's (Fed) current and/or past programs whereby the Fed purchases a set amount of Treasury and/or mortgage-backed securities each month from banks. This inserts more money in the economy (known as easing), which is intended to encourage economic growth.

The Fed Funds futures contract represents the average daily fed funds effective rate for a given calendar month as calculated and reported by the Federal Reserve Bank of New York. It is designed to capture the market's need for an instrument that reflects Federal Reserve monetary policy.

The Federal Open Market Committee (FOMC) is the branch of the Federal Reserve Board that determines the direction of monetary policy. The eleven-person FOMC is composed of the seven-member board of governors, and the five Federal Reserve Bank presidents.

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