Fed Balance Sheet 101[1]

Remarks by

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I want to thank you for the opportunity to join you today. The Denver Branch of the Federal Reserve Bank of Kansas City was created to serve as the central bank's connection to portions of the Mountain West that are within the Tenth Federal Reserve District – Colorado, Wyoming and northern New Mexico. To help us fulfill that responsibility, we rely heavily on our contacts from within this community, including many joining us here today, as well as others across the region to provide us with insight on emerging financial and economic conditions. The contributions by these individuals are extremely important to me in my responsibilities representing this region in Federal Open Market Committee (FOMC) deliberations, and I want to express my thanks to those who provide this valuable input.

Today, I would like to talk about a topic that has been receiving much attention — the Federal Reserve's balance sheet – and what it means when policymakers talk about its normalization and ceasing reinvestments. Large scale asset purchases (LSAPs), better known as quantitative easing, or QE, have transformed the Fed's balance sheet and sparked active debate, both within and outside the FOMC, about the costs and benefits of this unconventional monetary policy that was deployed during and after the financial crisis. Given the juncture we are at in the process of normalizing monetary policy, now is a useful time to revisit these issues based on what we know — and what we have yet to learn — about using the Federal Reserve's balance sheet in this way.

Because the majority of my regional contacts are neither central bankers nor economists, I have focused my remarks today on providing a basic foundation for understanding this headline issue. I'll begin my comments with a primer on the nature of the Federal Reserve's assets and liabilities. Then, I will describe how the Fed's balance sheet changed starting in 2008 based on FOMC decisions to make credit easier and provide more accommodation to the economy.

Finally, I'll discuss some of the key issues policymakers are considering today and what I see as possible implications.

Inside the Numbers

Understanding the Fed's balance sheet requires some understanding of the Federal Reserve System structure designed by Congress in 1913. The Fed consists of a government agency in Washington, D.C. known as The Federal Reserve Board of Governors, and 12 separately-incorporated, nationally-chartered Reserve Banks. When we talk about the Federal Reserve's balance sheet today, we are actually referring to the combined balance sheets of the 12 individual regional Federal Reserve Banks.

This combined balance sheet is audited annually by an independent audit firm, currently KPMG, and is made available to the public on the Board of Governors of the Federal Reserve System's website: www.federalreserve.gov. Also on this website are unaudited quarterly financial reports that include the combined balance sheet. And each week, generally late on Thursday afternoon, changes to the Fed's balance sheet are published on the website in the H.4.1 statistical release, known as "Factors Affecting Reserve Balances."

The current $4.5 trillion balance sheet certainly stands out. The Fed's assets primarily include a securities portfolio of System Open Market Account (SOMA) holdings. The Fed's liabilities primarily consist of Federal Reserve notes in circulation and depository institution deposits.[2]

[2] Additional details on the composition of assets and liabilities in the Fed's combined balance sheet at March 31, 2017 can be found in the unaudited quarterly financial report, which is available online at: https://www.federalreserve.gov/aboutthefed/files/quarterly-report-20170331.pdf

What is unique about the Fed's balance sheet is its ability to expand and shrink as needed to facilitate the conduct of monetary policy in response to economic conditions. Conventional monetary policy involves the buying and selling of securities. At the conclusion of each FOMC policy meeting, a directive is communicated to the Federal Reserve's open market desk, which is based at the New York Fed. This directive also is communicated publicly in the FOMC's post meeting statement, which is heavily covered by the financial press.

In the case of a conventional policy tightening, the Fed's open market desk will sell securities. The funds received from those sales will then be removed from circulation, reducing the overall amount of available reserves in the banking system. The resulting smaller pool of reserves from which to lend increases the cost of borrowing – or to put it more clearly, interest rates move higher. If the FOMC decides to ease monetary policy, this process would work in reverse, with the Fed buying securities.

The Federal Reserve's balance sheet has grown considerably over the past decade. At nearly $4.5 trillion, it represents almost 25 percent of the nation's Gross Domestic Product (GDP) compared to just 6 percent of GDP in 2007. Liabilities of the Fed at that time were comprised almost entirely of currency in circulation with reserves averaging about $10 billion. Today, reserves total more than $2 trillion. These reserves were created by the Fed to finance the purchase of long-term Treasury and agency debt during multiple rounds of large scale asset purchases, also known as LSAPs. Although the Fed stopped its program of expansionary bond purchases in October 2014, it has continued to reinvest the returns it receives from the maturing securities. As a result, the current size and composition of the balance sheet has remained unchanged for more than 2 ½ years.

The Shift to Unconventional Policy

In the pre-crisis monetary policy framework, the Fed adjusted its holdings of Treasury securities to affect the amount of reserves in the banking system through the process I explained earlier. Due to the low level of excess reserves banks held at that time, modest adjustments in the size of the Fed's balance sheet influenced the federal funds rate, which is the rate that banks lend their reserves to each other overnight. When this was the key mechanism to influence monetary policy, open market operations required a relatively small balance sheet with assets comprised primarily of short-term Treasuries. However, this pre-crisis framework was challenged during the global financial crisis.

In December 2008, the economic outlook deteriorated to the point that the FOMC voted to target a federal funds rate of zero to 25 basis points. Despite these extraordinarily low short-term interest rates, longer-term rates for consumers and firms remained well above zero. The combination of weakening economic conditions and effectively constrained short-term policy rates led the Federal Reserve to pursue a strategy of LSAPs to further ease monetary conditions.

By the nature of the fed funds rate, traditional monetary policy has a more substantial influence on the short-term securities market, providing a base from which yields extend across the curve. LSAPs were designed explicitly to depress yields on longer-term securities through the purchase of large quantities of assets. The initial round of purchases, which commenced in December of 2008, primarily targeted mortgage-related securities in an effort to put downward pressure on mortgage rates and to help stabilize housing and financial markets. However, subsequent rounds of asset purchases included longer-term Treasury securities in a bid to ease broader financial conditions and foster overall economic activity. In these latter rounds of purchases, LSAPs evolved from a crisis response mechanism to a more general policy tool used

to promote the Federal Reserve's mandate to foster maximum sustainable employment and stable prices.

Judging the Benefits and Costs of LSAPs

The use of the balance sheet as an instrument of monetary policy in this manner marked an important shift. With no experience on which to rely, the FOMC's decision to undertake balance sheet policy was not taken lightly. Arguments in favor of expanding the balance sheet focused on the notion that by depressing longer-term yields and easing credit conditions, the FOMC could provide some stimulus to support the economic recovery. On the other hand, it was recognized that there could be nontrivial costs associated with providing this experimental stimulus. These costs stemmed from the unintended consequences LSAPs could have on the economy and financial markets, and the complexities associated with employing and exiting from such unconventional policy. Ultimately, the FOMC deemed the benefits would outweigh the costs.

While it is likely premature to fully judge the extent of the benefits versus the costs of LSAPs, a consensus of research does suggest that the expansion of the Federal Reserve's balance sheet has depressed longer-term interest rates. This has eased financial conditions,[3] although some of this effect assumes that the Federal Reserve will hold the assets it purchased for a prolonged period of time independent of economic conditions.

Research by my staff suggests that the Fed's asset holdings continue to place downward pressure on longer-term rates today – as they were intended to do.[4] This effect, however, has the

[3] See, for example, Taeyoung Doh, "The Efficacy of Large-Scale Asset Purchases at the Zero Lower Bound," Economic Review, Federal Reserve Bank of Kansas City, Q2 2010. Also, the Macro Bulletin cited below.
[4] See, for example, Troy Davig and A. Lee Smith, "Forecasting the Stance of Monetary Policy under Balance Sheet Adjustments," Macro Bulletin, Federal Reserve Bank of Kansas City, May 10, 2017.

potential to introduce new threats to economic stability going forward. Holding long-term rates below the level that they might otherwise move to naturally, amidst improving economic fundamentals, risks creating financial imbalances. History reminds us that it may be difficult to detect such imbalances in real time and that they can only become apparent well after they manifest. Looking across a spectrum of asset classes today, from real estate to equities to corporate bonds, there is reason to remain vigilant despite the apparent tranquility in financial markets.

In addition to the potential costs associated with using LSAPs, some costs have become increasingly visible as the FOMC begins to normalize monetary policy. For example, a large balance sheet has made monetary policy more complex today than it was a decade ago. From an operational standpoint, the Federal Reserve has had to rethink its traditional approach to targeting the federal funds rate in an environment of abundant reserves. In the process, the Federal Reserve has engaged an expanded set of counterparties and thereby expanded its footprint in certain financial markets.

From a communications perspective, the existence of multiple policy instruments has made explaining the FOMC's monetary policy strategy to the public more complicated. With the introduction of LSAPs, the FOMC's post-meeting statements became lengthier.[5] These statements now include not only the traditional policy directive and relevant details regarding economic conditions and the outlook, but also address securities holdings acquired under the LSAPs.

[5] The first post-meeting public statement, issued in 1994, was a total of about 100 words. The length of policy statements in recent years has increased to average more than 600 words.

The Process of Normalizing the Balance Sheet

At its June 2017 meeting, the FOMC outlined its planned approach for reducing its Treasury and agency portfolio. Once initiated, the Committee intends to limit the pace at which the FOMC's portfolio is unwound by gradually decreasing its reinvestment of the principal payments received from maturing securities. Specifically, such payments will be reinvested only to the extent that they exceed preset rising caps, allowing the balance sheet to shrink in a slow and largely predictable manner.

While the "how" of balance sheet normalization has been largely established, the "when" and the "how much" remain to be determined. In terms of "when," the FOMC has indicated it expects to begin implementing a balance sheet normalization program this year, provided the economy evolves broadly as anticipated. One reason I favor shrinking the balance sheet sooner rather than later is the observed disconnect between short-term rates and long-term rates. Despite four 25-basis-point increases in the target funds rate since December of 2015, longer-term yields remain little changed.

According to the FOMC's Summary of Economic Projections (SEP), the median forecast in the so-called "dot plot" anticipates another 25-basis-point increase in the funds rate this year and three more increases next year. If further increases in the target funds rate fail to transmit to longer-term yields, the yield curve could flatten further. Such a rate environment can distort investment decisions. To the extent that reducing our asset holdings will apply some modest upward pressure to longer-term interest rates, balance sheet normalization could promote the more typical transmission of short-term interest rate changes throughout the yield curve and ensure that all components of policy accommodation are removed in a gradual manner.

The question of "how much" the Fed's balance sheet will shrink also is an important aspect of policy normalization, but has yet to be determined. The FOMC has said that it anticipates reducing the amount of reserves, over time, to a level appreciably below that seen in recent years but larger than before the financial crisis. The ultimate size of the Fed's balance sheet will be influenced by a number of factors, including the public's demand for currency in circulation, decisions the FOMC makes about its securities portfolio and its long-run operating framework, and the economy. To improve the public's understanding of balance sheet developments, the Federal Reserve Bank of New York's public website was recently updated with projections for the long-run size of the Federal Reserve's balance sheet.[6]

Gauging the Implications of Balance Sheet Normalization

I support the FOMC's approach to balance sheet normalization and favor initiating the process in the near future, although I would have preferred to be starting the process with a smaller balance sheet than exists today. As a voting member of the FOMC in 2013, I voted against the continuation of the asset purchase program known popularly as QE III. By then, financial markets were stable and the economy was growing. My concerns about the expansion of the Fed's balance sheet under those conditions centered on many of the issues I've discussed today. In my view, the possible unintended side effects of the ongoing asset purchases posed risks to economic and financial stability and served to unnecessarily further complicate future monetary policy. I remain reluctant to advocate for the use of LSAPs in the future outside extraordinary circumstances.

[6] http://libertystreeteconomics.newyorkfed.org/2017/07/just-released-updated-soma-portfolio-and-income-projections.html

It could prove to be the case that my concerns were misplaced. Certainly today's financial markets are calm and labor markets remain robust. Recent "stress tests" suggest that the largest U.S. banks are healthy for the most part. I hope such conditions point to a path of continued, stable economic growth.

Yet, my experience reminds me that imbalances can develop in sectors outside the lens of regulators and, as we witnessed a decade ago, can unwind with little warning. The current combination of asset valuations —influenced in part by LSAPs — together with low levels of implied volatility in equity and bond markets, could be signaling broader complacency in financial markets. For example, the failure of longer-term rates to move up with short-term rates during this normalization cycle illustrates the risk for a disruptive repricing of assets as markets adjust to a more normal policy stance. The potential for such disruption highlights the essential nature of ensuring that our largest banks are indeed well capitalized and able to withstand the repercussions of a financial shock. Although often noted as higher than a decade ago, equity capital levels in these banks remain well below levels held by the nation's community banks.[7] Assuring strong capital is particularly critical in light of focused efforts to ease various regulatory mechanisms that are designed to offset the systemic risk these large banks pose to the nation's economy.

At the same time, the FOMC faces the unprecedented task of normalizing multiple dimensions of policy without impeding the economic expansion. Moving too fast could excessively tighten financial conditions and slow the economy. Moving too slowly could cause a relatively tight labor market to become further stretched beyond what is sustainable in the longer-run. In either case, history shows that a policy mistake can invite a recession.

[7] FDIC Global Capital Index: https://www.fdic.gov/about/learn/board/hoenig/global.html

Conclusion

Even as short-term interest rates rise, monetary policy remains accommodative. Making adjustments to the Fed's sizeable balance sheet is a necessary but unfamiliar part of the FOMC's policy process. As a result, the Committee has adopted a gradual approach to its policy normalization approach. Removing accommodation in small doses, consistent with the pace of improvement in the economy's fundamentals, should allow Fed policy to evolve from fueling an economic expansion to sustaining it.