The Fed's "New Normal" Balance Sheet

Michael Gregory, CFA, Deputy Chief Economist • michael.gregory@bmo.com • 416-359-4747

The Fed's balance sheet paring will soon hit its maximum pace. Beginning October, the first $30 billion of maturing Treasury securities will not be reinvested each month along with the first $20 billion of redeeming MBS. A year ago, these thresholds were initially set at $6 billion and $4 billion, respectively, and they've been lifted each quarter by $6 billion and $4 billion (respectively). Permissible balance sheet reduction is about to shift into its fastest gear, an annualized $600 billion[1]. When the normalization process began in October 2017, the Fed's balance sheet stood at $4.46 trillion; it now stands at $4.22 trillion (*Chart 1*). **How big (or small) will it be when the process ends?**

A decade ago (2008 Q2), before the Fed's alphabet soup of liquidity measures and large-scale asset purchases inflated the figures, the **Fed's balance sheet averaged $891 billion, or 6.0% of nominal GDP**. The ratio was relatively stable up to that point, averaging 5.7% since 1975 with a 0.5% standard deviation (*Chart 2*). It **subsequently surged more than four times** this level by the end of 2014, to a record 25.1%. As the economy continued to grow and maturing/redeeming securities in the system open market account (SOMA) were fully reinvested, the ratio started to slip. The slippage picked up as SOMA holdings were permitted to shrink starting October 2017; assets are currently 21.3% of GDP. Turning to the liabilities side of the ledger as a guide (*Table 1*), **we reckon the relative size of the "new normal" balance sheet will be at least twice as large as its pre-crisis range**.

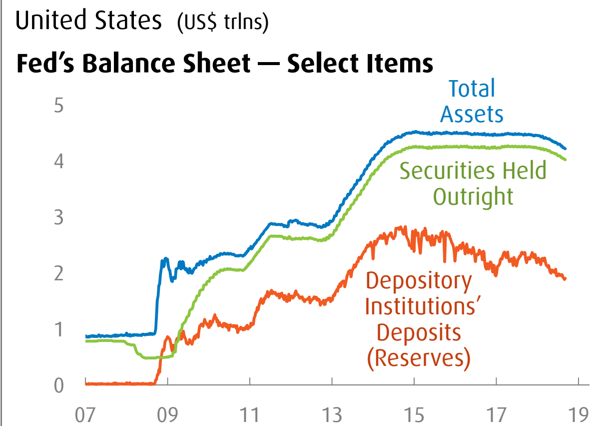
From one perspective, the **Fed has been quietly growing into its over-sized balance sheet**, partly mitigating the requirement to reduce it. Federal Reserve notes, currently $1.63 trillion outstanding, have been outpacing nominal GDP growth for most of the past decade (*Chart 3*), despite the shift to electronic payments and the emergence of cryptocurrencies. For several years prior to the Global Financial Crisis and Great Recession, the growth in greenbacks-in-print lagged GDP. However, these events, along with subsequent economic, financial market, policy and political uncertainty—both at home and abroad—seemingly boosted, and continue to boost, the demand for physical dollars. Global dollar demand was also prodded by historically low (and, in some jurisdictions, negative) interest rates. In modelling the Fed's balance

[1] Our Fixed Income Strategy team estimates Treasury maturities and MBS redemptions will total more than $350 billion this year, around $480 billion next year, and about $400 billion in 2020.

Chart 1
Starting to Shrink

United States (US$ trlns)

Fed's Balance Sheet — Select Items

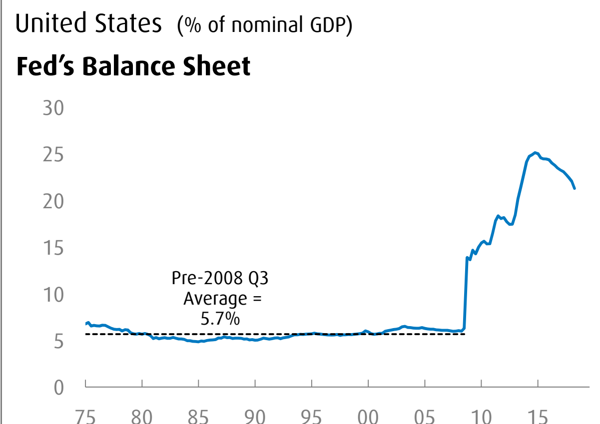


Sources: BMO Economics, Haver Analytics

Chart 2
Quadruple

United States (% of nominal GDP)

Fed's Balance Sheet



Sources: BMO Economics, Haver Analytics

Table 1
Fed's Balance Sheet: By the Numbers

($ blns : as of August 29, 2018)*

Assets		Liabilities	
Total assets	**4,219**	**Total liabilities**	**4,219**
Securities held outright	**4,024**	**Federal Reserve notes**	**1,633**
Treasuries	2,325	**Reverse repos**	**232**
MBS	1,697	Foreign official & int'l accounts	232
Agencies	2	Other (incl. ON RPP program)	1
All other assets	**195**	**Deposits**	**2,308**
		Depository institutions (reserves)	1,881
		Treasury	345
		Other	82
		All other liabilities (incl. capital)	**45**

* figures might not add up due to rounding
Sources: BMO Economics, Haver Analytics

sheet, we assume the current growth gap between Federal Reserve notes and GDP will only gradually converge to zero, with a nod to the numerous issues lingering on the uncertainty front.[2]

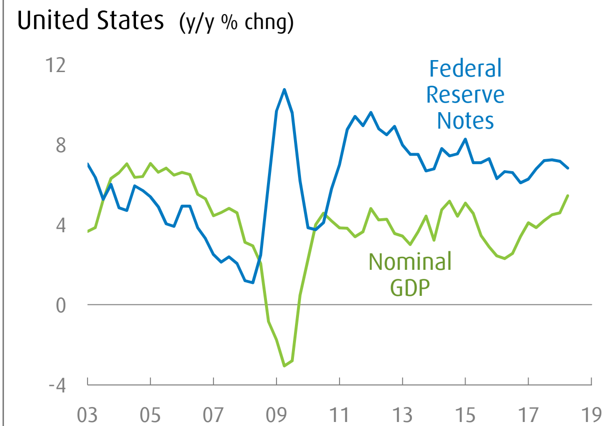
Three other items constitute a permanently larger balance sheet than before. First, **the U.S. Treasury now holds much larger account balances at the Fed**. Before 2008 Q4, balances always averaged less than $15 billion per quarter (*Chart 4*). Currently, primarily for prudential purposes, Treasury has a policy of maintaining the higher of $150 billion or five days' worth of payments in its account, and the latter tends to be more binding. Amid the implementation of money market reform in October 2016, the 13-week average topped $375 billion at one point as large amounts of T-bills were issued to accommodate the increased demand for these securities. Although balances were subsequently drawn down sharply owing to repeated debt ceiling constraints, they are trending above $300 billion again. Looking ahead, with budget outlays projected to expand faster than GDP (according to the CBO's baseline) and Treasury's cybersecurity concerns likely escalating, Treasury balances should remain at least at $300 billion.

Second, since early 2015, more foreign official and international account holders (e.g., other central banks) have been **taking advantage of the foreign reverse repo pool** (*Chart 5*), as the NY Fed relaxed its rules to afford customers more flexibility. Recently, these overnight transactions have been running around $245 billion, on a 13-week average basis. They hovered around $100 billion before the rules changed and under $50 billion pre-crisis. The NY Fed relaxed its rules because reserves in the banking system had become so abundant that large unplanned customer reverse repo swings could be easily absorbed. It's possible that, as reserves become less abundant, the rules could be tweaked tighter; but, as we discuss below, **normalized levels of reserves will still likely be very large from an historical perspective**. As such, going forward, we judge activity here will be comparable to current levels.

Third, depository institutions' deposits at the Fed, a.k.a. **bank reserves, are currently $1.88 trillion**, down from the record high of $2.82 trillion hit in October 2014 when the FOMC's third round of large-scale asset purchases (QE3) ended (*see Chart 1 again*). It's noteworthy that reserves have fallen by $940 billion since then, while SOMA securities have decreased by $229 billion (or $216 billion since balance sheet normalization began). As money market interest rates have risen, in some cases relative to the interest rate

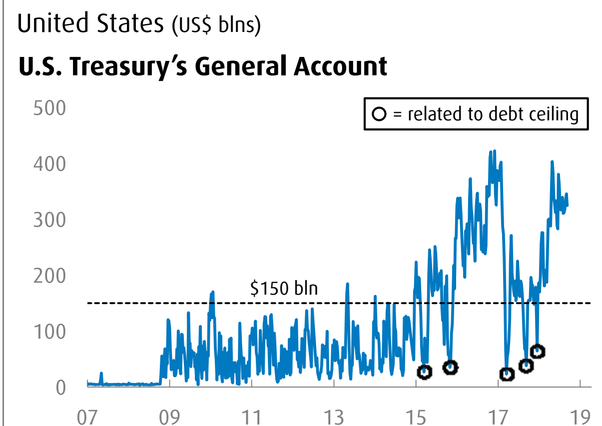
[2] In 2018 Q2, nominal GDP growth was 5.4% y/y, the strongest in nearly a dozen years and we look for this pace to persist through the turn of the year, before embarking on a gradual slowing trend to its longer-run rate just under 4%. In 2018 Q2, average Federal Reserve notes were up 6.8% y/y, and we project the gap to close by 0.1 % per quarter.

Chart 3
Gaining Currency



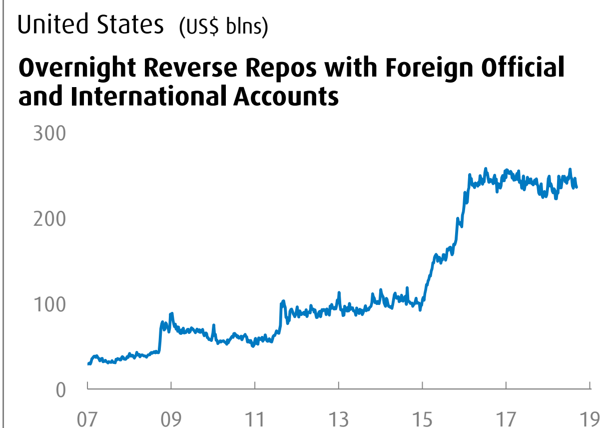
Sources: BMO Economics, Haver Analytics

Chart 4
Big Bank Account



Sources: BMO Economics, Haver Analytics

Chart 5
Jumping in the Foreign Repo Pool



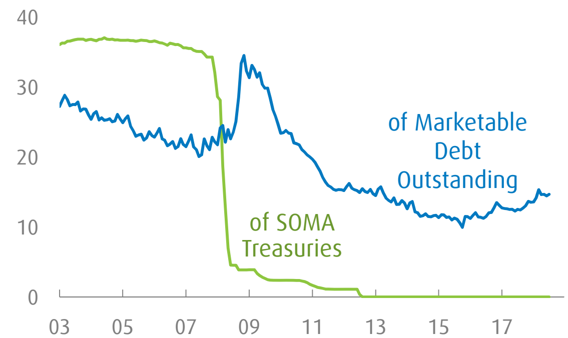
Sources: BMO Economics, Haver Analytics

paid on excess reserves (IOER), banks have redeployed some of these funds. Also, during money market reform (and to some degree since), the demand for bank-issued paper was (is being) dampened, prodding banks to tap another source of funding, their reserves.

These developments illustrate that the current **demand for reserves is being driven by factors not present before the financial crisis, and thus, reserve levels are unlikely to return to where they were before**. In the pre-2008 period, and since 1980, reserves ran at less than $50 billion, apart from a brief episode around 9/11 when they were lifted above $100 billion. This amount was mostly to meet reserve requirements and facilitate interbank settlements. And, while these reasons still exist, the demand for reserves is now being driven more by a crowd of new factors including *"the Liquidity Coverage Ratio (LCR), banks' internal stress tests of their liquidity adequacy, supervisory expectations related to banks' ability to monetize their liquidity portfolios during periods of financial stress, and the incorporation of liquidity into resolution planning. Other important factors include increased bank aversion to incurring intraday overdrafts, higher bank investor and creditor expectations for liquidity, and a lower opportunity cost of holding reserves relative to before the crisis"*.[3] Of course, many of these factors reflect an increased demand for liquidity, but reserves are the most liquid asset; they don't have to be sold or financed (potentially during a period of financial market stress). Our **working assumption is for normalized reserves of at least $500 billion**.[4]

Chart 6

Got Bills?



Sources: BMO Economics, Haver Analytics

If we set Treasury balances, foreign client reverse repos and bank reserves at the above-mentioned amounts, allow for GDP-exceeding growth in Federal Reserve notes and assume all other balance sheet items grow in line with the economy, shrinking SOMA balances will intersect with these normalized net liabilities by 2021 Q2 (or sooner). At this time, the **Fed's balance sheet should be above $3.04 trillion, or above 13.3% of GDP**. After this point, the FOMC will have to start buying Treasury securities to grow the balance sheet and replace redeeming MBS (with the eventual goal of holding only Treasuries).

When it comes to the Fed's balance sheet, it's important to keep in mind that, although the size of assets should be normalized by 2021 Q2, **the mix of assets will not be normalized**. Three rounds of longer-term-skewed asset purchases and an Operation Twist (switching shorter-term for longer-term tenors) left a legacy of an above-market weight of longer-term maturities in the SOMA. Other things equal, this should continue to impart some flattening pressure on the yield curve. And, by 2021 Q2, the Fed will still probably own more than $1 trillion of MBS. Other things equal, this should continue to impart some narrowing pressure on mortgage spreads. **We suspect the Fed's attention will turn to asset mix normalization once the balance sheet has been right-sized** (if not sooner).

Note that the FOMC has already indicated that it could resort to *"limited sales"* of MBS to expedite the drawdown in the longer run. Depending on the health of housing and mortgage markets, the Fed could entertain earlier (and larger) outright MBS sales. Next, when the Fed starts buying Treasuries again to grow the balance sheet and replace redeeming MBS, the focus will probably be solely on bills. Currently the Fed owns none, when the SOMA used to hold an above-market weight (*Chart 6*). Moving to just a market weight would require $480 billion in initial bill purchases. Finally, given that attrition alone won't readily address the above-market weight of longer-term coupons in the SOMA, the **Fed could also entertain outright sales of longer-term maturities for short-term tenors—or a "reverse" Operation Twist**. This option could gain some currency if the yield curve actually inverts.

---

[3] Simon Potter, "Confidence in the Implementation of U.S. Monetary Policy Normalization", Federal Reserve Bank of New York, August 2018 https://www.newyorkfed.org/newsevents/speeches/2018/pot180803

[4] Given this elevated level and the potential volatility imparted by the mentioned factors, a return to point-targeting of the fed funds rate, rather than range-targeting, appears unlikely. The ON RPP program and interest being paid on reserves are going to continue, although we assume ON RPP balances will be relatively small for the most part.

General Disclosure

"BMO Capital Markets" is a trade name used by the BMO Financial Group for the wholesale banking businesses of Bank of Montreal and its subsidiaries BMO Nesbitt Burns Inc., BMO Capital Markets Limited in the U.K. and BMO Capital Markets Corp. in the U.S. BMO Nesbitt Burns Inc., BMO Capital Markets Limited and BMO Capital Markets Corp are affiliates. This document is issued and distributed in Hong Kong by Bank of Montreal ("BMO"). BMO is an authorized institution under the Banking Ordinance (Chapter 155 of the Laws of Hong Kong) and a registered institution with the Securities and Futures Commission (CE No. AAK809) under the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong). BMO does not represent that this document may be lawfully distributed, or that any financial products may be lawfully offered or dealt with, in compliance with any regulatory requirements in other jurisdictions, or pursuant to an exemption available thereunder. This document is directed only at entities or persons in jurisdictions or countries where access to and use of the information is not contrary to local laws or regulations. Their contents have not been reviewed by any regulatory authority. Bank of Montreal or its subsidiaries ("BMO Financial Group") has lending arrangements with, or provide other remunerated services to, many issuers covered by BMO Capital Markets. The opinions, estimates and projections contained in this report are those of BMO Capital Markets as of the date of this report and are subject to change without notice. BMO Capital Markets endeavours to ensure that the contents have been compiled or derived from sources that we believe are reliable and contain information and opinions that are accurate and complete. However, BMO Capital Markets makes no representation or warranty, express or implied, in respect thereof, takes no responsibility for any errors and omissions contained herein and accepts no liability whatsoever for any loss arising from any use of, or reliance on, this report or its contents. Information may be available to BMO Capital Markets or its affiliates that is not reflected in this report. The information in this report is not intended to be used as the primary basis of investment decisions, and because of individual client objectives, should not be construed as advice designed to meet the particular investment needs of any investor. This document is not to be construed as an offer to sell, a solicitation for or an offer to buy, any products or services referenced herein (including, without limitation, any commodities, securities or other financial instruments), nor shall such Information be considered as investment advice or as a recommendation to enter into any transaction. Each investor should consider obtaining independent advice before making any financial decisions. This document is provided for general information only and does not take into account any investor's particular needs, financial status or investment objectives. BMO Capital Markets or its affiliates will buy from or sell to customers the securities of issuers mentioned in this report on a principal basis. BMO Capital Markets or its affiliates, officers, directors or employees have a long or short position in many of the securities discussed herein, related securities or in options, futures or other derivative instruments based thereon. The reader should assume that BMO Capital Markets or its affiliates may have a conflict of interest and should not rely solely on this report in evaluating whether or not to buy or sell securities of issuers discussed herein.

Dissemination of Research

Our publications are disseminated via email and may also be available via our web site http://economics.bmocapitalmarkets.com. Please contact your BMO Financial Group Representative for more information.

Conflict Statement

A general description of how BMO Financial Group identifies and manages conflicts of interest is contained in our public facing policy for managing conflicts of interest in connection with investment research which is available at http://researchglobal.bmocapitalmarkets.com/Public/Conflict_Statement_Public.aspx.

ADDITIONAL INFORMATION IS AVAILABLE UPON REQUEST

BMO Financial Group (NYSE, TSX: BMO) is an integrated financial services provider offering a range of retail banking, wealth management, and investment and corporate banking products. BMO serves Canadian retail clients through BMO Bank of Montreal and BMO Nesbitt Burns. In the United States, personal and commercial banking clients are served by BMO Harris Bank N.A., Member FDIC. Investment and corporate banking services are provided in Canada and the US through BMO Capital Markets. BMO Capital Markets is a trade name used by BMO Financial Group for the wholesale banking businesses of Bank of Montreal, BMO Harris Bank N.A, BMO Ireland Plc, and Bank of Montreal (China) Co. Ltd. and the institutional broker dealer businesses of BMO Capital Markets Corp. (Member SIPC), BMO Nesbitt Burns Securities Limited (Member SIPC) in the U.S., BMO Nesbitt Burns Inc. (Member Canadian Investor Protection Fund) in Canada, Europe and Asia, BMO Capital Markets Limited in Europe, Asia and Australia and BMO Advisors Private Limited in India.

"Nesbitt Burns" is a registered trademark of BMO Nesbitt Burns Inc., used under license. "BMO Capital Markets" is a trademark of Bank of Montreal, used under license. "BMO (M-Bar roundel symbol)" is a registered trademark of Bank of Montreal, used under license.

® Registered trademark of Bank of Montreal in the United States, Canada and elsewhere.

™ Trademark Bank of Montreal in the United States and Canada.

© COPYRIGHT 2018 BMO CAPITAL MARKETS CORP.

A member of BMO Financial Group