March 7, 2019

Options for Ending Balance Sheet Runoff[1]

1. Introduction

In its January meeting, the FOMC discussed options to end balance sheet runoff later this year in order to provide the public with greater certainty about the evolution of the size of the SOMA portfolio.[2] This memo presents two options for ending balance sheet runoff on September 30, 2019: i) continuing redemptions at their current pace through that date, or ii) tapering the cap on Treasury redemptions to $20 billion per month on April 1 and then to $10 billion on July 1 before ending Treasury redemptions entirely on September 30.

Tapering redemptions would slow the pace of balance sheet runoff in the second and third quarters of this year. Because tapering would result in a modestly higher level of reserves in September, the balance sheet could be held constant for a little longer thereafter before reserves would need to be stabilized by purchasing assets to accommodate trend growth in other liabilities. However, tapering does not have any implications for the long-run level of reserves or the long-run size of the portfolio, as these will be determined by the long-run demand for the Federal Reserve's liabilities. The other considerations related to tapering are mainly associated with communications.

The memo reviews the paths of SOMA holdings and reserve balances corresponding to the two options for ending balance sheet runoff later this year (section 2). Key policy and communication considerations related to the two options are then discussed (section 3). Finally, the memo lays out an interim strategy for reinvesting SOMA principal payments from the end of balance sheet runoff until the Committee determines a plan for the longer-run composition of its portfolio (section 4).

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[2] See the January FOMC memo titled "Options for Announcing an End to Reducing the Size of the Balance Sheet" for a discussion of the advantages of announcing September 30, 2019, as the end date for redemptions.

2. Options for ending balance sheet runoff with or without tapering redemptions

In the first option (labeled "No Taper"), balance sheet runoff continues with the current redemption caps in place until redemptions of Treasury securities cease starting on October 1. In the second option (labeled "Taper"), the monthly redemption cap for Treasury securities is tapered from its current value of $30 billion to $20 billion in April and then to $10 billion in July, before Treasury redemptions cease in October. For both options, the cap on redemptions of agency debt and agency mortgage-backed securities (MBS) remains in place at its current level of $20 billion.

Under both scenarios, principal payments received from maturing Treasury securities above the cap would continue to be rolled over into new issues of Treasury notes and bonds by allocating the resulting proceeds at auction in proportion to the issuance size of newly auctioned securities.[3] Principal payments received from holdings of agency debt and agency MBS in excess of the monthly $20 billion cap would continue to be reinvested in agency MBS via secondary market purchases, although the cap on MBS redemptions is not likely to bind throughout the projection period.

Figure 1 illustrates the paths of total SOMA holdings and reserve balances, with the black solid and the blue dashed lines associated with the "No Taper" and "Taper" options, respectively. For illustrative purposes, the projections assume that the average level of reserves will stabilize at $1 trillion, but as discussed in the forthcoming memo "Transitioning to an Ample Reserves Regime with Lower Reserves," the actual level at which reserves stabilize will need to be chosen in light of information on banks' reserve demand. As of April 1, securities holdings and reserve balances are projected to stand at about $3.75 trillion and $1.49 trillion, respectively, with the securities portfolio composed of $2.15 trillion of Treasury securities and $1.59 trillion of agency MBS.[4] By the time balance sheet runoff ends on September 30, under the "No Taper" option, securities holdings and reserve balances are projected to reach $3.51 trillion and $1.20 trillion, respectively. The "Taper" option would reduce balance sheet runoff by about $55 billion during 2019. Under this option, securities holdings and reserves are projected to reach $3.56 trillion and $1.25 trillion, respectively, as of September 30.

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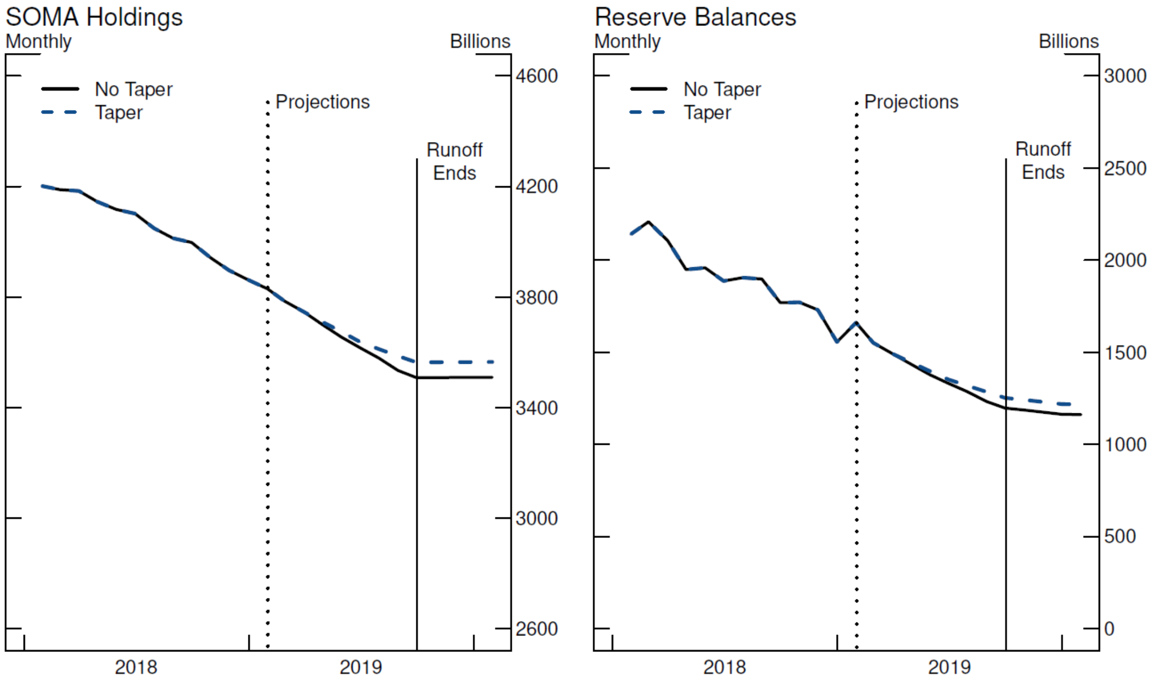
[3] SOMA rollovers are treated as add-ons at Treasury auctions and do not affect the total par amount issued to the public in a particular auction.

[4] In the left panel of Figure 1, SOMA securities holdings are presented at face value, consistent with how they are reported in the H.4.1 statistical release. In the H.4.1 release, unamortized premiums and discounts on securities held outright are reported as separate line items. In the Federal Reserve's financial statements published by the Board of Governors, available at https://www.federalreserve.gov/aboutthefed/fed-financial-statements.htm, securities are reported on an amortized cost basis, which reflects both face values and unamortized premiums and discounts.

Figure 1: Projected SOMA Holdings and Reserve Balances



Note: Staff calculations.

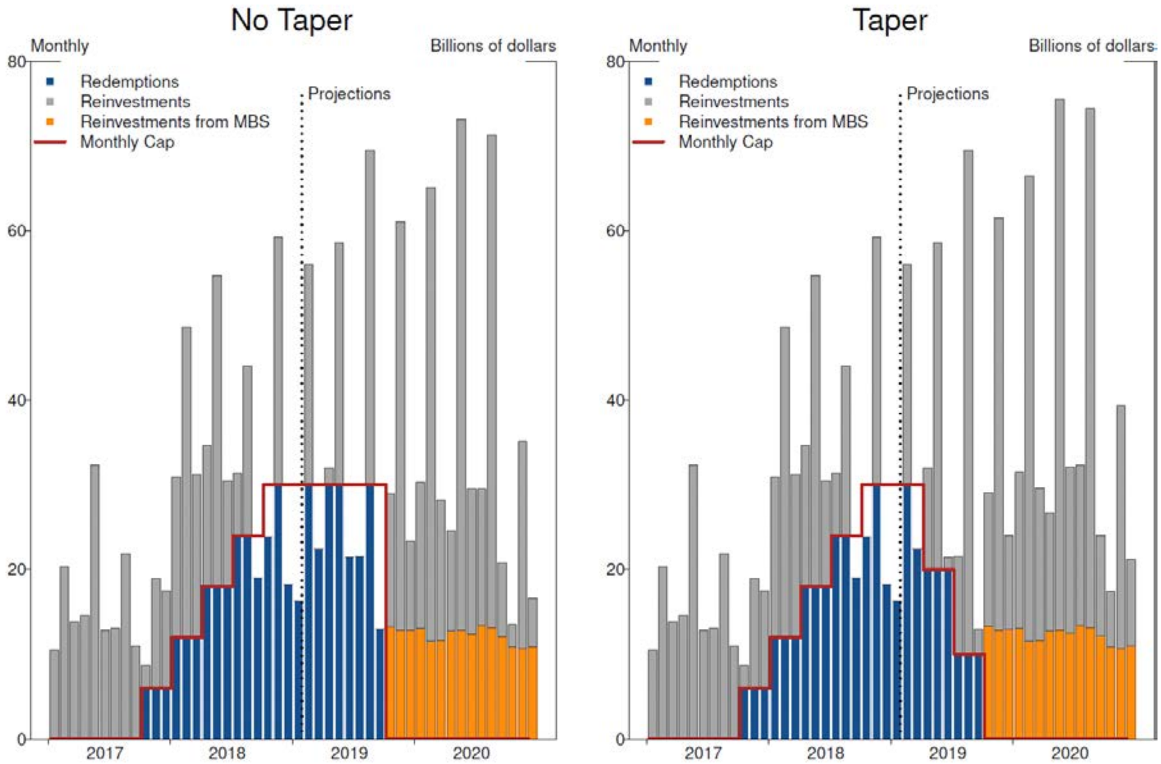
The slightly different short-run paths of securities holdings and reserve balances under the two options plotted in Figure 1 reflect the differences in redemptions and reinvestments of Treasury securities. In the long run, however, the decision on tapering will not affect the level of reserves or the size of the portfolio, which are ultimately determined by demand for Federal Reserve liabilities.

Figure 2 shows the projections for SOMA Treasury redemptions and reinvestments under each option. During the second and third quarters of 2019, $216 billion of Treasury securities in the SOMA portfolio will mature.[5] If the balance sheet normalization plan continues until the end of September with the current redemption caps, as in the “No Taper” option (the panel on the left), $146 billion of those maturing holdings will be redeemed (the blue portion of the bars) and $70 billion will be reinvested (the gray portion of the bars). If the caps are instead tapered (the panel on the right), $90 billion in maturing holdings will be redeemed, while $126 billion will be reinvested.[6]

[5] The reinvestment amounts shown in this figure do not include any new asset purchases that would need to occur to prevent reserve balances from declining below desired levels.

[6] Although the difference in redemptions of Treasury securities between the two options is $56 billion, the difference in total balance sheet runoff is a touch smaller—$55 billion—because the “Taper” option is a bit more accommodative than the “No Taper” option, resulting in a slightly higher path for MBS principal payments.

Figure 2: Projections for SOMA Reinvestments into Treasury Securities



Note: Projections for redemption and reinvestment amounts of Treasury securities depend on assumed distribution of future Treasury issuance. Projections for reinvestment amounts from agency MBS into Treasury securities depend on future interest rates and housing market developments because of unscheduled prepayments.
Source: Staff calculations.

Starting on October 1, principal payments received from maturing Treasury securities and from holdings of agency MBS would be fully reinvested. In line with the Committee's previously announced plans to hold primarily Treasury securities in the long run, agency MBS principal payments below the $20 billion cap would be reinvested in Treasury securities. Details of the proposed approach for reinvesting MBS principal payments after the end of balance sheet runoff are discussed in section 4.

3. Policy and communications considerations

In the intermeeting period, communications by policymakers as well as the release of the January FOMC minutes have likely increased expectations that the ongoing runoff of the balance sheet will end later this year. While some market participants had already expected balance sheet runoff to conclude by year-end, others noted that this was an earlier timeframe than they had expected. Following the release of the January FOMC minutes, several additional market participants indicated that they expect the Committee to formally announce a timeline for ending balance sheet runoff following the March FOMC meeting.

As discussed in section 2, the tapering option would imply a $55 billion higher level of reserves as of the end of September, relative to the option of not tapering. In the January meeting, the FOMC discussed the advantages of keeping total assets roughly constant for a time after redemptions end, and allowing the average level of reserves to decline in line with trend growth in other liabilities. Such a period would continue until reserves have reached the lowest level consistent with effective and efficient implementation of an ample reserves regime; after that, the portfolio would grow to continue to provide a sufficient supply of reserves. As described in the forthcoming memo "Transitioning to an Ample Reserves Regime with Lower Reserves," by reaching the end of September with a moderately higher level of reserves, the tapering option would permit a slightly longer period of holding the balance sheet constant and allowing trend decline in reserves before asset purchases would likely need to resume to keep pace with trend growth in nonreserve liabilities and stabilize the supply of reserves.

There are also some communication benefits and costs associated with the choice of tapering. On the one hand, a plan to taper the redemption caps before ending redemptions altogether would be consistent with previous changes in balance sheet policy, and could be communicated as further supporting a smooth approach to the ample reserves regime. A few market participants view tapering as a possibility. On the other hand, slowing redemptions in April may be earlier than expected.

Treasury Redemptions and Implications for Treasury Debt Management

Treasury has already likely incorporated an end to redemptions in 2019 into its issuance plans for the year, as the potential for this was discussed in the January FOMC meeting minutes, and in other Federal Reserve communications. However, additional reinvestments from tapering the redemption caps may not have been taken into account. If the Federal Reserve rolls over more securities at Treasury auctions because of the tapered redemption caps, the Treasury's net borrowing need to the public would decline and they may reduce issuance of bills to the public as a result. Over the summer, the Treasury is likely to already be reducing bill issuance to remain under the debt limit, which is projected to bind sometime in the fall. While the reduction in bill issuance from tapering redemption caps is not large, it may contribute to swings in bill issuance that could result in a premium for bills. Advance communication with the Treasury about this taper would help them smooth the effects of this change on their auction schedule.

The debt ceiling episode may also temporarily affect the level of reserve balances. As Treasury approaches the point at which the debt limit becomes binding, the Treasury General Account (TGA) is expected to temporarily decline, resulting in higher reserve balances. However, resolution of the debt limit would allow the Treasury to return the TGA to its typical level, restoring reserve balances to a level closer to the baseline. Tapering the redemption caps should have no discernable impact on this dynamic.

4. Reinvestment of MBS principal payments

Once the reduction in asset holdings is complete, the Committee will need a plan for reinvesting principal payments on its securities holdings. This section discusses a potential interim approach for reinvesting MBS principal payments after redemptions end, to allow the FOMC time to develop a strategy for the longer-run composition of the SOMA portfolio. Staff assume a projection horizon of about a year. The FOMC may wish to adopt an interim approach for reinvesting MBS principal payments that minimizes inference about the potential longer-run composition of the SOMA portfolio.

In light of the FOMC's plan to hold "primarily Treasury securities" in the longer run, as detailed in the Policy Normalization Principles and Plans, policymakers may wish to reinvest MBS principal paydowns below the monthly $20 billion cap in Treasury securities and to reinvest MBS principal paydowns above that cap in MBS. According to staff analysis, MBS principal paydowns are unlikely to exceed the $20 billion cap after 2019, averaging about $12 billion per month between 2019:Q4 and the end of 2020. Nonetheless, retaining the MBS cap would continue to support the MBS market by limiting the pace at which the Federal Reserve's MBS holdings could decline if prepayments accelerated in response to a more sizable decline in long-term rates.[7]

MBS principal paydowns below the MBS redemption cap would be reinvested by purchasing Treasury securities in the secondary market via the Desk's standard approach of competitive auctions with primary dealers. These purchases are shown by the orange portion of the bars in Figure 2. Allocating these purchases across different Treasury security types and maturity ranges in proportion to the outstanding Treasury universe would avoid having purchases disproportionately focused in any one sector and minimize any signaling about the longer-run SOMA portfolio composition.[8,9] Given that the Desk has not transacted in all Treasury sectors since 2006, as the Desk resumes regular purchases, it will learn more about market capacity for secondary market purchases in various sectors, which may provide useful information for the Committee when assessing the options for the long-run portfolio composition and implementation strategy.

[7] In reaction to the January FOMC minutes, a few market participants interpreted the discussion about continuing to reinvest agency MBS principal payments in excess of $20 billion per month in agency MBS as simplifying communications going forward. However, market commentary was limited, and market expectations have not firmly coalesced regarding the approach for any adjustments to the MBS redemption cap.

[8] When Treasury securities that were purchased in the secondary market mature, they will be rolled over at auction, along with maturing legacy SOMA Treasury securities.

[9] Treasury sectors include all issuance types (bills, notes, bonds, TIPS, and FRNs) and various maturity ranges.

Communicating this reinvestment plan well in advance of its implementation would aid the Treasury in planning for any issuance changes it may need to make.[10]

Once the Committee decides to resume asset purchases in order to accommodate trend growth in nonreserve liabilities and maintain reserves above its chosen minimum operating reserve level, secondary market purchases of Treasury securities will need to be even larger than the amount required to reinvest MBS principal paydowns. Staff estimates suggest that nonreserve liabilities may grow by about $11 billion per month over the near- to medium-term, requiring an equivalent amount of net increases in SOMA securities to maintain a constant average level of reserves. As a result, total purchases could average roughly $23 billion per month once asset growth resumes.

A key goal of communications regarding the reinvestment strategy will be to provide clarity on the interim nature of the reinvestment approach, while stressing that decisions about the long-run composition of the portfolio will be made at a later date. In order to reinforce this distinction, the Committee could consider suggesting a general timeframe over which the interim approach will be in place.

One appealing feature of the approach of allocating Treasury purchases across the outstanding maturity spectrum is that it may be perceived as neutral and not as sending a signal about the long-run portfolio composition. However, such an approach may come as somewhat of a surprise to market participants, potentially affecting prices in the bill market. Market expectations for initial SOMA portfolio purchases are difficult to measure; however, some market commentary has noted an expectation that the resumption of Treasury purchases would be more heavily weighted in Treasury bills, given that there are currently no bills held in the SOMA.[11] Nonetheless, FOMC communications since the January meeting have avoided providing specifics surrounding the composition of outright purchases of Treasury securities, which may have led to diffuse expectations for the tenor of these purchases pending further clarity from the Committee.

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[10] Additionally, by communicating the reinvestment plan well in advance, the Desk would have a sufficient amount of time to release details of its planned operations to the public, as well as ensure robustness of internal planning and trading tools.

[11] As of February 2019, the weighted average maturity (WAM) of the SOMA Treasury portfolio is 8.4 years compared to 5.8 years for the universe of Treasury securities outstanding. Under the reinvestment options outlined in this memo, the WAM would increase slightly to approximately 8.8 years at the end of 2020. Over this same period, the share of bills held in the SOMA would edge up to 1 percent.