Prefatory Note

The attached document represents the most complete and accurate version available based on original files from the FOMC Secretariat at the Board of Governors of the Federal Reserve System.

Please note that some material may have been redacted from this document if that material was received on a confidential basis. Redacted material is indicated by occasional gaps in the text or by gray boxes around non-text content. All redacted passages are exempt from disclosure under applicable provisions of the Freedom of Information Act.

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Class I FOMC – Restricted Controlled (FR)

Report to the FOMC on Economic Conditions and Monetary Policy

Book B

Monetary Policy Alternatives

June 13, 2019

Prepared for the Federal Open Market Committee
by the staff of the Board of Governors of the Federal Reserve System

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Monetary Policy Alternatives

Information received since the Committee's May meeting indicates that economic growth has stepped down to a moderate rate. Although household spending appears to have picked up from earlier in the year, indicators of business fixed investment have been soft in the second quarter. In contrast, recent employment data indicate that the labor market has remained strong. The unemployment rate declined to 3.6 percent in April and remained at this value in May. Although job gains slowed to 75,000 in May, the three-month average of 151,000 remains well above estimates of the rate consistent with no change in labor utilization. The staff now projects real GDP growth to decline from a pace of 2½ percent in the first half of this year to around 1¾ percent in the second half, in contrast to the moderate step-up in growth over 2019 projected in the April Tealbook. Core PCE prices rose by 1.6 percent over the 12 months ending in April, and staff projects 12-month core PCE inflation to move up over the second half of 2019. The escalation of international trade tensions in recent weeks has left a significant imprint on financial markets. Treasury yields and the market-implied path for the policy rate shifted down considerably over the intermeeting period, while equity prices declined and credit spreads widened. Against this backdrop, along with greater uncertainties about the foreign outlook, the staff has shifted to the downside its assessment of the balance of risks associated with its projection for economic activity.

Under these circumstances, the alternative policy statements presented below offer a range of options for the stance and likely future path of monetary policy. Alternative B maintains the current monetary policy stance and continues to indicate that the Committee views sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective as the most likely outcomes. However, this alternative points to increased uncertainties about the outlook, along with muted inflation pressures, as reasons for altering the policy message. In particular, the statement moves away from the "patient" approach to monetary policy articulated in this year's previous postmeeting statements and expresses the Committee's willingness to act as appropriate to sustain the economic expansion.

Alternative A gives a similar assessment of the incoming data as Alternative B, but views heightened concerns about the outlook as sufficient to merit a policy response. Accordingly, this alternative lowers the target range for the federal funds rate by ¼ percentage point and announces the conclusion of the reduction of the Federal Reserve's securities holdings by the end of July. With this easing, as well as expressing the Committee's preparedness to adjust the monetary policy stance further, Alternative A maintains the positive economic outlook given in the May statement.

Alternative C maintains the current policy stance and reinforces the policy message from recent FOMC meetings. In particular, it retains the "patient" approach to monetary policy from the May postmeeting statement and leaves the description of the outlook unchanged. Thus, Alternative C implicitly discounts recent concerns about trade and other risks, suggesting these developments have little bearing on the policy outlook.

With regard to the specifics of the language in Alternatives A, B, and C:

- The assessment of the incoming data:
  - Alternatives A and B share the same characterization of the incoming data. Both alternatives continue to portray the labor market as strong, and note that the unemployment rate remains low, and that average job gains in recent months have been "solid." While both alternatives describe economic growth as moderate, they acknowledge divergent developments in household and business spending by noting that "although growth of household spending appears to have picked up from earlier in the year, indicators of business fixed investment have been soft." Both alternatives also note that "overall inflation and inflation for items other than food and energy are running below 2 percent." Regarding indicators of inflation expectations, Alternatives A and B state that "market-based measures of inflation compensation have declined" and repeat the assessment from the May postmeeting statement that "survey-based measures of longer-term inflation expectations are little changed."
  - Alternative C has two modifications to the description of incoming data compared with Alternatives A and B. First, Alternative C characterizes private-sector spending in a more neutral manner by omitting "although" and stating that "growth of household spending appears to have picked up from earlier in the year, while indicators of business fixed investment have been soft." Second, regarding inflation expectations, Alternative C does not point to the decline in market-based measures of inflation compensation, but continues to describe them as having remained low.

Alternatives

- The outlook for economic activity and inflation:
  - Under all three alternatives, the modal outlook for economic activity and inflation is unchanged from the May FOMC statement. However, to achieve the outcomes of "sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective," the alternatives convey different paths for the federal funds rate. In addition, under Alternatives A and B, the Committee would acknowledge that uncertainties about this outlook have increased.
- For the current policy decision and the outlook for policy:
  - Alternatives B and C maintain the current target range for the federal funds rate. In contrast, Alternative A lowers the target range "in light of heightened uncertainties about the economic outlook and muted inflation pressures" and states the Committee's decision "to conclude the reduction of its aggregate securities holdings in the System Open Market Account at the end of July."
  - With Alternative B, the Committee would replace the indication that it will be "patient" with the statement that, in light of uncertainties about the economic outlook and the softness in inflation, it "will act as appropriate to sustain the expansion, with a strong labor market and inflation near its symmetric 2 percent objective."
  - Given the adjustment to the target range, Alternative A also no longer contains the "patient" language with regard to the policy stance; instead, it signals that the Committee is prepared to make further adjustments to the policy stance.
  - By contrast, Alternative C continues to highlight "global economic and financial developments and muted inflation pressures" as factors that the Committee is focused on, but it retains the "patient" language, indicating that at this point these developments do not warrant a change in the policy outlook.

May 2019 FOMC Statement

1. Information received since the Federal Open Market Committee met in March indicates that the labor market remains strong and that economic activity rose at a solid rate. Job gains have been solid, on average, in recent months, and the unemployment rate has remained low. Growth of household spending and business fixed investment slowed in the first quarter. On a 12-month basis, overall inflation and inflation for items other than food and energy have declined and are running below 2 percent. On balance, market-based measures of inflation compensation have remained low in recent months, and survey-based measures of longer-term inflation expectations are little changed.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. In support of these goals, the Committee decided to maintain the target range for the federal funds rate at 2-1/4 to 2-1/2 percent. The Committee continues to view sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective as the most likely outcomes. In light of global economic and financial developments and muted inflation pressures, the Committee will be patient as it determines what future adjustments to the target range for the federal funds rate may be appropriate to support these outcomes.

3. In determining the timing and size of future adjustments to the target range for the federal funds rate, the Committee will assess realized and expected economic conditions relative to its maximum employment objective and its symmetric 2 percent inflation objective. This assessment will take into account a wide range of information, including measures of labor market conditions, indicators of inflation pressures and inflation expectations, and readings on financial and international developments.

ALTERNATIVE A FOR JUNE 2019

1. Information received since the Federal Open Market Committee met in ~~March~~ **May** indicates that the labor market remains strong and that economic activity ~~rose~~ **is rising** at a ~~solid~~ **moderate** rate. Job gains have been solid, on average, in recent months, and the unemployment rate has remained low. **Although** growth of household spending ~~and~~ **appears to have picked up from earlier in the year, indicators of** business fixed investment ~~slowed in the first quarter~~ **have been soft**. On a 12-month basis, overall inflation and inflation for items other than food and energy ~~have declined and~~ are running below 2 percent. ~~On balance,~~ Market-based measures of inflation compensation have ~~remained low in recent months, and~~ **declined;** survey-based measures of longer-term inflation expectations are little changed.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. In ~~support of these goals~~ **light of heightened uncertainties about the economic outlook and muted inflation pressures**, the Committee decided to ~~maintain~~ **lower** the target range for the federal funds rate ~~at~~ **to 2 to** 2-1/4 ~~to 2-1/2~~ percent. **The Committee also decided to conclude the reduction of its aggregate securities holdings in the System Open Market Account at the end of July; thereafter, reinvestments will occur as specified in the Committee's statement of Balance Sheet Normalization Principles and Plans.** **With these actions,** the Committee continues to view sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective as the most likely outcomes. ~~In light of global economic and financial developments and muted inflation pressures,~~ The Committee ~~will be patient as it determines what future~~ **is prepared to** adjust~~ments to~~ the target range for the federal funds rate ~~may be~~ **as** appropriate to support these outcomes.

3. In determining the timing and size of future adjustments to the target range for the federal funds rate, the Committee will assess realized and expected economic conditions relative to its maximum employment objective and its symmetric 2 percent inflation objective. This assessment will take into account a wide range of information, including measures of labor market conditions, indicators of inflation pressures and inflation expectations, and readings on financial and international developments.

Alternatives

ALTERNATIVE B FOR JUNE 2019

1. Information received since the Federal Open Market Committee met in ~~March~~ **May** indicates that the labor market remains strong and that economic activity ~~rose~~ **is rising** at a ~~solid~~ **moderate** rate. Job gains have been solid, on average, in recent months, and the unemployment rate has remained low. **Although** growth of household spending ~~and~~ **appears to have picked up from earlier in the year, indicators of** business fixed investment ~~slowed in the first quarter~~ **have been soft**. On a 12-month basis, overall inflation and inflation for items other than food and energy ~~have declined and~~ are running below 2 percent. ~~On balance,~~ Market-based measures of inflation compensation have ~~remained low in recent months, and~~ **declined;** survey-based measures of longer-term inflation expectations are little changed.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. In support of these goals, the Committee decided to maintain the target range for the federal funds rate at 2-1/4 to 2-1/2 percent. The Committee continues to view sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective as the most likely outcomes**, but uncertainties about this outlook have increased**. In light of ~~global economic and financial developments~~ **these uncertainties** and muted inflation pressures, the Committee will ~~be patient as it determines what future adjustments to the target range for the federal funds rate may be~~ **act as** appropriate to ~~support these outcomes~~ **sustain the expansion, with a strong labor market and inflation near its symmetric 2 percent objective**.

3. In determining the timing and size of future adjustments to the target range for the federal funds rate, the Committee will assess realized and expected economic conditions relative to its maximum employment objective and its symmetric 2 percent inflation objective. This assessment will take into account a wide range of information, including measures of labor market conditions, indicators of inflation pressures and inflation expectations, and readings on financial and international developments.

Alternatives

ALTERNATIVE C FOR JUNE 2019

1. Information received since the Federal Open Market Committee met in ~~March~~ **May** indicates that the labor market remains strong and that economic activity ~~rose~~ **is rising** at a ~~solid~~ **moderate** rate. Job gains have been solid, on average, in recent months, and the unemployment rate has remained low. Growth of household spending ~~and~~ **appears to have picked up from earlier in the year, while indicators of** business fixed investment ~~slowed in the first quarter~~ **have been soft**. On a 12-month basis, overall inflation and inflation for items other than food and energy ~~have declined and~~ are running below 2 percent. On balance, market-based measures of inflation compensation have remained low in recent months, and survey-based measures of longer-term inflation expectations are little changed.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. In support of these goals, the Committee decided to maintain the target range for the federal funds rate at 2-1/4 to 2-1/2 percent. The Committee continues to view sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective as the most likely outcomes. In light of global economic and financial developments and muted inflation pressures, the Committee will be patient as it determines what future adjustments to the target range for the federal funds rate may be appropriate to support these outcomes.

3. In determining the timing and size of future adjustments to the target range for the federal funds rate, the Committee will assess realized and expected economic conditions relative to its maximum employment objective and its symmetric 2 percent inflation objective. This assessment will take into account a wide range of information, including measures of labor market conditions, indicators of inflation pressures and inflation expectations, and readings on financial and international developments.

THE CASE FOR ALTERNATIVE B

Economic Conditions and Outlook

- The staff estimates that real GDP in the second quarter rose at an annual rate of 1.8 percent, about 1 percentage point below its pace in the first quarter. Although household spending is estimated to have picked up in the current quarter from earlier in the year, business fixed investment looks to have stalled. The staff revised down GDP growth for the second half of the year, as heightened concerns about global trade and an associated deterioration in risk sentiment are expected to weigh on the business sector. Nonetheless, for the current year as a whole, GDP is projected to increase at a rate slightly above the growth rate of potential output.
- Available data indicate that the labor market remains strong.
  - Payrolls rose 75,000 in May and averaged 151,000 per month over the past three months, roughly 30,000 per month lower than expected at the time of the April Tealbook. Nevertheless, average payroll gains in the past three months are still well above the pace that the staff estimates to be consistent with no change in resource utilization.
  - The labor force participation rate fell to 62.8 percent in April and remained at this value in May. After declining to 3.6 percent in April, the unemployment rate held steady in May. Although the unemployment rate remained below all participants' estimates of the longer-run normal rate of unemployment in the March Summary of Economic Projections, in those projections policymakers did not expect high levels of labor utilization to be associated with notable upward pressure on inflation.
  - Average hourly earnings rose 3.1 percent over the 12 months ending in May. While this figure is up from 2.9 percent a year earlier, it is down a bit from the readings earlier this year.
- Headline and core PCE inflation rates are running below the Committee's 2 percent objective. Inflation is expected to move up later this year, as the effects of idiosyncratic and temporary factors that have held down inflation dissipate.
  - The 12-month change in core PCE prices stood at 1.6 percent in April.[1] Staff projects core inflation to move up by the end of the summer and reach

[1] Based on PPI and CPI data received for May, the staff's estimates for the 12-month change in headline and core PCE inflation in May are both 1.5 percent.

  1.8 percent for the year as a whole. Core inflation is expected to edge up to 1.9 percent in 2020 and 2021. Headline inflation on a 12-month basis is expected to run below core inflation by 0.3 percentage point this year. Beyond this year, headline inflation is expected to be close to core inflation.
  - While survey-based measures of longer-term inflation expectations are little changed and on their own suggest that these expectations remain reasonably well-anchored, market-based measures of inflation compensation have declined by more than 20 basis points from already low levels.

- Investor sentiment towards risky assets deteriorated as a result of the recent escalation of trade tensions. Treasury yields and the market-implied path for the policy rate shifted down considerably, while equity prices declined and credit spreads and the exchange value of the dollar increased. The uncertainties surrounding trade policy developments, particularly if they are sustained or intensify, may have negative implications for the economic outlook.

- Other sources of downside risk stem from abroad. Recent data on foreign economic activity has generally been disappointing, raising questions about the strength of the global economy. More specific risks include the increased probability of a "no deal" Brexit and renewed concerns about the sustainability of Italy's public debt.

- In light of these developments, the staff now judges that the risks to its projection for GDP growth are tilted to the downside over the next year.

Policy Strategy

- Although policymakers may see continued strong labor market conditions and a gradual rise of inflation to 2 percent as the most likely outcome, they may concur with the staff assessment that downside risks to this outlook have increased. In light of heightened risks, and in a context in which inflationary pressures remain muted, they may deem it prudent to leave the target range unchanged at the June meeting but to indicate that they will act as appropriate to sustain the expansion. Hence, Alternative B removes the "patient" language used in the May FOMC statement.

- While acknowledging the recent increase in uncertainties about the economic outlook, policymakers may not want to adjust the policy stance at the June meeting, preferring instead to await the arrival of additional information, such as the outcome of upcoming trade negotiations, that can inform their judgment about the appropriate stance of policy. Moreover, both survey information and market pricing suggests that a reduction in the target range for the federal funds rate at this meeting would be somewhat surprising and therefore could have an adverse effect on market sentiment if investors judged that the Committee was especially concerned about the outlook.

- Market quotes, along with responses to the Desk's latest surveys of primary dealers and market participants, indicate that a change in the target range at the June meeting is seen as unlikely. Some market commentary and responses in the Desk's surveys suggest that a change in the policy message in the June statement is expected, consistent with recent communications from policymakers. That said, several respondents to the Desk's surveys expect little change in language, whereas a few respondents expect downside risks to be more explicitly mentioned, and others did not provide much information on their statement expectations. Consequently, a statement along the lines of Alternative B appears reasonably consistent with the current market-implied path for the federal funds rate. However, given the apparent dispersion of views, predicting the market reaction is particularly difficult at this time.

Alternatives

Monetary Policy Expectations and Uncertainty

Measures of the expected path of the federal funds rate based on financial market prices declined sharply over the intermeeting period. Negative headlines about international trade tensions, weaker-than-expected domestic economic news, and, later in the period, remarks by FOMC participants that were seen as signaling an increased likelihood of near-term policy easing were the primary drivers of the declines. Respondents to the Desk's June surveys also revised down their federal funds rate projections when compared with the April/May surveys.

The probability distribution of the federal funds rate following the June 2019 meeting, as implied by a straight read of the most recent quotes on options and not adjusted for risk premiums (not shown), suggests that investors continue to assign low odds to a decrease in the target range for the federal funds rate at the June meeting. In contrast, the distribution of possible values for the funds rate following the July meeting (figure 1) now implies a 25-basis-point decline in the target range is the most likely outcome. The probability distribution has shifted notably since the May FOMC meeting towards lower outcomes, leaving only a modest probability that the federal funds rate will stay in its current target range. For comparison, a third of the respondents to the June Desk surveys provided modal expectations for either a 25- or 50-basis-point decline in the target range at the July meeting. Figure 2 shows that the option-implied probability distribution for the end of 2019 also shifted down substantially.[1] It suggests that the federal funds rate is about equally likely to end the year in either the 1.5 to 1.75 percent or 1.75 to 2 percent range, with only about a ten percent probability on higher values. By contrast, although respondents to the June Desk surveys now assign substantially higher probability to a decline in the target range by year-end than they did in the previous surveys, they still see a 42 percent likelihood that the target range will not be lowered between now and the end of this year.

Financial market measures of the expected federal funds rate over the next few years (figure 3) also declined substantially over the intermeeting period. The changes in near-term forward rates derived from overnight index swaps (OIS) quotes were the largest for any intermeeting period since December 2008. Forward rates for end-2019 and end-2020 declined by 41 and 46 basis points, respectively (the blue lines). Movements in the expected federal funds rate path adjusted for term premiums using a staff term structure model (the purple lines) declined by 33 and 40 basis points for end-2019 and end-2020, respectively, thus attributing most of the changes in forward rates to changes in policy expectations.[2]

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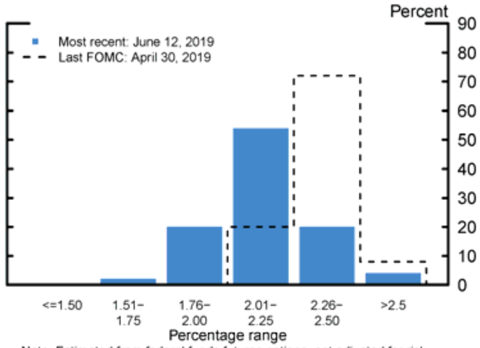
[1] Furthermore, option-based measures of uncertainty about the federal funds rate, at horizons of 6- and 12-months ahead, increased noticeably.

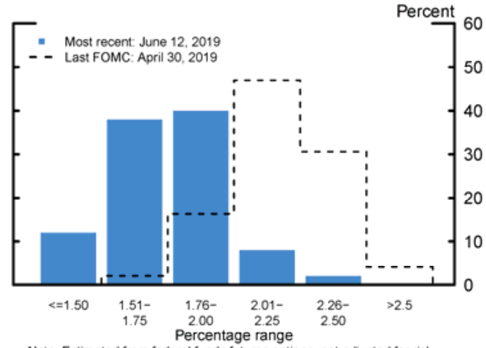
[2] Figure 3 shows the estimates for the staff's updated model, which is discussed in the box "Revision to the Staff's Term-Premium-Adjusted Policy Rate Path" in the Financial Market section of Tealbook A.

Figure 1: Market−Implied Probability Distribution of the Federal Funds Rate, August 2019



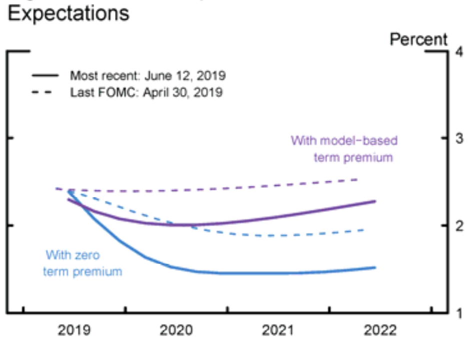
Note: Estimated from federal funds futures options, not adjusted for risk premiums.
The distribution for August provides a read on expectations for policy action at the July FOMC meeting.
Source: CME Group; Federal Reserve Board staff estimates.

Figure 2: Market−Implied Probability Distribution of the Federal Funds Rate, Year−End 2019



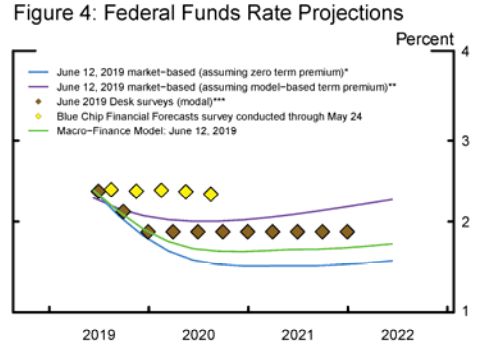
Note: Estimated from federal funds futures options, not adjusted for risk premiums.
Source: CME Group; Federal Reserve Board staff estimates.

Figure 3: Market−Implied Federal Funds Rate Expectations



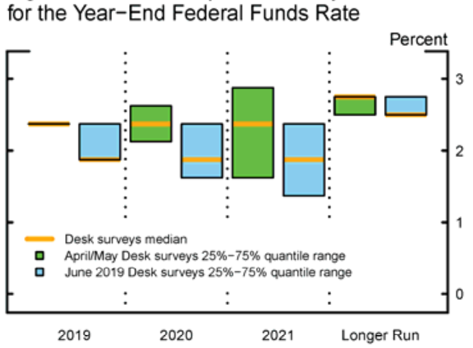
Note: Zero term premium path is estimated using overnight index swap quotes with a spline approach and a term premium of zero basis points. Model−based term premium path is estimated using a term structure model maintained by Board staff and corrects for term premium.
* Median of respondents' modal paths for the federal funds rate.
Source: Bloomberg; Board staff calculations; FRBNY.

Figure 4: Federal Funds Rate Projections



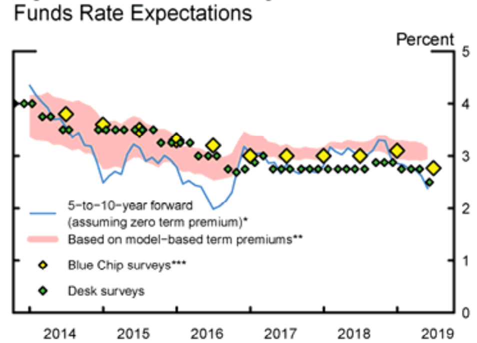
* Estimated using overnight index swap quotes with a spline approach and a term premium of zero basis points.
** Adjusting for premiums using a term structure model maintained by Board staff.
*** Median of respondents' modal paths for the federal funds rate.
Source: Bloomberg; Federal Reserve Board staff estimates; FRBNY.

Figure 5: Desk Surveys Modal Projections for the Year−End Federal Funds Rate



Note: Based on all responses from the April/May and June 2019 Desk surveys.
Source: FRBNY.

Figure 6: Measures of Longer−Run Federal Funds Rate Expectations



* Monthly average 5−to−10−year forward rate derived from prices of Treasury securities.
** Monthly average 5−to−10−year forward rate adjusted for three alternative model−based term premium estimates using Kim and Wright (2005), D'Amico, Kim, and Wei (2018), and Kim and Priebsch (2019).
*** Most recent long−run survey value is from the June 2019 Blue Chip survey.
Source: Blue Chip; FRBNY; Federal Reserve Board staff estimates.

While figure 3 focuses on changes in forward rates over the intermeeting period, figure 4 compares the current level of the expected federal funds rate path according to various measures. The straight read of OIS forward rates, plotted again in blue, suggests that investors currently expect the federal funds rate to decline 60 basis points by end-2019 and a further 33 basis points by end-2020. For comparison, the latest path from the staff's term structure model, plotted again in purple, suggests that investors expect declines of 32 basis points by end-2019 and an additional 3 basis points by end-2020. An alternative staff model of the term-premium (in green) lies closer to the unadjusted forward rate path, suggesting a decline of a bit less than 50 basis points by end-2019 and another 20 basis points by end-2020.[3] Likewise, the modal path reported by the median respondent to the Desk's June surveys now points to a 50-basis-point decline in 2019, but then a flat path thereafter (the brown diamonds).[4]

Figure 5 shows the median and interquartile range of respondents' modal federal funds rate projections from the Desk's June surveys (in blue) relative to the April/May surveys (in green). The median projections (the orange bars) for end-2019 declined by 50 basis points and the interquartile range, which was essentially zero in April/May, widened to about 50 basis points. These changes were predominantly due to downward revisions by respondents in the Survey of Market Participants, as most respondents in the Survey of Primary Dealers continue to project no rate changes for this year. The interquartile ranges for end-2020 and end-2021 moved down, while the median for the longer-run modal projection declined 25 basis points. In explaining their downward revisions, most respondents pointed to increased downside risks to the economic outlook, with several pointing to the likely impact of trade tensions.

Figure 6 shows measures of the longer-run expected federal funds rate. A straight read of forward rates implied by Treasury yields suggests that investors' current expectation for the average federal funds rate 5 to 10 years ahead (the blue line) declined to about 2.4 percent. Adjusting for term premiums using various staff term structure models (with the light-red-shaded region showing a range of three such model estimates) continues to suggest that 5-to-10-year-ahead expectations are above the unadjusted forward rates, at between 2.9 and 3.2 percent, consistent with a negative term premium at those horizons.[5] In contrast, surveys of professional forecasters project rates closer to the unadjusted forward rates; the median forecast from the Desk's June surveys (the green diamonds) and the average longer-run forecast from the June Blue Chip survey (conducted through May 24, the yellow diamonds) are 2.5 and 2.75 percent. Both declined relative to their previous readings in April and in December of last year, respectively.

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[3] The box "A Macro-Finance Measure of Term Premiums in Federal Funds Futures Rates" in the Financial Market section of the April 2019 Tealbook A discusses the alternative model.

[4] The most likely timing of the declines during the remainder of this year imply 25-basis-point declines at the September and December FOMC meetings.

[5] Relative to the chart shown in previous editions of this box, the range of estimates is narrower for the most recent years. The upper part of the range is lower as it now reflects the estimates from the staff's updated term-premium-adjusted policy rate path model.

THE CASE FOR ALTERNATIVE A

If policymakers view the escalation of trade tensions and the deterioration in investor sentiment as evidence that downside risks for economic growth have significantly increased and are worried about the ongoing softness in inflation, they may deem it appropriate to provide monetary policy accommodation at this time to sustain the economic expansion. Moreover, a weakening of the economic expansion in an environment in which short-term interest rates are not very far from the effective lower bound could warrant a prompt easing of policy on risk-management grounds. With Alternative A, policymakers would communicate that, in light of "heightened uncertainties about the economic outlook and muted inflation pressures," the Committee "decided to lower the target range for the federal funds rate" and "to conclude the reduction of its aggregate securities holdings." Although the economic effects of ending the balance sheet runoff in July as opposed to September are likely trivial, policymakers may not want to move their policy tools in opposite directions.

Policymakers may see the slowing in business fixed investment and manufacturing output from their rates of increase last year as evidence that trade uncertainties, besides leaving a significant imprint on financial markets, are affecting global growth and the U.S. economic outlook. They may also be concerned about the continued decline in Treasury term spreads and view recent movements as consistent with a significant increase in the probability of a recession over the next year if policy accommodation is not provided in June.

With inflation running below the Committee's symmetric 2 percent objective, policymakers may see significant risks that inflation could fail to return to 2 percent on a sustained basis, particularly if resource utilization were to soften. In this case, the credibility of the Committee's commitment to its 2 percent longer-run inflation objective could be damaged or longer-term inflation expectations may move lower.

In addition, policymakers may deem it appropriate to emphasize their commitment to sustain the economic expansion, support a return of inflation to the Committee's symmetric 2 percent objective, and signal that more monetary policy accommodation may be forthcoming in the near future. Consequently, in Alternative A, the Committee stresses that it "is prepared to adjust the target range for the federal funds rate" to support these objectives.

A statement such as Alternative A would likely be seen by market participants as implying a more accommodative path for policy than had been anticipated and market expectations for the federal funds rate would likely fall. If, in addition, market participants judged Alternative A as indicating a more accommodative policy reaction function, then equity prices and inflation compensation would likely rise. The effect on the dollar might be more ambiguous, with lower real rates and higher future inflation pointing to depreciation, but stronger economic activity suggesting the opposite. If, by contrast, market participants inferred from Alternative A that the Committee had lowered its outlook for economic activity and inflation by more than they expect, equity prices would likely fall together with the exchange value of the dollar, and possibly inflation compensation.

THE CASE FOR ALTERNATIVE C

If policymakers do not view recent trade and financial market developments as significantly increasing downside risks to the economic outlook and are confident that economic activity will evolve broadly in line with their previous expectations, the Committee may want to continue to signal an intention to "be patient as it determines what future adjustments to the target range for the federal funds rate may be appropriate."

Policymakers may have anticipated a moderation in overall output growth from 2018 to 2019, along with a slowdown in the pace of job gains. They may see the apparent softness in business spending as transitory and, with household spending picking up from earlier in the year, they may anticipate a rebound in spending over the remainder of 2019.

Policymakers may interpret the softness in inflation as being caused largely or entirely by transitory factors and therefore be confident that, under the current monetary policy stance, inflation will rise to the Committee's 2 percent objective over the medium term. Policymakers may also anticipate that price pressures from high levels of resource utilization will facilitate the return of inflation to 2 percent. In addition, they may judge long-term inflation expectations to be sufficiently well-anchored at levels consistent with the Committee's 2 percent objective. They may therefore deem the current stance of policy as appropriate.

Even though Alternative C would be consistent with the widely-held expectation of no change in the target range for the federal funds rate at the upcoming meeting, it would not signal an increased likelihood of adjustments in the monetary policy stance at subsequent meetings, as many market participants seem to expect. As a result, market expectations for short-term interest rates would likely move up, while equity prices and inflation compensation would likely fall. As was the case last December, the market effects could be pronounced if investors judged that the Committee was insufficiently attentive to downside risks or "inflexible" in its conduct of policy.

IMPLEMENTATION NOTE

If the Committee decides to maintain the current target range for the federal funds rate, an implementation note that indicates no change to the Federal Reserve's administered rates—the interest rate on required and excess reserve balances, the offering rate on overnight reverse repurchase agreements, and the primary credit rate—would be issued. If the Committee decides to lower the target range for the federal funds rate, an implementation note that communicates the changes the Federal Reserve decided to make in these three policy tools would be issued. Draft implementation notes that correspond to these two cases appear on the following pages. If the Committee decides to conclude the reduction of its aggregate securities holdings in the System Open Market Account at the end of July, the relevant portions of the directive to the Desk would not need to be changed until the July FOMC meeting. As usual, struck-out text indicates language deleted from the April/May directive and implementation note, bold red underlined text indicates added language, and blue underlined text indicates text that links to websites.

Alternatives

Implementation Note for June 2019 Alternative A

Release Date: June 19, 2019

Decisions Regarding Monetary Policy Implementation

The Federal Reserve has made the following decisions to implement the monetary policy stance announced by the Federal Open Market Committee in its statement on ~~May 1, 2019~~ **June 19, 2019**:

- The Board of Governors of the Federal Reserve System voted [unanimously] to ~~set~~ **lower** the interest rate paid on required and excess reserve balances ~~at 2.35~~ **to 2.10** percent, effective ~~May 2, 2019~~ **June 20, 2019**. ~~Setting the interest rate paid on required and excess reserve balances 15 basis points below the top of the target range for the federal funds rate is intended to foster trading in the federal funds market at rates well within the FOMC's target range.~~
- As part of its policy decision, the Federal Open Market Committee voted to authorize and direct the Open Market Desk at the Federal Reserve Bank of New York, until instructed otherwise, to execute transactions in the System Open Market Account in accordance with the following domestic policy directive:

  "Effective ~~May 2, 2019~~ **June 20, 2019**, the Federal Open Market Committee directs the Desk to undertake open market operations as necessary to maintain the federal funds rate in a target range of **2 to** 2-1/4 ~~to 2-1/2~~ percent, including overnight reverse repurchase operations (and reverse repurchase operations with maturities of more than one day when necessary to accommodate weekend, holiday, or similar trading conventions) at an offering rate of ~~2.25~~ **2.00** percent, in amounts limited only by the value of Treasury securities held outright in the System Open Market Account that are available for such operations and by a per-counterparty limit of $30 billion per day.

  ~~Effective May 2, 2019,~~ The Committee directs the Desk to **continue** roll**ing** over at auction the amount of principal payments from the Federal Reserve's holdings of Treasury securities maturing during each calendar month that exceeds $15 billion~~. The Committee directs the Desk~~**, and** to continue reinvesting in agency mortgage-backed securities the amount of principal payments from the Federal Reserve's holdings of agency debt and agency mortgage-backed securities received during each calendar month that exceeds $20 billion. Small deviations from these amounts for operational reasons are acceptable.

  The Committee also directs the Desk to engage in dollar roll and coupon swap transactions as necessary to facilitate settlement of the Federal Reserve's agency mortgage-backed securities transactions."

- In a related action, the Board of Governors of the Federal Reserve System voted **[** unanimously **]** to approve ~~the establishment of~~ **a 1/4 percentage point decrease in** the primary credit rate ~~at the existing level of 3.00 percent~~ **to 2.75 percent, effective June 20, 2019**. **In taking this action, the Board approved requests to establish that rate submitted by the Boards of Directors of the Federal Reserve Banks of […].**

This information will be updated as appropriate to reflect decisions of the Federal Open Market Committee or the Board of Governors regarding details of the Federal Reserve's operational tools and approach used to implement monetary policy.

More information regarding open market operations and reinvestments may be found on the Federal Reserve Bank of New York's website.

Alternatives

Implementation Note for June 2019 Alternatives B and C

Release Date: June 19, 2019

Decisions Regarding Monetary Policy Implementation

The Federal Reserve has made the following decisions to implement the monetary policy stance announced by the Federal Open Market Committee in its statement on ~~May 1, 2019~~ **June 19, 2019**:

- The Board of Governors of the Federal Reserve System voted **[** unanimously **]** to ~~set~~ **maintain** the interest rate paid on required and excess reserve balances at 2.35 percent, effective ~~May 2, 2019~~ **June 20, 2019**. ~~Setting the interest rate paid on required and excess reserve balances 15 basis points below the top of the target range for the federal funds rate is intended to foster trading in the federal funds market at rates well within the FOMC's target range.~~
- As part of its policy decision, the Federal Open Market Committee voted to authorize and direct the Open Market Desk at the Federal Reserve Bank of New York, until instructed otherwise, to execute transactions in the System Open Market Account in accordance with the following domestic policy directive:

  "Effective ~~May 2, 2019~~ **June 20, 2019**, the Federal Open Market Committee directs the Desk to undertake open market operations as necessary to maintain the federal funds rate in a target range of 2-1/4 to 2-1/2 percent, including overnight reverse repurchase operations (and reverse repurchase operations with maturities of more than one day when necessary to accommodate weekend, holiday, or similar trading conventions) at an offering rate of 2.25 percent, in amounts limited only by the value of Treasury securities held outright in the System Open Market Account that are available for such operations and by a per-counterparty limit of $30 billion per day.

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  The Committee also directs the Desk to engage in dollar roll and coupon swap transactions as necessary to facilitate settlement of the Federal Reserve's agency mortgage-backed securities transactions."

- In a related action, the Board of Governors of the Federal Reserve System voted [unanimously] to approve the establishment of the primary credit rate at the existing level of 3.00 percent.

This information will be updated as appropriate to reflect decisions of the Federal Open Market Committee or the Board of Governors regarding details of the Federal Reserve's operational tools and approach used to implement monetary policy.

More information regarding open market operations and reinvestments may be found on the Federal Reserve Bank of New York's website.

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Balance Sheet and Income Projections

The staff has prepared projections of the Federal Reserve's balance sheet and the associated income statement that are consistent with the baseline forecast in Tealbook A and the Balance Sheet Normalization Principles and Plans that the Committee released after the March FOMC meeting. Key features of these projections are described below. If the Committee were to adopt Alternative A at this meeting, balance sheet reduction would conclude at the end of July; this decision would imply only minor changes to the projections discussed below.[1]

Relative to the April Tealbook, the paths for longer-term interest rates in the staff's financial projections have been revised down notably. The 10-year Treasury yield and the 30-year fixed mortgage rate are about 30 to 35 basis points lower than in the April Tealbook over the next three quarters and are both subsequently about 15 basis points lower through the end of 2021. These revisions primarily affect the balance sheet by implying a faster pace of prepayments from agency mortgage-backed securities (MBS) than projected in April, which, at this stage in the normalization process, has implications mostly for the composition rather than the size of the balance sheet.

Evolution of the SOMA portfolio. Under the balance sheet normalization program initiated in October 2017 and revised in March 2019, cumulative redemptions are projected to reach $753 billion by the time the reduction in the size of SOMA holdings concludes at the end of the third quarter. Of this total, redemptions of Treasury and agency securities will amount to $419 billion and $334 billion, respectively (see the table in the exhibit "Redemptions and Reinvestments of SOMA Principal Payments"). Over the same period, cumulative reinvestments of principal payments in Treasury and agency securities are projected to be $363 billion and $159 billion, respectively. Relative to the April Tealbook, lower projected paths of mortgage rates and the resulting faster pace of MBS prepayments over coming months imply both an increase in projected redemptions and a more sustained breach of the $20 billion monthly redemption cap during this summer. During the second and third quarters of this year, cumulative

[1] Under Alternative A, the SOMA portfolio remains about $40 billion larger from July through the end of 2021 than under the baseline. The longer-run size of the balance sheet as a share of GDP remains essentially unchanged as does the degree of downward pressure exerted by SOMA holdings on longer-term Treasury yields.

Balance Sheet & Income

Redemptions and Reinvestments of SOMA Principal Payments

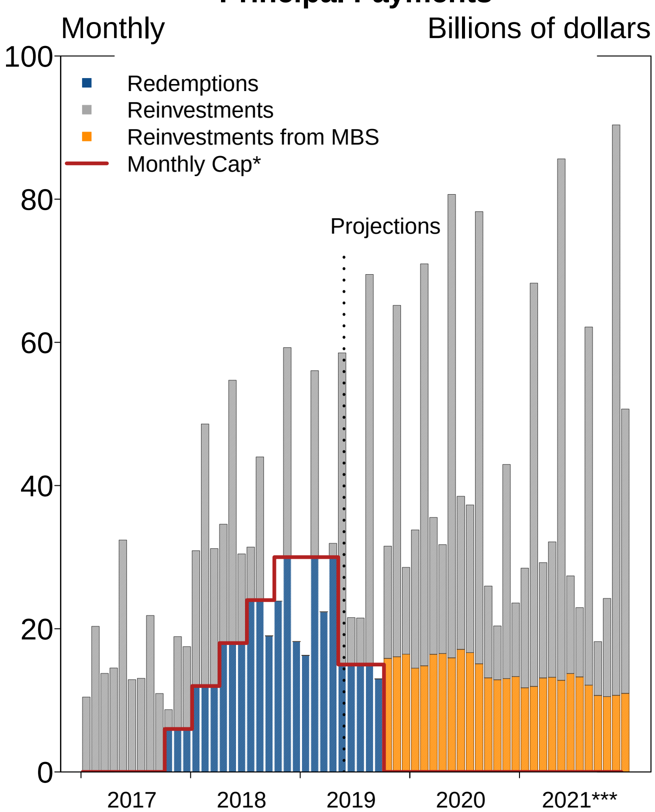
Projections for Treasury Securities
(Billions of dollars)

	Redemptions		Reinvestments*	
	Period	Since Oct. 2017	Period	Since Oct. 2017
2019:Q2	60.1	375.8	51.9	302.2
2019:Q3	43.0	418.8	61.0	363.2
2019:Q4	0.0	418.8	75.4	438.6
2018	229.1	247.1	197.1	224.2
2019	171.7	418.8	214.4	438.6
2020	0.0	418.8	361.6	800.2
2021***	0.0	418.8	344.3	1144.5

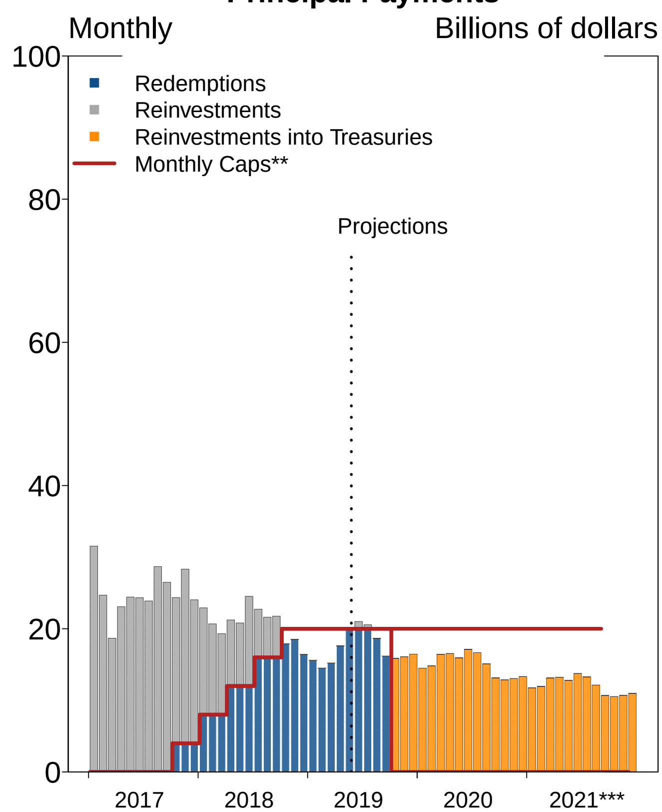
Projections for Agency Securities
(Billions of dollars)

	Redemptions		Reinvestments** (Agency/Treasury)	
	Period	Since Oct. 2017	Period	Since Oct. 2017
2019:Q2	57.6	275.7	3.3 / 0.0	155.6 / 0.0
2019:Q3	58.3	334.0	3.0 / 0.0	158.6 / 0.0
2019:Q4	0.0	334.0	0.0 / 53.4	158.6 / 53.4
2018	160.8	172.8	87.6 / 0.0	152.3 / 0.0
2019	161.2	334.0	6.2 / 53.4	158.6 / 53.4
2020	0.0	334.0	0.0 / 187.6	158.6 / 241.0
2021***	0.0	334.0	0.0 / 125.4	158.6 / 366.4

SOMA Treasury Securities Principal Payments



SOMA Agency Debt and MBS Principal Payments



* Starting in May 2019, principal payments from maturing Treasury securities below $15 billion per month are redeemed, while those above are reinvested into Treasury securities. Starting in October 2019, all principal payments from maturing Treasury securities are reinvested into Treasury securities.

** Starting in October 2019, principal payments from holdings of agency securities below $20 billion per month are reinvested into Treasury securities, while those above are reinvested into agency MBS.

*** Reserves are projected to reach $1 trillion in October 2021. After this date, all principal payments received from all security holdings are reinvested into Treasury securities.

redemptions and reinvestments of agency securities are each $6 billion higher than in the April projection.

By the time the reduction in total securities holdings concludes at the end of September, the size of the SOMA portfolio is projected to be slightly below $3.7 trillion, consisting of about $2.1 trillion of Treasury securities and $1.5 trillion in agency securities. At that time, the balance sheet is projected to stand at about 17 percent of nominal GDP (see the bottom panels of the exhibit titled "Total Assets and Selected Balance Sheet Items"). The liability side of the balance sheet is projected to be composed of $2.4 trillion—or 11 percent of nominal GDP—of nonreserve liabilities, and just under $1.3 trillion—or about 6 percent of nominal GDP—of reserve balances.[2] By assumption, once reserves reach $1 trillion, in the fourth quarter of 2021, the size of the balance sheet as a share of nominal GDP is projected to remain constant at nearly 16 percent.[3] For comparison, the size of the balance sheet as a share of GDP peaked at about 25 percent in the fourth quarter of 2014 and averaged about 5 percent over the decade prior to the crisis. After reserves reach $1 trillion, SOMA holdings are projected to start rising in line with nominal GDP, keeping pace with increases in Federal Reserve liabilities and Federal Reserve Bank capital.[4]

Because of the faster projected pace of MBS prepayments, the share of agency MBS in the SOMA portfolio, which currently stands at 42 percent, is expected to decline a bit more rapidly than in the April Tealbook, falling to about 18 percent of the SOMA portfolio by the end of 2025, compared to 19 percent in April.

[2] Reserve projections included in Tealbook B do not incorporate effects related to the debt limit episode as TGA balances are assumed to grow in line with nominal GDP over the projection period. When Treasury's debt limit practices are factored into the TGA projections, end-September reserve balances are projected to be around $1.6 trillion, about $300 billion higher than the level of reserves projected in the Tealbook baseline. Following the resolution of the debt limit impasse, the level of reserve balances will likely decline to the level projected in the baseline as the Treasury rebuilds its TGA balance.

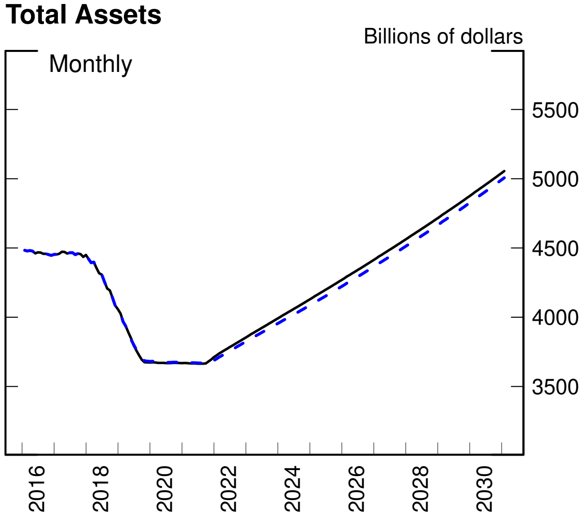
[3] Our projections are based on the assumption that reserve balances will continue to decline until they reach $1 trillion, the same assumption as in the April Tealbook. However, as discussed in the March FOMC memo "Transitioning to an Ample Reserves Regime with Lower Reserves," the actual level at which the decline in reserves will cease is uncertain and will need to be determined in light of information regarding banks' reserve demand.

[4] In this Tealbook, we adjusted our technical assumptions with respect to the growth of a few liability items. In particular, we now assume that liabilities other than currency and reserves, such as the foreign repo pool and DFMU balances, grow in line with nominal GDP from the start of the projection period, rather than after the decline in reserves ceases.

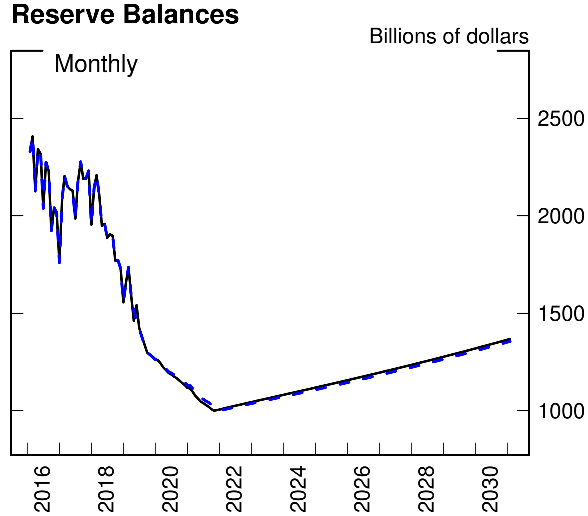
Total Assets and Selected Balance Sheet Items

June Tealbook baseline — April Tealbook baseline

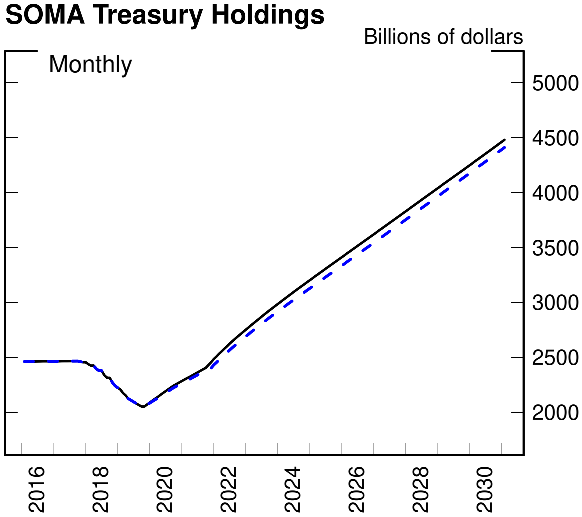
Total Assets



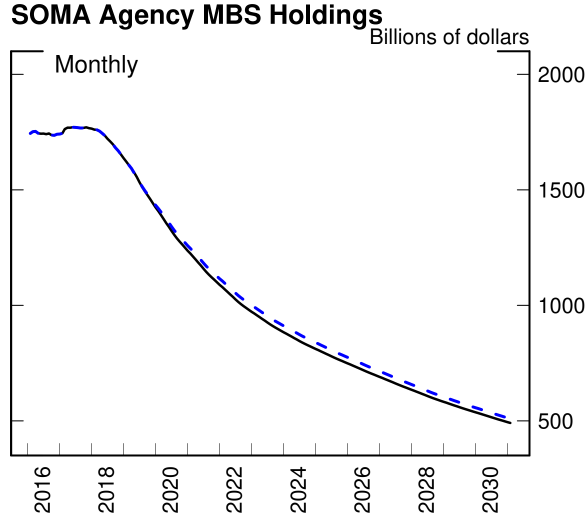
Reserve Balances



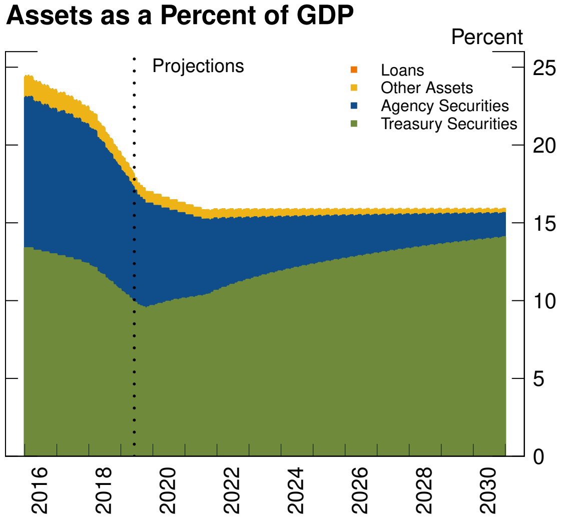
SOMA Treasury Holdings



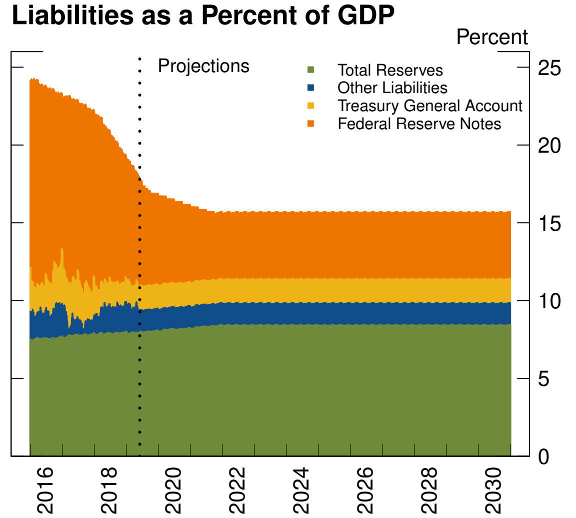
SOMA Agency MBS Holdings



Assets as a Percent of GDP



Liabilities as a Percent of GDP



Federal Reserve Balance Sheet
Month-end Projections – June Tealbook
(Billions of dollars)

	Historical*			Projections				
	Aug 2014	Sep 2017	May 2019	Dec 2019	Dec 2020	Dec 2022	Dec 2025	Dec 2030
Total assets	4,416	4,460	3,847	3,673	3,669	3,853	4,269	5,041
Selected assets								
Loans and other credit extensions**	2	6	0	0	0	0	0	0
Securities held outright	4,157	4,240	3,667	3,514	3,522	3,725	4,161	4,957
U.S. Treasury securities	2,437	2,465	2,110	2,088	2,283	2,750	3,410	4,460
Agency debt securities	42	7	2	2	2	2	2	2
Agency mortgage-backed securities	1,678	1,768	1,555	1,424	1,236	972	749	494
Unamortized premiums	209	162	132	123	110	90	67	41
Unamortized discounts	19	14	13	12	12	10	7	5
Total other assets	29	37	34	24	24	29	34	38
Total liabilities	4,360	4,419	3,808	3,652	3,642	3,809	4,219	4,977
Selected liabilities								
Federal Reserve notes in circulation	1,249	1,533	1,690	1,745	1,853	2,042	2,262	2,668
Reverse repurchase agreements	277	432	276	271	282	304	336	397
Deposits with Federal Reserve Banks	2,825	2,447	1,834	1,631	1,502	1,458	1,615	1,905
Reserve balances held by depository institutions	2,762	2,190	1,541	1,261	1,117	1,044	1,156	1,364
U.S. Treasury, General Account	49	176	221	308	320	345	382	451
Other deposits	15	82	72	62	64	69	76	90
Earnings remittances due to the U.S. Treasury	3	2	2	0	0	0	0	0
Total Federal Reserve Bank capital***	56	41	39	39	40	44	50	64

Source: Federal Reserve H.4.1 daily data and staff calculations.
Note: Components may not sum to totals due to rounding.
*August 2014 corresponds to the peak month-end value of reserve balances; September 2017 corresponds to the last month-end before the initiation of the normalization program; May 2019 is the most recent historical value
**Loans and other credit extensions includes discount window credit; central bank liquidity swaps; and net portfolio holdings of Maiden Lane LLC.
***Total capital includes capital paid-in and capital surplus accounts.

Balance Sheet & Income

SOMA portfolio characteristics. The weighted-average duration of the SOMA Treasury portfolio is currently just above six and a half years (see the top panel of the exhibit titled "Projections for the Characteristics of SOMA Treasury Securities Holdings"). Duration is projected to edge up to nearly seven years as redemptions continue through September and longer-duration securities become a larger share of the portfolio.[5] Thereafter, duration stays roughly constant until the decline in reserve balances ends and the SOMA portfolio begins to expand again in the fourth quarter of 2021.

In this Tealbook, we have brought our assumptions regarding reinvestment of principal payments from maturing Treasury securities once the decline in reserve balances ends in line with the Desk's longstanding reinvestment practices. We now assume that rollovers of maturing Treasury securities will be directed to newly-issued securities at Treasury auctions in proportion to the maturity distribution of the issuance amounts for the rest of the projection horizon.[6] Meanwhile, for secondary market purchases of Treasury securities aimed at reinvesting principal payments from agency securities holdings and at accommodating growth in Federal Reserve liabilities, we have retained the assumptions of the previous Tealbook that those purchases will be directed toward Treasury bills until bills comprise approximately one-third of the Treasury portfolio, similar to the pre-crisis composition.[7]

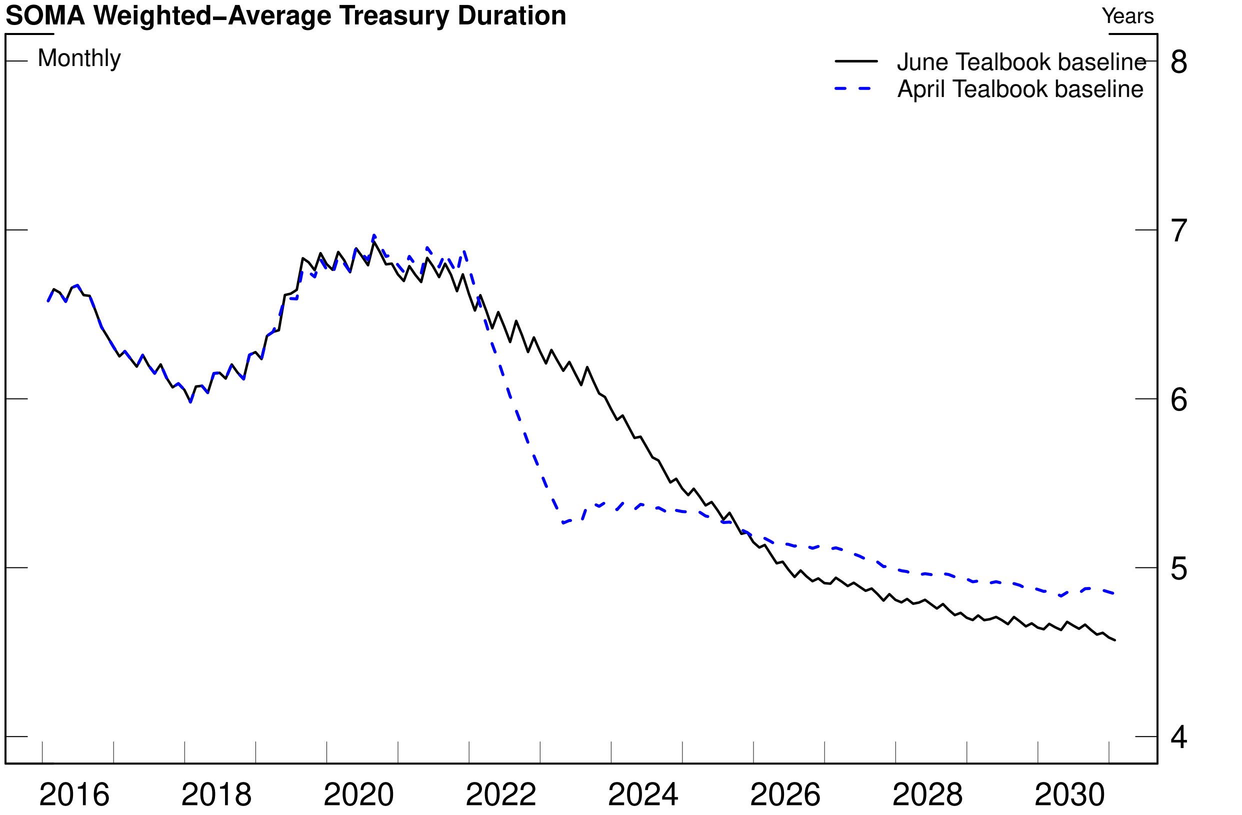
The process of rebuilding the Treasury bill portion of the portfolio is expected to take about 5½ years, thus leading to a gradual reduction in the weighted-average duration of the Treasury portfolio to just under 5 years. Thereafter, further secondary-market purchases of Treasury securities are assumed to be spread across the maturity spectrum

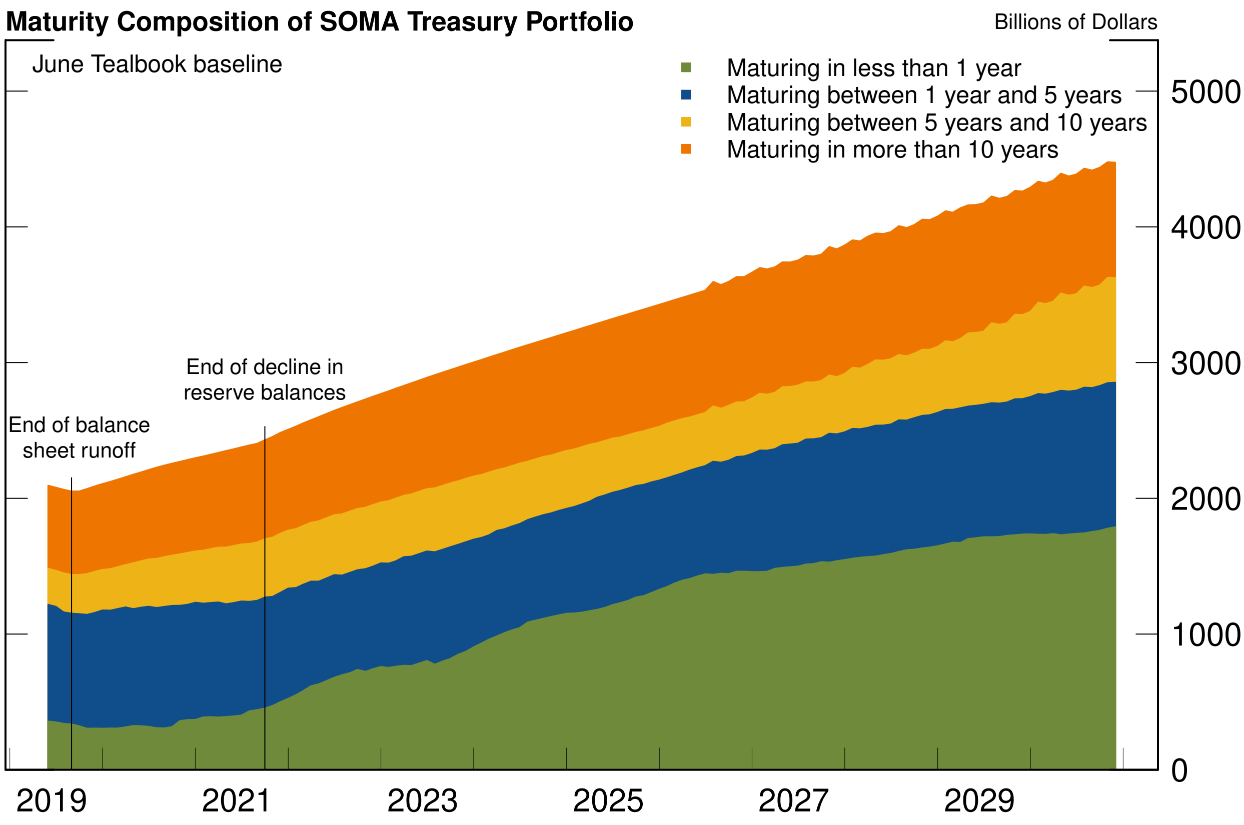
[5] These projections assume that rollovers of maturing Treasury securities will be allocated across newly issued securities at Treasury auctions on a pro-rata basis in proportion with the amounts being issued. Consistent with the Desk's interim plan for reinvesting principal payments from agency debt and MBS into Treasury securities beginning in October 2019, these purchases will be spread across the Treasury curve in line with the amounts outstanding in each sector. Secondary-market purchases of Treasury securities will be distributed across eight sectors for nominal coupon securities and one sector each for bills, Treasury Inflation-Protected Securities (TIPS), and Floating Rate Notes (FRNs). Of note, the share of these purchases allocated to bills will be 15 percent, while the share allocated to coupon securities with residual maturity shorter than three years will be 41 percent.

[6] In previous Tealbooks, we had assumed that, once the decline in reserves ceases, principal payments from maturing Treasury securities would be entirely reinvested in Treasury bills until the share of Treasury bills in the Treasury securities portfolio reaches about one-third.

[7] Given that the Committee has not yet reached a decision on the long-run composition of the SOMA portfolio, we retain this purchase assumption in the current projections.

Projections for the Characterstics of SOMA Treasury Securities Holdings





(see the bottom panel of the exhibit). Relative to the April Tealbook, the revised technical assumptions relative to rollovers of Treasury securities not only result in a more gradual decline in the weighted-average duration of the portfolio over the next several years but also result in a lower weighted-average duration in the longer run.[8]

Federal Reserve remittances. Remittances to the Treasury are projected to decline to $49 billion this year from $65 billion in 2018 (see the exhibit "Income Projections"), mainly reflecting reduced interest income resulting from the reduction in SOMA securities holdings.[9] Total interest expense is projected to be $42 billion this year, little changed from 2018.[10,11] Remittances are expected to increase to $53 billion next year, and continue to rise, reflecting an increase in net interest income associated with a growing balance sheet. Relative to the previous Tealbook, the projected path for remittances is generally a bit lower, reflecting the lower MBS coupon income resulting from the faster projected pace of MBS prepayments. As shown in the middle right panel of the exhibit "Income Projections," annual remittances are projected to rise gradually from around 0.25 percent of nominal GDP next year to just below 0.3 percent by the end of the projection horizon.

Unrealized gains or losses. The SOMA portfolio was in a net unrealized gain position of about $110 billion at the end of May.[12] With longer-term interest rates projected to rise, the unrealized gain position is expected to turn into an unrealized loss

Balance Sheet & Income

[8] The lower weighted-average duration of the SOMA in the longer run reflects a lower weighted-average duration in the assumed distribution of Treasury issuance relative to that of the maturity spectrum into which principal payments of maturing Treasury securities were assumed to be reinvested in previous Tealbooks.

[9] Remittances in 2018 included two mandated transfers to the Treasury due to reductions to the statutory limit on aggregate Reserve Bank surplus. First, $2.5 billion was transferred in February 2018 following an amendment to Section 7 of the Federal Reserve Act by the Bipartisan Budget Act of 2018, enacted in that month. Second, $675 million was transferred in June 2018, reflecting another amendment to Section 7 by the Economic Growth, Regulatory Relief, and Consumer Protection Act, enacted in May 2018.

[10] The effects of the increase in the IOER and the decrease in reserves since 2018 on total interest expense approximately offset each other.

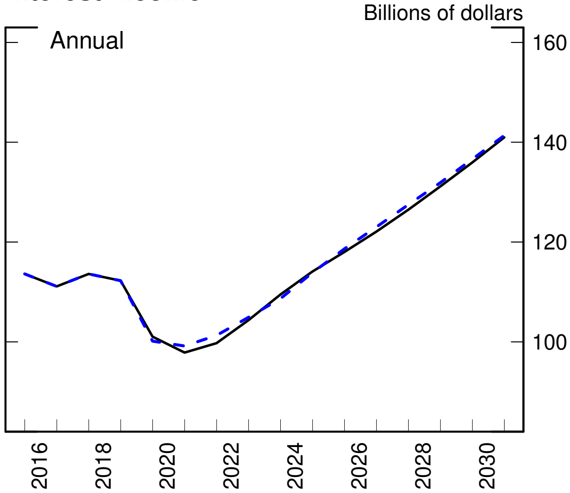
[11] We continue to assume that the FOMC will set a 25 basis point-wide target range for the federal funds rate throughout the projection period. Consistent with the FOMC's May 2019 Implementation Note, we now assume that the interest rates paid on reserve balances will be set 15 basis points below the top of the target range. We continue to assume that the offering rate on overnight RRPs will be set at the bottom of the range.

[12] See the Tealbook B box titled "What Does it Mean for the SOMA Portfolio to be in an 'Unrealized Loss' Position?" (June 2018) for an explanation of the accounting concepts underlying unrealized and realized gain and loss positions, as well as their implications for the Federal Reserve's ability to meet its obligations.

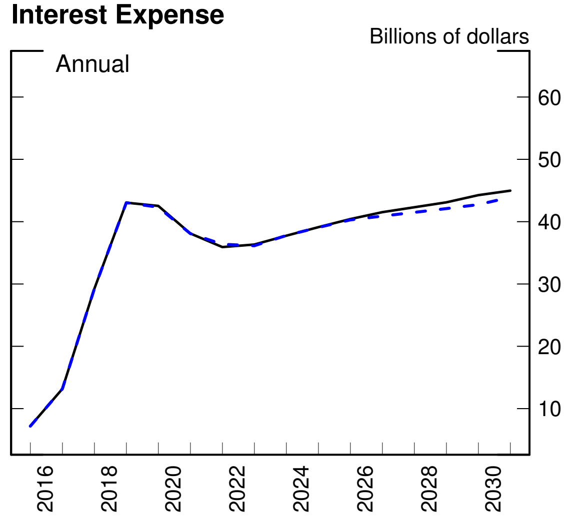
Income Projections

June Tealbook baseline — April Tealbook baseline (dashed)

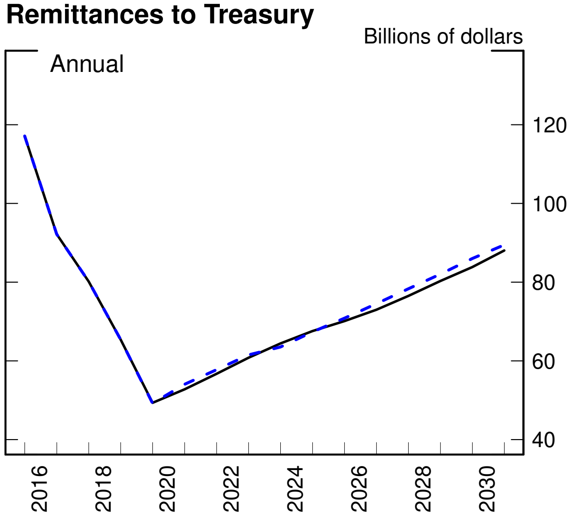
Interest Income



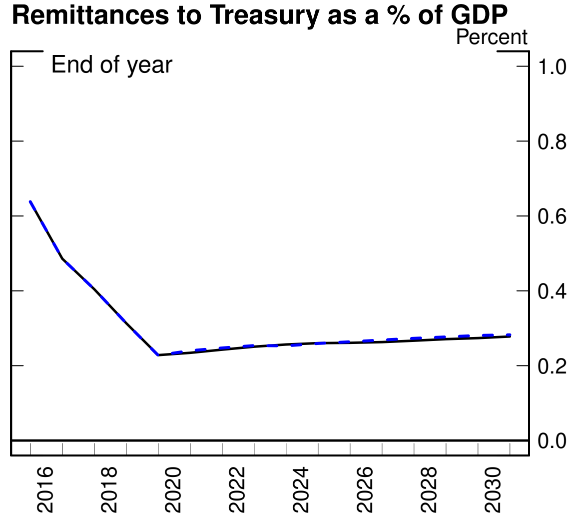
Interest Expense



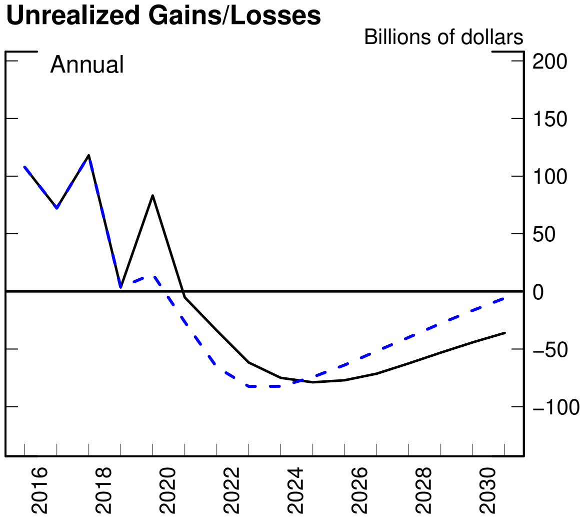
Remittances to Treasury



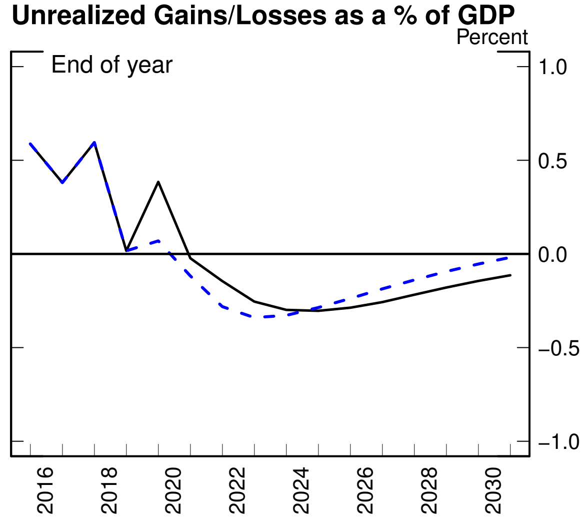
Remittances to Treasury as a % of GDP



Unrealized Gains/Losses



Unrealized Gains/Losses as a % of GDP



position by late 2020 and reach a peak around $80 billion in 2025:Q1. Compared with the April Tealbook, the path for the unrealized position of the SOMA portfolio is higher over the next several years reflecting the lower path for longer-term interest rates.

Total term premium effect. SOMA securities holdings are estimated to be reducing the term premium embedded in the 10-year Treasury yield by about 130 basis points in the current quarter (see the exhibit "Projections for the 10-year Treasury Total Term Premium Effect"). Over the projection horizon, the magnitude of the downward pressure exerted on the term premium in Treasury yields is estimated to diminish gradually as a result of the projected decrease in the duration of the Federal Reserve's securities holdings as well as the projected continued decrease in the size of the SOMA portfolio relative to nominal GDP through of the fourth quarter of 2021. Over the next decade, the average pace of decline is projected to be about 4 basis points per year so that the total term premium effect of the SOMA portfolio for the 10-year Treasury yield is less than 100 basis points at the end of 2030.

Relative to the April projection, the contour of the total term premium effect (TTPE) is a few basis points more negative through 2022, but it is slightly less negative over the longer term reflecting the revised technical assumptions regarding rollovers of Treasury securities.[13]

[13] The small downward revision to the TTPE path over the next few years is due to a more gradual projected decline in the weighted-average duration of the Treasury portfolio than in the previous Tealbook, while in the longer run, the slightly less negative TTPE reflects the lower projected level of the weighted-average duration.

Projections for the 10-Year Treasury
Total Term Premium Effect (TTPE)
(Basis Points)

Date	June Tealbook	April Tealbook
Quarterly Averages		
2019:Q2	-134	-131
Q3	-133	-130
Q4	-131	-129
2020:Q4	-126	-123
2021:Q4	-121	-118
2022:Q4	-117	-114
2023:Q4	-112	-112
2024:Q4	-109	-110
2025:Q4	-106	-109
2026:Q4	-103	-107
2027:Q4	-101	-105
2028:Q4	-99	-104
2029:Q4	-97	-102
2030:Q4	-95	-101

(This page is intentionally blank.)

Abbreviations

ABS	asset-backed securities
AFE	advanced foreign economy
BEA	Bureau of Economic Analysis, Department of Commerce
BHC	bank holding company
CDS	credit default swaps
CFTC	Commodity Futures Trading Commission
C&I	commercial and industrial
CLO	collateralized loan obligation
CMBS	commercial mortgage-backed securities
CPI	consumer price index
CRE	commercial real estate
DEDO	section in Tealbook A: “Domestic Economic Developments and Outlook”
Desk	Open Market Desk
DFMU	Designated Financial Market Utilities
ECB	European Central Bank
EFFR	effective federal funds rate
ELB	effective lower bound
EME	emerging market economy
EU	European Union
FAST Act	Fixing America’s Surface Transportation Act
FDIC	Federal Deposit Insurance Corporation
FOMC	Federal Open Market Committee; also, the Committee
GCF	general collateral finance
GDI	gross domestic income
GDP	gross domestic product
GSIBs	globally systemically important banking organizations
HQLA	high-quality liquid assets
IOER	interest on excess reserves

ISM	Institute for Supply Management
LIBOR	London interbank offered rate
LSAPs	large-scale asset purchases
MBS	mortgage-backed securities
MMFs	money market funds
NBER	National Bureau of Economic Research
NI	nominal income
NIPA	national income and product accounts
OIS	overnight index swap
ON RRP	overnight reverse repurchase agreement
PCE	personal consumption expenditures
QS	Quantitative Surveillance
repo	repurchase agreement
RMBS	residential mortgage-backed securities
RRP	reverse repurchase agreement
SCOOS	Senior Credit Officer Opinion Survey on Dealer Financing Terms
SEP	Summary of Economic Projections
SFA	Supplemental Financing Account
SLOOS	Senior Loan Officer Opinion Survey on Bank Lending Practices
SOMA	System Open Market Account
TBA	to be announced (for example, TBA market)
TCJA	Tax Cuts and Jobs Act of 2017
TGA	U.S. Treasury's General Account
TIPS	Treasury inflation-protected securities
TPE	Term premium effects
ZLB	zero lower bound