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.

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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

April 25, 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 met in March indicates that the labor market has remained strong. Payrolls rose 196,000 in March, following the weak reading in February. For the first quarter as a whole, job gains averaged 180,000 per month—a solid rate of job growth but slower than the average monthly pace for 2018. The unemployment rate held steady at 3.8 percent in March. Recent data on household spending and business fixed investment have been consistent with GDP growth slowing in the first quarter from its strong pace in 2018, albeit by less than previously projected. Consumer price data have been softer than expected in recent months. Based on current information, the staff estimates that core PCE inflation was 1.6 percent over the 12 months ending in March and projects it to edge up to 1.8 percent by the end of the year.

Against this backdrop, the alternative policy statements presented below offer a range of options for communicating the likely future path of monetary policy. Alternative B is intended to reaffirm the policy message that was conveyed in the March postmeeting statement. The case for a "patient" approach to monetary policy is buttressed by the recent downside surprise to inflation as well as by remaining uncertainty about the extent to which the recent softness in economic indicators will prove to be transitory. Alternative B continues to indicate that, based on the current stance of policy, 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.

Alternative A conveys a more-accommodative posture than Alternative B by replacing the "patient" characterization with a signal that a cut in the federal funds rate may soon be appropriate. This alternative notes that inflation is "softening" and that, consequently, the Committee will "assess whether it may soon become appropriate to adjust the target range" to achieve the Committee's desired outcomes.

Alternative C is based on some future scenario in which the economy continues to perform well and another increase in the federal funds rate may be seen as appropriate. Under such a scenario, the characterization of incoming data in the first paragraph could go a long way in shaping expectations for policy. Because current data do not support such an assessment, and continuing the practice followed in the March Tealbook, no first paragraph is presented for Alternative C. As noted in the second paragraph, the Committee could mention the developments justifying a firmer policy stance and signal that "it may soon become appropriate to adjust the target range."

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 note that the labor market remains strong, that the unemployment rate remains low, and that average job gains in recent months have been "solid." Alternatives A and B state that "economic activity has been rising at a moderate rate" and that "growth of household spending and business fixed investment slowed in the first quarter." The alternatives also note that "overall inflation and inflation for items other than food and energy have declined and are running below 2 percent." Regarding indicators of inflation expectations, Alternatives A and B continue to state that "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."
  - As noted above, Alternative C omits a description of the incoming data because it is intended to be considered in some future scenario in which the data point toward a potential need for further policy firming.
- The outlook for economic activity and inflation:
  - Under all three alternatives, the outlook for economic activity and inflation is unchanged from the March 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 condition on potentially different paths for the federal funds rate.
- For the current policy decision and the outlook for policy:
  - All three alternatives maintain the current target range for the federal funds rate.
  - Alternative B maintains the March perspective that "global economic and financial developments and muted inflation pressures" are factors that shape the outlook for policy and states that 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 the Committee's outlook.

- Alternative A links the policy outlook predominantly to inflation. In particular, it states that "in light of softening inflation, the Committee will assess whether it may soon become appropriate to adjust the target range for the federal funds rate."
- By contrast, Alternative C offers an illustrative selection of circumstances under which an increase in the federal funds rate "may soon become appropriate." Specifically, the alternative lists "firmer inflation readings," "tightening resource utilization," or "diminished risks to the outlook" as possible reasons for considering a change in the stance of policy.

The 1995–96 Mid-Cycle Rate Adjustments

A number of market commentaries have discussed whether, in light of recent lower inflation readings, a reduction in the target range for the federal funds rate might become appropriate to support a sustained return of inflation to 2 percent alongside strong labor market conditions. With inflation running below 2 percent and economic growth moderating, inflation expectations could drift downward, potentially making the current setting of the federal funds rate unwantedly restrictive. Some commentaries pointed back to several instances in the mid-1990s when the Committee was perceived as taking out insurance by cutting the federal funds rate after a series of rate hikes. This box analyzes the circumstances behind the mid-cycle adjustments of policy rates during 1995 and 1996.

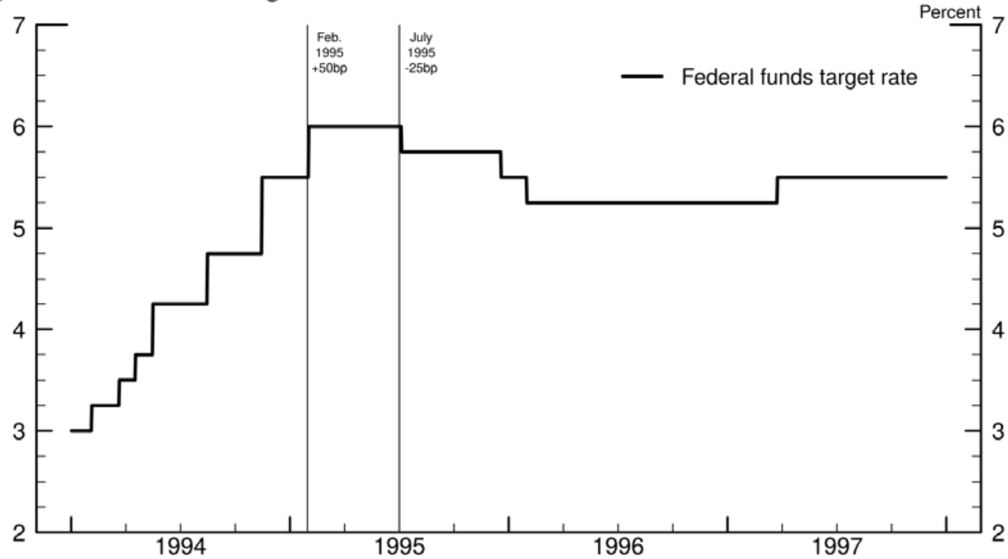
Starting in February 1994, the FOMC began raising interest rates to forestall an increase in inflation. Over the next year, the Committee raised the federal funds rate from 3 percent to 6 percent (figure 1). These rate hikes prevented inflation from rising, while the unemployment rate continued to decline (figure 2). After the final tightening step in February 1995, participants viewed the economy as having moved to a more sustainable path, even though some inflationary pressures still persisted. By the time of the July 1995 meeting, however, signs of a sharp slowing in economic activity were accumulating. At that meeting, the Committee decided to cut the federal funds rate target by 25 basis points. Two more 25 basis point reductions occurred in December 1995 and January 1996. These adjustments were intended to provide insurance against the risk of an undue weakening of economic activity.

The news leading up to the July 1995 meeting consisted almost entirely of surprises on the downside. The economy had softened to a greater extent than participants had anticipated. Nonfarm payroll employment had fallen in April and May, and the unemployment rate in May had risen somewhat from its first-quarter average. The central tendency of participants' projections, submitted for the Monetary Policy Report, for real GDP growth in 1995 fell from 2 to 3 percent in February to 1½ to 2 percent in early July. Pessimism brought on by the decline in jobs was reinforced by the string of negative reports on retail sales, industrial production, and the leading indicators.

At the July 1995 meeting, most participants perceived the pause in the expansion to be temporary and anticipated that economic activity would grow near its potential rate later in the year. However, the risk of a more pronounced slowdown figured prominently in the Committee's discussion. With inflation still running near 3 percent, above what participants considered to be consistent with the price stability mandate, the key question the Committee confronted was whether an easing in the stance of policy to support the expansion would risk forestalling further progress toward reducing inflation. In the event, and as noted earlier, the Committee cut the federal funds rate by 25 basis points. Participants viewed this adjustment as appropriate insurance against the risk of a more persistent slowdown. Although participants discussed a 50 basis point cut, that option was dismissed because, as Chairman

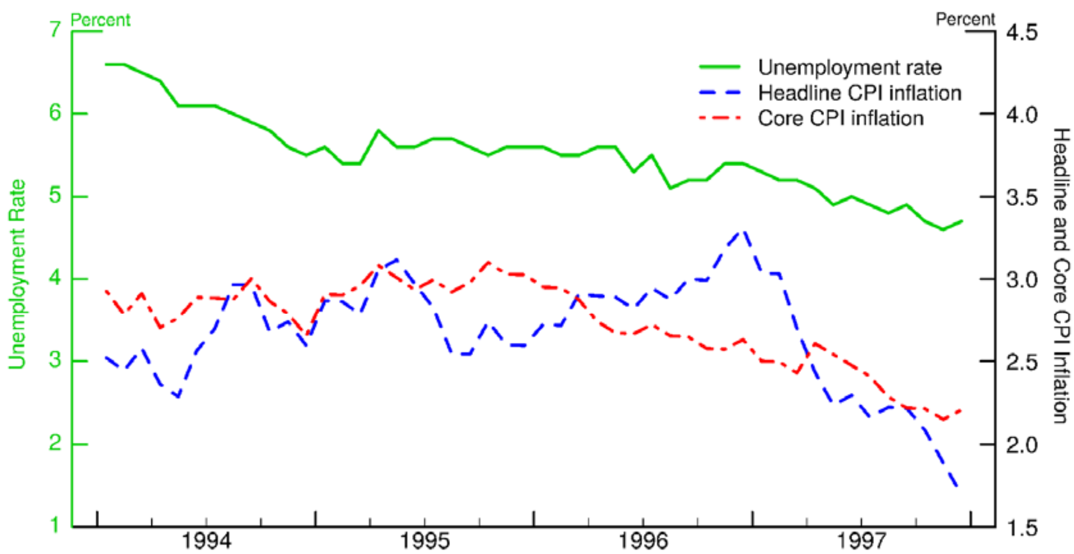
Alternatives

Figure 1: Federal Funds Target Rate



Source: Board of Governors of the Federal Reserve System.

Figure 2: Unemployment Rate, Headline and Core CPI Inflation



Note: Headline inflation is measured as the 12-month percent change in the consumer price index (CPI). Core inflation is measured as the 12-month percent change in CPI, excluding food and energy. Headline and core inflation data are taken from the November 1998 vintage release.

Source: Bureau of Labor Statistics (unemployment rate); Federal Reserve Bank of Philadelphia (inflation).

Greenspan put it, they were "concerned about spooking the markets." They agreed that there was little harm in leaving a further reduction to a future meeting.

In the following months, the economic expansion picked up again without notable upward pressure on inflation. Towards the end of the year, however, the economy again showed signs of slowing. Moreover, the minutes of the December 1995 FOMC meeting noted that "inflation had slowed from the elevated pace observed in the early part of the year." Measures of inflation expectations had also declined over the previous months, suggesting that the real federal funds rate had increased. Against the backdrop of a policy stance that most judged as somewhat restrictive, participants at the December meeting discussed the merits of taking an "opportunistic approach" to achieving further disinflation. Easing the stance of policy somewhat further was seen as reducing the risk of a more pronounced economic slowdown without forestalling further gradual disinflation, as participants noted emerging signs of positive supply side developments as well as muted inflation pressures abroad. In light of these considerations, at both the December 1995 and January 1996 meetings, the Committee decided to reduce the federal funds rate target by 25 basis points.

1995 ended with inflation below 3 percent, alongside a low and steady unemployment rate of around 5½ percent. Real GDP growth came down from around 4 percent in 1994 to about 2 percent in 1995, but no recession ensued. After the rate cut in January 1996, the federal funds rate target remained stable until the fall of 1998, with the exception of one rate increase in March 1997. During this period, real GDP growth rebounded and the unemployment rate drifted lower, while the Committee's discussions paid considerable attention to the evolution of actual and projected inflation. Although high resource utilization started to be reflected in wage increases, core inflation continued to trend lower. Starting in early 1997, participants expressed greater confidence in the possible role of faster-than-reported productivity increases as the source of the benign behavior of inflation.

Alternatives

MARCH 2019 FOMC STATEMENT

1. Information received since the Federal Open Market Committee met in January indicates that the labor market remains strong but that growth of economic activity has slowed from its solid rate in the fourth quarter. Payroll employment was little changed in February, but job gains have been solid, on average, in recent months, and the unemployment rate has remained low. Recent indicators point to slower growth of household spending and business fixed investment in the first quarter. On a 12-month basis, overall inflation has declined, largely as a result of lower energy prices; inflation for items other than food and energy remains near 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 APRIL/MAY 2019

1. Information received since the Federal Open Market Committee met in ~~January~~ **March** indicates that the labor market remains strong ~~but~~ **and** that ~~growth of~~ economic activity has ~~slowed from its solid rate in the fourth quarter~~ **been rising at a moderate rate**. ~~Payroll employment was little changed in February, but~~ Job gains have been solid, on average, in recent months, and the unemployment rate has remained low. ~~Recent indicators point to slower~~ Growth of household spending and business fixed investment **slowed** in the first quarter. On a 12-month basis, overall inflation ~~has declined, largely as a result of lower energy prices;~~ **and** inflation for items other than food and energy ~~remains near~~ **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. **To support these outcomes** in light of ~~global economic and financial developments and muted~~ **softening** inflation ~~pressures~~, the Committee will ~~be patient as it determines what future adjustments to~~ **assess whether it may soon become appropriate to adjust** 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.

Alternatives

ALTERNATIVE B FOR APRIL/MAY 2019

1. Information received since the Federal Open Market Committee met in ~~January~~ **March** indicates that the labor market remains strong ~~but~~ **and** that ~~growth of~~ economic activity has ~~slowed from its solid rate in the fourth quarter~~ **been rising at a moderate rate**. ~~Payroll employment was little changed in February, but~~ Job gains have been solid, on average, in recent months, and the unemployment rate has remained low. ~~Recent indicators point to slower~~ Growth of household spending and business fixed investment **slowed** in the first quarter. On a 12-month basis, overall inflation ~~has declined, largely as a result of lower energy prices;~~ **and** inflation for items other than food and energy ~~remains near~~ **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.

Alternatives

ALTERNATIVE C FOR APRIL/MAY 2019

1. Information received since the Federal Open Market Committee met in…

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. **To support these outcomes** in light of ~~global economic and financial developments and muted inflation pressures~~ **[firmer inflation readings | tightening resource utilization | diminished risks to the outlook]**, the Committee will ~~be patient as it determines what future adjustments to~~ **assess whether it may soon become appropriate to adjust** 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.

Alternatives

THE CASE FOR ALTERNATIVE B

Economic Conditions and Outlook

- Data received in recent weeks suggest that the risk of a pronounced slowing of the economy has diminished. The staff now estimates that real GDP in the first quarter rose at an annual rate of 2.1 percent; this estimate is about 1 percentage point higher than projected in the March Tealbook, as data on housing, state and local construction, and net exports came in stronger than anticipated. Moreover, retail sales, after declining in February, bounced back in the following month, reflecting delayed tax refunds that pushed some February spending into March. Household spending and business fixed investment are estimated to have slowed in the first quarter, consistent with the expectation that GDP growth is stepping down from its strong pace in 2018. For the current year as a whole, GDP is projected to grow at a rate little above the growth rate of potential output.

- Available data indicate that the labor market remains strong.

  - After the weakness in February, payrolls rose by 196,000 in March. Given the very strong figures for January, payroll gains averaged a solid 180,000 per month for the first quarter, well above the pace that the staff estimates to be consistent with no change in resource utilization.

  - The labor force participation rate ticked down to 63.0 percent in March, while the unemployment rate stayed at 3.8 percent. Although the unemployment rate remains below all participants' estimates of the longer-run rate of unemployment in the March Summary of Economic Projections, policymakers do not expect high levels of labor utilization to generate notable upward pressure on inflation.

  - Average hourly earnings rose 3.2 percent over the 12 months ending in March, up from 2.8 percent a year earlier. The Federal Reserve Bank of Atlanta's wage growth tracker also had a higher reading than a year earlier, but none of these rates suggest that the labor market is overheating.

- Headline and core PCE inflation rates have declined and 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 are currently holding down inflation dissipate.

- The staff estimates the 12-month change in core PCE prices at 1.6 percent for March, reflecting in part unusual and notable declines in a few categories. Staff projects 12-month core inflation to stay around 1.6 percent before moving up by the end of the summer. For 2019 as a whole, core PCE prices are expected to increase 1.8 percent. Thereafter, core price inflation is expected to edge up to 1.9 percent in 2020 and 2021. 12-month headline inflation is expected to run close to core inflation over the projection period.
- Indicators of inflation expectations are little changed, on balance, since the March Tealbook and suggest that long-term inflation expectations remain well-anchored.

- Increases in equity prices and declines in corporate-bond yields and spreads have continued to produce easier financing conditions for businesses and households.
- Although downside risks have diminished somewhat, several persist.
    - The factors that have caused the decline in inflation may turn out to be more persistent than the staff currently projects. In addition, indicators of longer-term inflation expectations bear watching.
    - The possibility that softer household and business spending will turn out to be more persistent poses downside risks for economic activity.
    - The staff has revised up its projection for economic growth in emerging market economies, although growth in advanced foreign economies is likely to languish in the near term. Notably, soft euro-area data, especially in manufacturing, may be signaling more pronounced weakness.
    - While a "no-deal, no-transition" Brexit seems to have been avoided for now, the prolonged uncertainty associated with the Brexit process will weigh on investment and spending in the United Kingdom. Furthermore, despite reported progress towards a U.S.-China trade agreement, the outcomes of the ongoing negotiations remain uncertain.

Policy Strategy

- Policymakers may have anticipated a moderation in overall output growth from 2018 to 2019, and see the first-quarter dip in estimated growth of household and business spending as transitory. Consequently, they may anticipate a rebound in spending over the remainder of 2019 and therefore continue to see economic conditions evolving broadly in line with their expectations, notwithstanding notable risks.

- Policymakers may interpret the decline in inflation as having been caused largely or entirely by idiosyncratic and temporary factors. Thus, policymakers may 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 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 to withstand the temporary decline in inflation.
- Seeing muted inflation pressures in the context of near-potential growth and the policy rate within the range of estimates of its neutral level, policymakers may deem the current stance of policy as appropriate.
- 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 May meeting is seen as very unlikely. A statement such as Alternative B also appears generally in line with the expectations of respondents to the Desk's surveys. Consequently, a statement along the lines of Alternative B seems unlikely to generate appreciable changes in asset prices.

Alternatives

Monetary Policy Expectations and Uncertainty

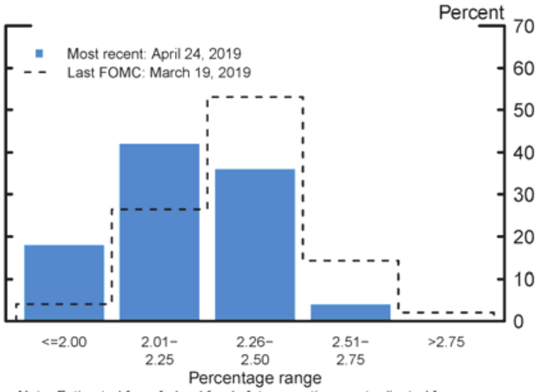
Measures of the expected path of the federal funds rate based on financial market prices moved down a bit, on net, over the intermeeting period. Early in the period, policy expectations declined notably in reaction to FOMC communications following the March meeting, including the larger-than-expected downward revisions to FOMC participants' March SEP assessments for the federal funds rate. These declines were partly reversed later in the period as U.S. and Chinese data were, on balance, stronger than expected and as sentiment improved regarding trade negotiations between the United States and China. Compared with the March surveys, respondents to the Desk's April/May surveys revised down their federal funds rate projections modestly.

A straight read of the probability distribution of the federal funds rate at the end of 2019 implied by the most recent quotes on options and not adjusted for risk premiums (figure 1) suggests that the federal funds rate is most likely to end the year in the 2 to 2.25 percent range. The probability distribution shows a notable shift since March towards lower outcomes, leaving only marginal probability on outcomes above the current target range. By comparison, Desk survey respondents on average assigned the greatest probability to an unchanged year-end target range and judged the odds on higher rates as slightly outweighing those on lower rates (not shown).

Figure 2 shows how option-implied policy rate expectations at the six-month horizon have evolved since the September 2018 FOMC meeting. The bars depict the probabilities that the target range six months ahead would be lower (in blue), unchanged (in yellow), or higher (in red) relative to the target range in effect just before each meeting. As shown in the leftmost bar, ahead of the September 2018 meeting markets priced in a higher future policy rate in six months' time with virtual certainty. By the time of the January meeting, however, substantial probability of an unchanged or lower future target range had emerged. At the January meeting the FOMC indicated it would take a "patient" approach going forward. Between the January and March meetings, the implied probability that the policy rate would be unchanged at the six-month horizon—which can be interpreted as one measure of perceived patience—rose significantly. Since March, the implied probability of no change in the target range has held relatively steady while the odds on lower outcomes have increased.

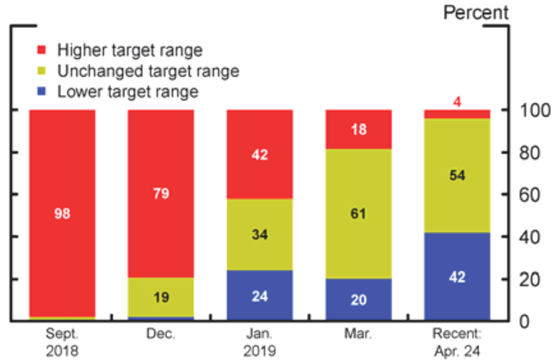
Figure 3 compares various measures of the expected federal funds rate over the next few years. A straight read of forward rates derived from overnight index swaps (the solid blue line) suggests that the federal funds rate will decline roughly 20 basis points this year and about 25 basis points in 2020. In contrast, the latest expected path from a staff term structure model that adjusts for term premiums (the solid red line) continues to suggest further gradual increases in

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



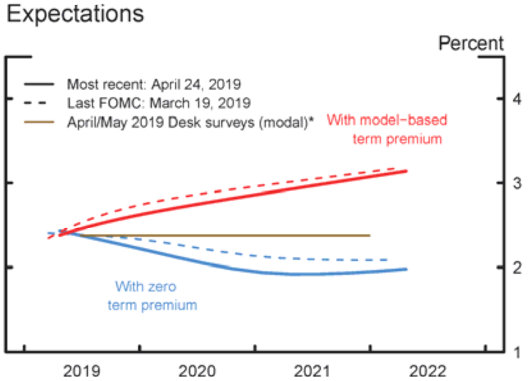
Note: Estimated from federal funds futures options, not adjusted for risk premiums.
Source: CME Group; Federal Reserve Board staff estimates.

Figure 2: Option−Implied Distribution of Policy Rate Six Months Ahead



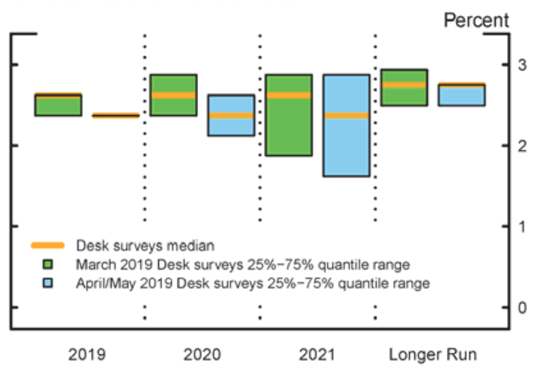
Note: Bars represent the option−implied probabilities, as of the day before the indicated FOMC meeting, that the average federal funds rate during the contract month six months after the month of the meeting will be below, within, or above the target range in effect on the eve of the meeting. The Nov. 2018 meeting is omitted.
Source: CME Group; Board staff calculations.

Figure 3: Measures of Federal Funds Rate Expectations



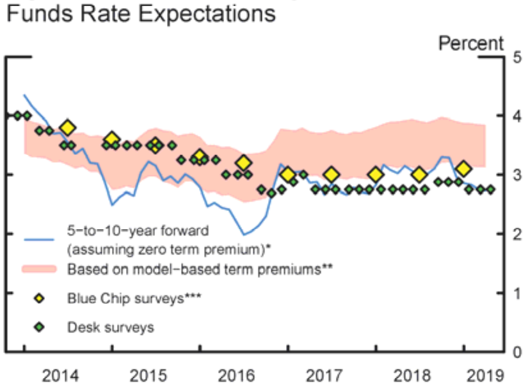
Note: Zero term premium path is estimated using overnight index swap quotes with a spline approach and a term premium of zero basis points. Model−based term premium path is estimated using a term structure model maintained by Board staff and corrects for term premium.
* Median of respondents' modal paths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

Figure 4: Desk Surveys Modal Projections for the Federal Funds Rate



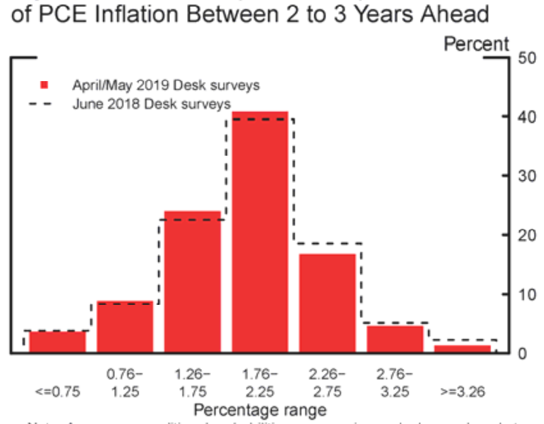
Note: Based on all responses from the March and April/May 2019 Desk surveys.
Source: FRBNY.

Figure 5: 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 Priebsch (2017).
*** Most recent long−run survey value is from the December 2018 Blue Chip survey.
Source: Blue Chip; FRBNY; Federal Reserve Board staff estimates.

Figure 6: Desk Survey Probability Distribution of PCE Inflation Between 2 to 3 Years Ahead



Note: Average unconditional probabilities across primary dealers and market participants for different ranges of the PCE inflation rate from April 1, 2021 to March 31, 2022 (April/May 2019 Desk surveys) and June 1, 2020 to May 31, 2021 (June 2018 Desk surveys).
Source: FRBNY.

the federal funds rate of about 20 to 25 basis points per year over the next several years. The path from the staff's model beyond 2019 lies notably above the modal path reported by the median respondent to the Desk's April/May surveys (the brown line), which was flat. Relative to the March surveys, the median respondent no longer anticipates a rate hike by the end of this year as the modal outcome and expects the target range for the federal funds rate to remain unchanged through 2021. As shown by the dashed lines in figure 3, both the unadjusted and adjusted market-based paths declined somewhat on net, following more notable declines earlier in the intermeeting period.

Figure 4 shows the median and interquartile range of respondents' modal federal funds rate projections from the Desk's April/May surveys (in blue) relative to the March surveys (in green). The median projection (the orange bars) declined by 25 basis points at each of the next three year-ends. The median for the longer-run modal projection has remained unchanged. While the interquartile range has converged on the median for the end of 2019, its width has stayed about unchanged for the end of 2020 and has expanded for the end of 2021.

Figure 5 shows measures of the longer-run expected federal funds rate. A straight read of forward rates at longer horizons implied by Treasury yields (the blue line) suggests that investors' current expectation for the average federal funds rate 5 to 10 years ahead declined a touch further, to about 2.75 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 3.1 and 3.9 percent, consistent with a negative term premium at those horizons. In contrast, surveys of professional forecasters project rates closer to the unadjusted forward rates; the average longer-run forecast from the December Blue Chip survey (the yellow diamonds) and the median forecast from the Desk's April/May surveys (the green diamonds) are 3.1 and 2.75 percent, respectively.

The Desk's April/May surveys also asked respondents for their assessments of the rate of PCE inflation two to three years ahead. Figure 6 shows the average probability distribution across respondents from the current surveys (the red bars) together with that from the June 2018 surveys (the black dashed line), the last time a comparable question was asked. These medium-term forward PCE inflation expectations were little changed, on balance, with respondents continuing to assign the highest average probability to the 1.76 to 2.25 percent range. Respondents also continue to assign greater odds to the next-lower range for PCE inflation (1.26 to 1.75 percent) than to the next-higher range (2.26-2.75 percent). Meanwhile, the median forecast in the survey of primary dealers for core PCE inflation in 2019 and 2020 has declined by 20 and 4 basis points, respectively, since the March survey (not shown).

THE CASE FOR ALTERNATIVE A

If policymakers judge that the softening in inflation indicates an increased risk of inflation running persistently below the 2 percent objective, they may want to communicate that they stand ready to adjust rates. With Alternative A, the Committee would signal the potential for rate cuts in the near term by stating that, in light of "softening" inflation, it will "assess whether it may soon become appropriate to adjust the target range for the federal funds rate." Under Alternative A, the "patient" language used in Alternative B would be removed.

Policymakers may judge that solid job growth and gradually firming wage data indicate that the labor market strengthened at a steady pace over the past few years without generating a sizable increase in inflation. Meanwhile, recent data suggest that the growth rates of household and business spending have been slowing from their pace last year. With inflation already 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 erode.

In addition, policymakers may deem it prudent to emphasize their commitment to support a sustained return of inflation to the Committee's symmetric 2 percent objective. Consequently, Alternative A stresses that adjustments to the target range may be "appropriate" to support the outcome of "inflation near the Committee's symmetric 2 percent objective."

While Alternative A signals an inclination to reduce the target range in the future, the inclusion of the phrase "assess whether it may soon become appropriate to adjust the target range" does not lock the Committee into making such an adjustment. Hence, the Committee may see this communication as reducing the risk of a policy surprise while preserving optionality for a future rate reduction.

A statement from the Committee such as Alternative A could be seen by market participants as signaling a more accommodative path for the policy rate 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, equity prices would likely fall together with the exchange value of the dollar, and possibly inflation compensation.

The Case for Alternative C

Alternative C provides a possible template for a statement the Committee could consider in circumstances in which the economy continues to perform well and the case for further increases in the target range for the federal funds rate has materially strengthened. Because Alternative C is primarily meant to spur thinking on future statement language in circumstances different from those currently prevailing, it omits the usual discussion of recent data in the first paragraph. Presumably, at a time when Alternative C became appropriate, the language of the first paragraph would convey a view of firming inflation, a strengthening economy, or diminished risks to the outlook; it is also possible that one or more of these signals would be in postmeeting statements prior to the removal of the "patient" language.

If policymakers see a growing likelihood for another increase in the target range, the language characterizing the Committee's approach as "patient" would need to change. The March Tealbook offered two possibilities for altering this language. The first was to simply delete the last sentence of the second paragraph, and the second was to replace that sentence with the thought that "some further policy firming may become appropriate." The current version of Alternative C takes a slightly different approach by modifying the last sentence of the second paragraph to identify the economic conditions that may justify a subsequent increase in the target range. In particular, Alternative C states: "In light of [firmer inflation readings | tightening resource utilization | diminished risks to the outlook], the Committee will assess whether it may soon become appropriate to adjust the target range for the federal funds rate."

Policymakers may see this statement as addressing a need to provide more clarity about the future course of policy than is given by simply deleting the sentence containing the "patient" language. While the sentence indicates a bias toward an increase in the target range in the future, the language does not commit to such an adjustment. As with Alternative A, the Committee may view this communication as reducing the risk of a surprise change in policy, while creating optionality for future rate hikes.

Alternatives

Implementation Note

Under any of the Alternatives, the Committee would issue 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. The draft implementation note on the following pages reflects the Committee's decision, announced March 20, 2019, to reduce the monthly cap on Treasury securities redemptions from its current level of $30 billion to $15 billion beginning May 2019. As usual, struck-out text indicates language deleted from the March 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 May 2019 (all Alternatives)

Release Date: May 1, 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 ~~March 20, 2019~~ **May 1, 2019**:

- The Board of Governors of the Federal Reserve System voted [unanimously] to maintain the interest rate paid on required and excess reserve balances at 2.40 percent, effective ~~March 21, 2019~~ **May 2, 2019**.
- 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 ~~March 21, 2019~~ **May 2, 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.

  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 ~~$30~~ **$15** billion**.** ~~, and~~ **The Committee directs the Desk** 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 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.

Alternatives

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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. These projections are substantially revised from those presented in the previous Tealbook for two principal reasons.

First, the staff's revised financial projections in Tealbook A imply a much flatter path for the federal funds rate relative to the March Tealbook, with the short-term policy rate 140 basis points lower at the end of the medium term, in 2021:Q4. Over the medium run, the paths for the 10-year Treasury yield and the 30-year fixed mortgage rate are both, on average, 50 basis points below the March Tealbook projection. As a result of these revisions to the forecast, the projected path of prepayments from agency mortgage-backed securities (MBS) is higher, which induces a steeper pace of decline in SOMA MBS holdings throughout the projection horizon.

Second, the projections incorporate new policy assumptions regarding the evolution of the Federal Reserve's balance sheet, which embed the Balance Sheet Normalization Principles and Plans released after the March FOMC meeting. Over the current quarter and the next, these plans lead to a slower balance sheet runoff, which comes to a conclusion at the end of September 2019. After this date, the size of the SOMA portfolio will be held roughly constant for some time, while allowing for gradual declines in reserves to accommodate growth in currency and other nonreserve liabilities.[1] In our projections, we continue to assume that reserve balances will decline until they reach $1 trillion, which will take place in the fourth quarter of 2021, nearly two years later than in the March Tealbook.[2]

[1] Runoff of Treasury securities is slowed by reducing the cap on monthly redemptions from $30 billion to $15 billion beginning in May 2019. Beginning in October 2019, proceeds from principal payments of agency securities will be reinvested in Treasury securities subject to a monthly cap of $20 billion, with purchases roughly matching the maturity composition of Treasury securities outstanding. Principal payments of agency securities in excess of the monthly cap will continue to be reinvested in agency MBS.

[2] Because reserve balances are expected to reach $1 trillion later than in the previous Tealbook, and, thus, at a time when nominal GDP is projected to be at a higher level, the size of the balance sheet as a share of GDP is projected to be slightly smaller over the longer term. However, as discussed in the March FOMC memo "Transitioning to an Ample Reserves Regime with Lower Reserves," the actual level at

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 $747 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 $328 billion, respectively (see the table in the exhibit "Redemptions and Reinvestments of SOMA Principal Payments"). Through the same date, cumulative reinvestments of principal payments in Treasury and agency securities are projected to be $363 billion and $153 billion, respectively.[3] Relative to the March Tealbook, lower redemptions of Treasury securities through the third quarter of 2019 and the corresponding higher reinvestments reflect the new policy assumptions for the evolution of the balance sheet. In addition, the projection for cumulative redemptions of agency securities is $10 billion higher than in the March Tealbook given the lower projected paths of longer-term interest rates and the resulting faster pace of MBS prepayments over coming months.

By the time the reduction in total securities holdings concludes at the end of 2019:Q3, the size of the SOMA portfolio is projected to be slightly above $3.5 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, with nonreserve liabilities totaling 11 percent (see the bottom panels of the exhibit titled "Total Assets and Selected Balance Sheet Items"). Starting from the fourth quarter of 2021, when reserves are projected to reach $1 trillion, the size of the balance sheet is projected to remain a nearly 16 percent share of GDP.[4] 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.

which the decline in reserves ceases will need to be chosen in light of information on banks' reserve demand.

[3] MBS prepayments are projected to slightly exceed the $20 billion per month redemption cap in June so that $300 million of reinvestments in agency MBS are projected to occur in that month. However, the projections for agency MBS are subject to considerable uncertainty because of unscheduled prepayments. In particular, should longer-term interest rates decline significantly from the current projected paths, prepayments of MBS are likely to rise and may more frequently exceed the monthly cap of $20 billion.

[4] At that time, the SOMA portfolio is comprised of about $2.4 trillion in Treasury securities and $1.1 trillion in agency securities.

Redemptions and Reinvestments of SOMA Principal Payments

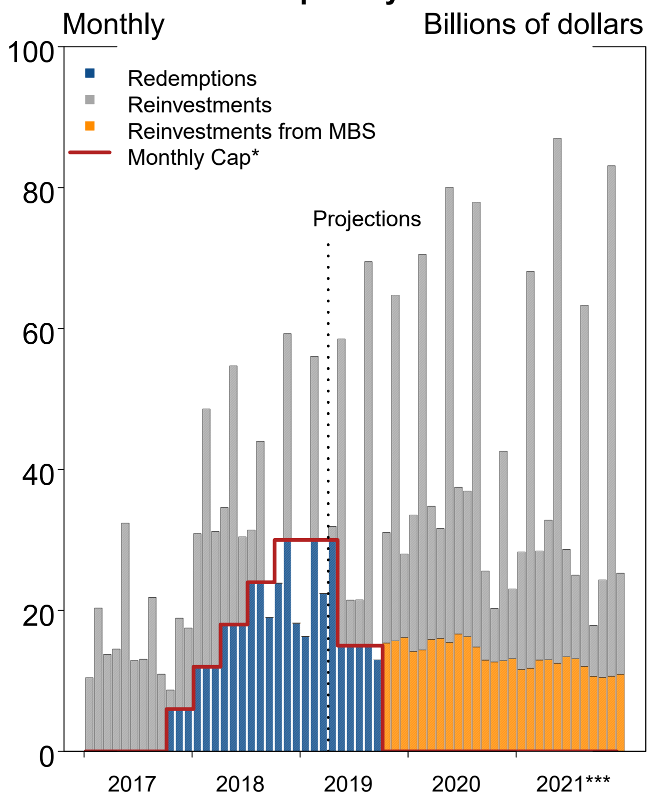
Projections for Treasury Securities
(Billions of dollars)

	Redemptions		Reinvestments*	
	Period	Since Oct. 2017	Period	Since Oct. 2017
2019:Q2	60.0	375.7	51.9	302.2
2019:Q3	43.0	418.7	61.0	363.2
2019:Q4	0	418.7	76.6	439.8
2018	229.1	247.1	197.1	224.2
2019	171.6	418.7	215.6	439.8
2020	0	418.7	339.1	779.0
2021***	0	418.7	369.1	1148.1

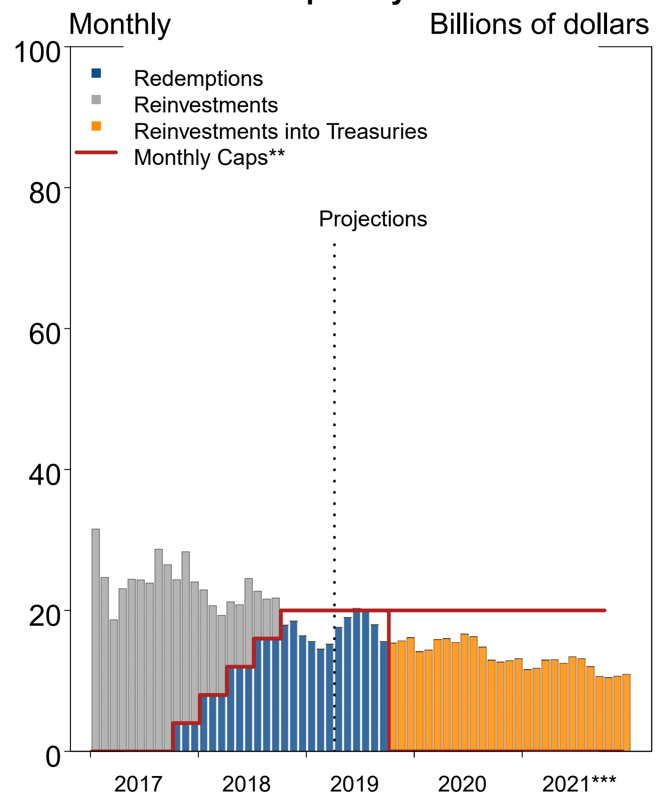
Projections for Agency Securities
(Billions of dollars)

	Redemptions		Reinvestments** (Agency/Treasury)	
	Period	Since Oct. 2017	Period	Since Oct. 2017
2019:Q2	56.6	274.7	0.3 / 0	152.6 / 0
2019:Q3	53.4	328.1	0 / 0	152.6 / 0
2019:Q4	0	328.1	0 / 47.2	152.6 / 47.2
2018	160.8	172.8	87.6 / 0	152.3 / 0
2019	155.3	328.1	0.3 / 47.2	152.6 / 47.2
2020	0	328.1	0 / 175.2	152.6 / 222.4
2021***	0	328.1	0 / 143.2	152.6 / 365.6

SOMA Treasury Securities Principal Payments



SOMA Agency Debt and MBS Principal Payments

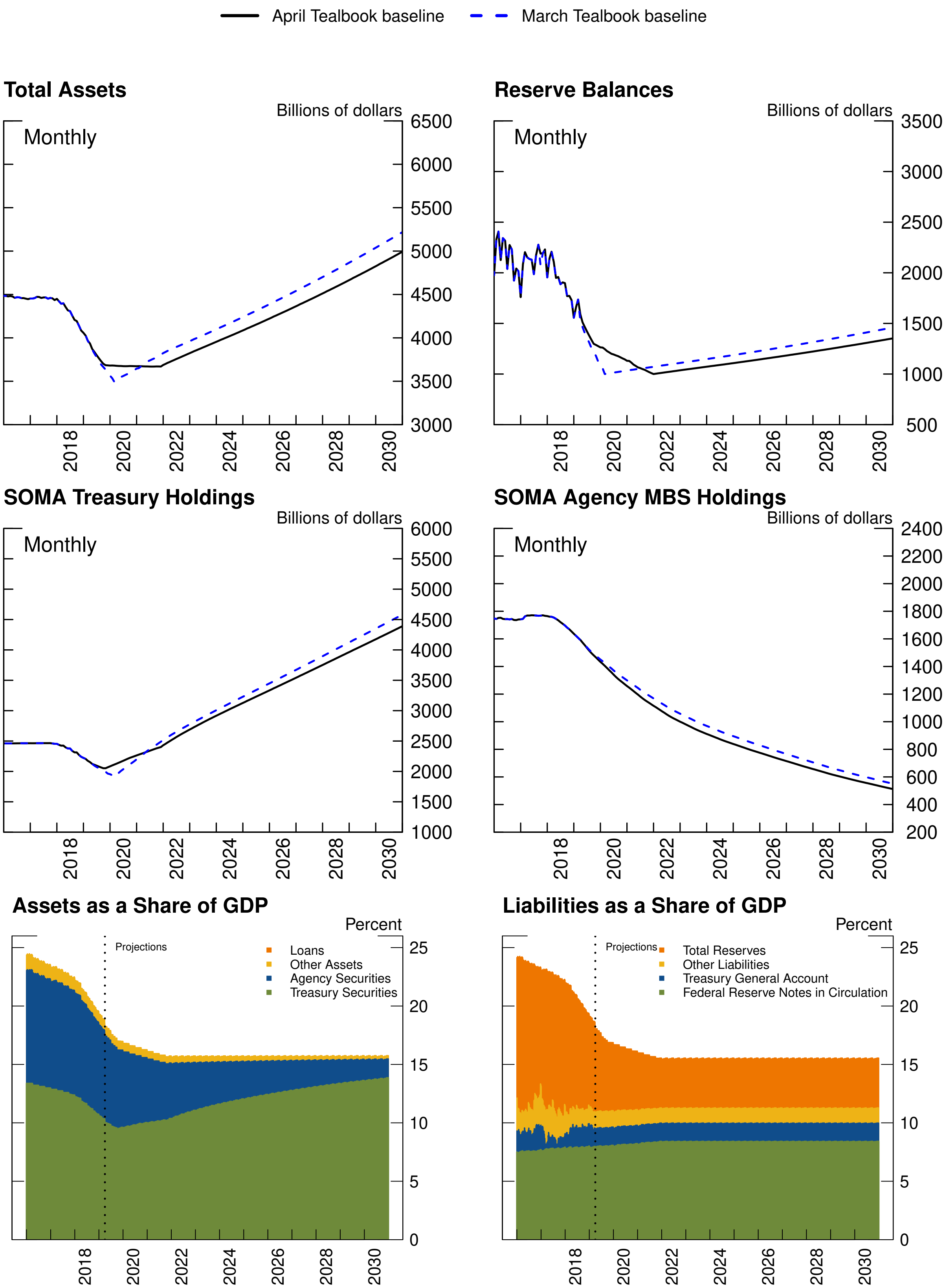


* Starting in May 2019, principal payments from maturing Treasury securities below $15 billion per month are redeemed, while those above are reinvested into Treasury securities. Starting in October 2019, all principal payments from maturing Treasury securities are reinvested into Treasury securities.

** 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 November 2021. After this date, all principal payments received from all security holdings are reinvested into Treasury securities.

Total Assets and Selected Balance Sheet Items



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

	Historical*			Projections				
	Aug 2014	Sep 2017	Mar 2019	Dec 2019	Dec 2020	Dec 2022	Dec 2025	Dec 2030
Total assets	4,416	4,460	3,935	3,681	3,673	3,824	4,222	4,992
Selected assets								
Loans and other credit extensions**	2	6	2	0	0	0	0	0
Securities held outright	4,157	4,240	3,748	3,519	3,524	3,692	4,111	4,905
U.S. Treasury securities	2,437	2,465	2,153	2,083	2,263	2,689	3,333	4,390
Agency debt securities	42	7	2	2	2	2	2	2
Agency mortgage-backed securities	1,678	1,768	1,593	1,434	1,258	1,000	775	513
Unamortized premiums	209	162	136	123	111	91	68	41
Unamortized discounts	-19	-14	-13	-12	-12	-10	-8	-5
Total other assets	66	66	63	51	51	51	51	51
Total liabilities	4,360	4,419	3,896	3,659	3,649	3,780	4,172	4,928
Selected liabilities								
Federal Reserve notes in circulation	1,249	1,533	1,677	1,749	1,857	2,044	2,256	2,665
Reverse repurchase agreements	277	432	248	240	240	249	275	324
Deposits with Federal Reserve Banks	2,825	2,447	1,966	1,666	1,548	1,483	1,637	1,934
Reserve balances held by depository institutions	2,762	2,190	1,589	1,263	1,131	1,037	1,144	1,352
U.S. Treasury, General Account	49	176	307	342	357	384	423	500
Other deposits	15	82	69	60	60	62	69	81
Earnings remittances due to the U.S. Treasury	3	2	1	0	0	0	0	0
Total Federal Reserve Bank capital***	56	41	39	40	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; March 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.

The share of agency MBS in the SOMA portfolio, which currently stands at 42 percent, is expected to decline somewhat more rapidly than projected in the March Tealbook, and reach about 19 percent by the end of 2025 given the higher projected pace of MBS prepayments.

SOMA portfolio characteristics. The weighted-average duration of the SOMA Treasury portfolio is currently about 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 over this quarter and the next and longer-duration securities become a larger share of the portfolio.[5] As in the March Tealbook we continue to assume that, once the level of reserves reaches $1 trillion, all principal payments received on maturing Treasury securities and on agency securities is entirely reinvested in Treasury bills until the share of Treasury bills in the Treasury securities portfolio reaches about one-third, close to their pre-crisis share.[6] This process is expected to take about 5 quarters and leads to a sharp reduction in the weighted-average duration to just over 5 years. Thereafter, further purchases of Treasury securities are assumed to be spread across the maturity spectrum (see the bottom panel of the exhibit).

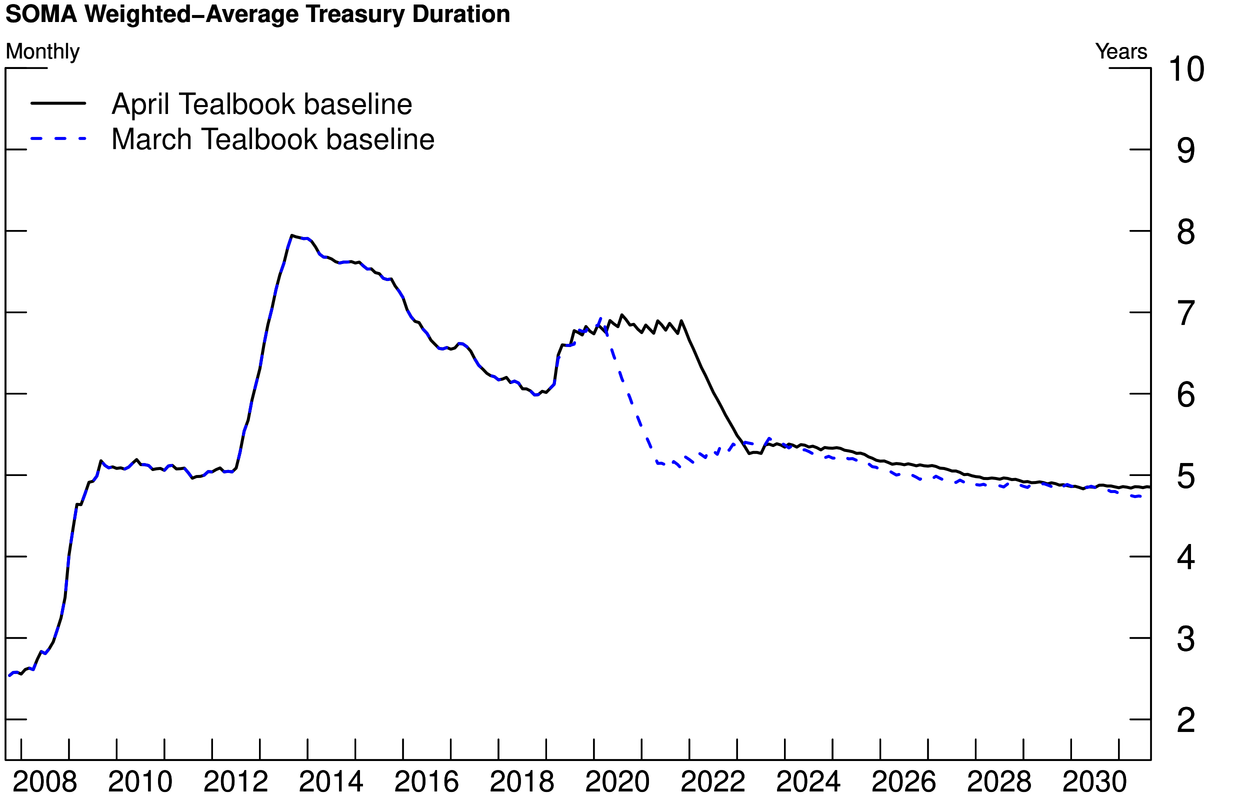
Federal Reserve remittances. Remittances to the Treasury are projected to decline to $49 billion this year from $65 billion in 2018 (see the exhibit "Income Projections"), mainly reflecting the decline in interest income resulting from the reduction in SOMA securities holdings.[7] Total interest expense is projected to be little

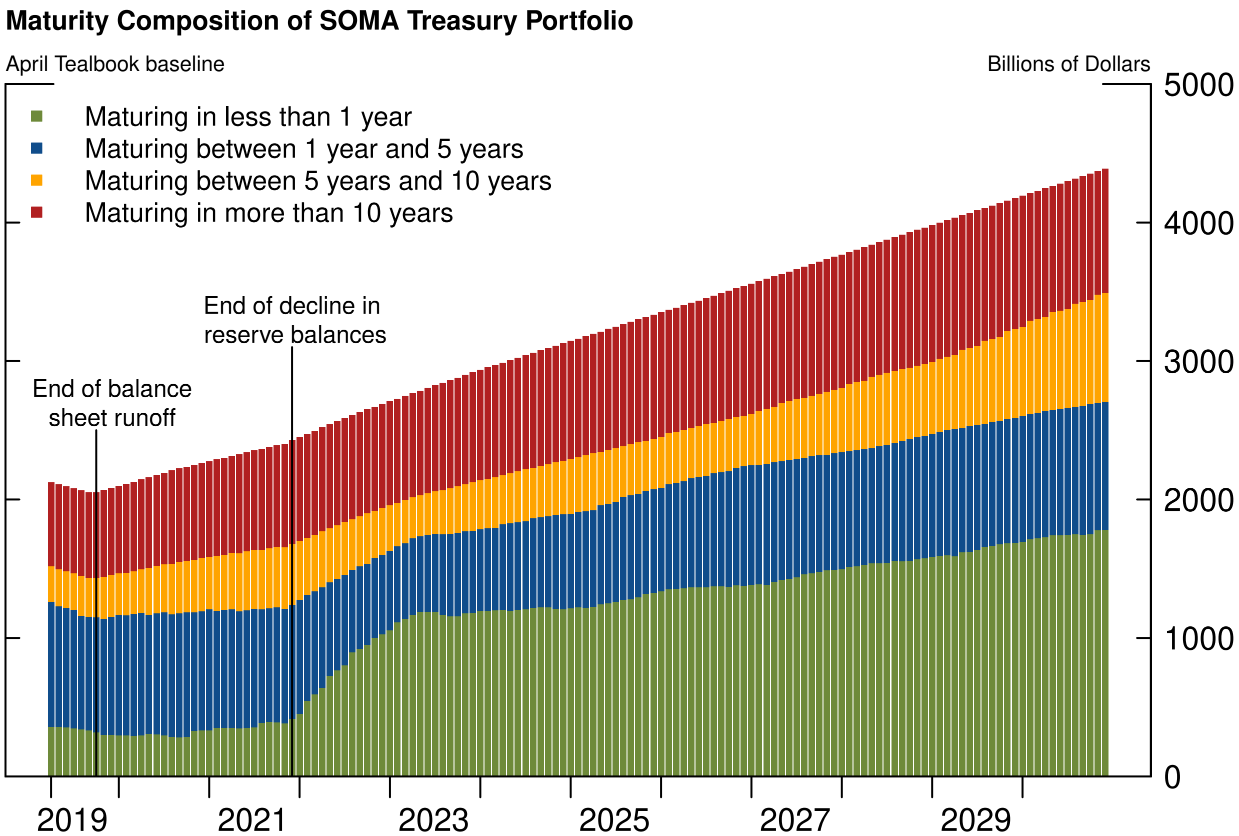
[5] Consistent with the Desk's current practice, these projections assume that rollovers of maturing Treasury securities will be allocated across newly issued securities at Treasury auctions on a pro-rata basis in proportion with the amount being issued. Consistent with the Desk's plans for reinvesting principal payments from agency debt and MBS into Treasury securities beginning in October 2019, these projections also assume that these purchases will be made across the Treasury curve during each month. Purchase amounts will be allocated to sectors in line with the amounts outstanding in those sectors. 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] Excluding securities acquired through small-value test operations, the SOMA portfolio currently contains no Treasury bills.

[7] 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

Projections for the Characteristics of SOMA Treasury Securities Holdings



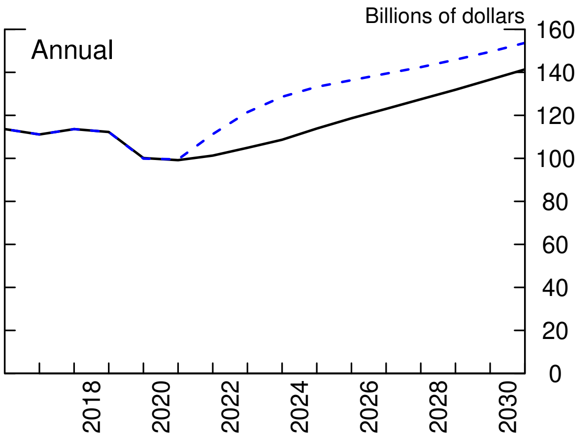


Balance Sheet & Income

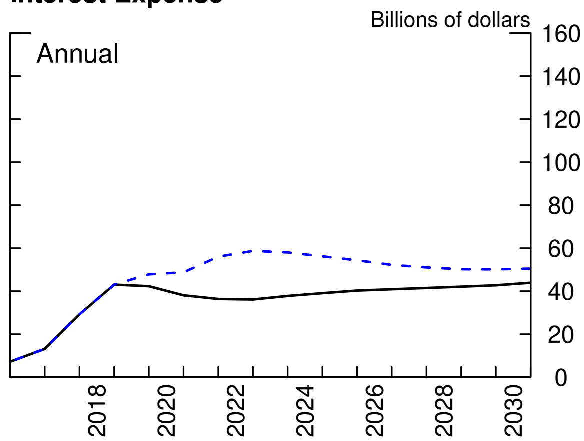
Income Projections

April Tealbook baseline — March Tealbook baseline

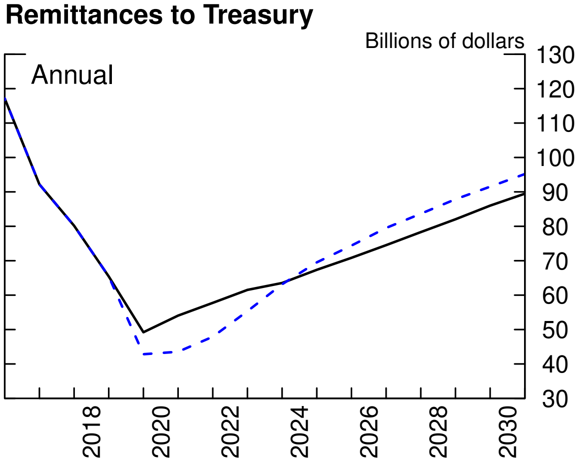
Interest Income



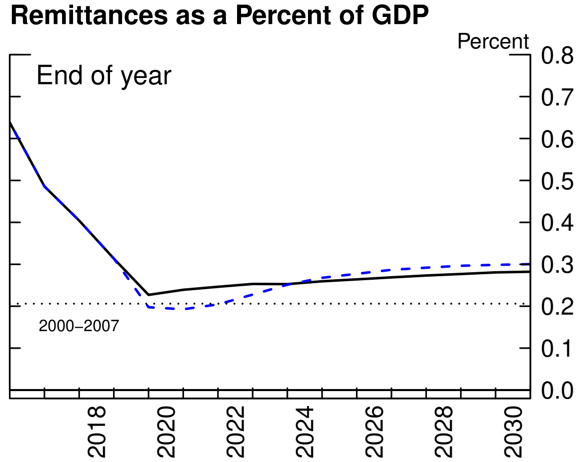
Interest Expense



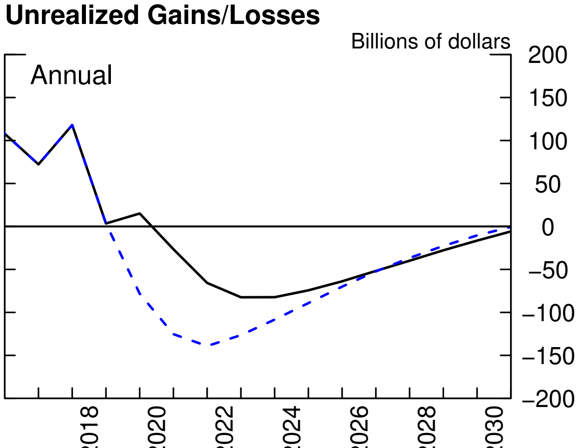
Remittances to Treasury



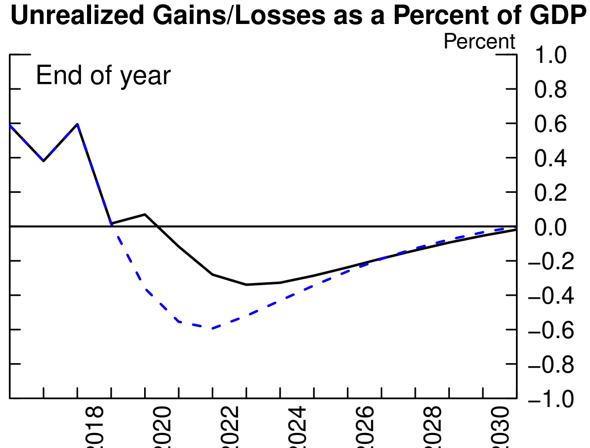
Remittances as a Percent of GDP



Unrealized Gains/Losses



Unrealized Gains/Losses as a Percent of GDP



changed at $42 billion this year.[8] Remittances are expected to increase to $55 billion in 2020. Thereafter, remittances rise reflecting an increase in interest income associated with a growing balance sheet.

Relative to the previous Tealbook, the projected path for remittances has been revised up over the next few years and revised down in the longer term. These revisions reflect the differential effects over time that the revised financial projections have on interest expense and interest income. Over the medium term, remittances are somewhat higher than previously projected primarily because the lower path for the interest rate paid on reserve balances reduces interest expense. In the longer term, this effect is more than offset by a downward revision to interest income stemming from a shift in the composition of the portfolio. In particular, the faster pace of prepayments from relatively higher-yielding MBS results in larger reinvestments into lower-yielding Treasury securities, thus reducing interest income. 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 $61 billion at the end of March. The staff estimates that the SOMA portfolio will be in a net unrealized gain position of about $41 billion at the end of April.[9] This amount is attributable to a $53 billion unrealized gain position in Treasury securities which more than offsets a $13 billion unrealized loss position in agency MBS. With longer-term interest rates projected to rise, the unrealized gain position is expected to turn into an unrealized loss position during the second half of 2020. The unrealized loss position is expected to reach a peak around $86 billion in 2023:Q2. Compared with the

to Section 7 by the Economic Growth, Regulatory Relief, and Consumer Protection Act, enacted in May 2018.

[8] 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 December 2018 Implementation Note, we assume that the interest rates paid on reserve balances will be set 10 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.

[9] 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 notions of unrealized and realized gain and loss positions, as well as their implications for the Federal Reserve's ability to meet its obligations.

March Tealbook, the path for the unrealized position of the SOMA portfolio is generally higher reflecting the lower projections 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 131 basis points in the current quarter (see the exhibit "Projections for the 10-year Treasury Total Term Premium Effect"). Relative to the March projection, the level of this total term premium effect (TTPE) is slightly more negative over the coming year, but it is slightly less negative over the longer term.

Over the next year, the downward effect on the TTPE resulting from the slower pace of securities redemptions and larger SOMA holdings more than offsets the upward effect stemming from faster MBS prepayments due to the revised financial assumptions, thereby leading to a slightly more negative TTPE. However, by the end of 2021, the effect of the slower pace of securities redemptions fades, and, through the end of the projection horizon, a slightly less negative TTPE results from the projected more rapid shift in the composition of the portfolio from MBS towards Treasury securities arising from the lower path for longer-term interest rates.[10,11]

[10] The lower path of longer-term interest rates, which induces faster MBS prepayments and higher reinvestments of MBS proceeds into Treasury securities, leads to a shift in the composition of the portfolio from MBS towards Treasury securities. Shifts of such nature reduce the projected magnitude of the TTPE, because in the term-structure model on which the TTPE estimates are based MBS holdings are measured at par value, whereas Treasury securities are measured on a 10-year equivalents basis.

[11] The slightly less negative path of the TTPE is also due, in part, to the smaller size of the balance sheet relative to GDP in the longer run.

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

Date	April Tealbook	March Tealbook
Quarterly Averages		
2019:Q2	-131	-129
Q3	-130	-127
Q4	-129	-126
2020:Q4	-123	-122
2021:Q4	-118	-120
2022:Q4	-114	-119
2023:Q4	-112	-116
2024:Q4	-110	-114
2025:Q4	-109	-112
2026:Q4	-107	-110
2027:Q4	-105	-109
2028:Q4	-104	-108
2029:Q4	-102	-106
2030:Q4	-101	-105

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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