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Class I FOMC – Restricted Controlled (FR)

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# Report to the FOMC on Economic Conditions and Monetary Policy



## Book B Monetary Policy Alternatives

October 24, 2019

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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

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The three alternative policy statements presented below offer a range of options for the setting of the current stance of monetary policy and for communicating the likely near-term path of policy. All three alternatives have similar characterizations of the incoming data as well as the economic outlook, but the latter characterization is conditioned on the different policy assumption associated with each alternative.

Alternative B reduces the target range for the federal funds rate by  $\frac{1}{4}$  percentage point, and it offers the same rationale for the policy action—the implications of global developments as well as muted inflation pressures—as that in the FOMC’s September postmeeting statement. Alternative B replaces the “act as appropriate” language that has appeared in recent postmeeting statements with language indicating that the Committee “will continue to monitor the implications of incoming information for the economic outlook as it assesses the appropriate path of the target range for the federal funds rate.” This change in language is meant to convey a diminished likelihood of additional reductions in the target range, consistent with a view that, after the policy action at this meeting, the Committee has, over the course of the year, provided significant accommodation to support a favorable economic outlook.

Alternative A also reduces the target range for the federal funds rate by  $\frac{1}{4}$  percentage point. Alternative A emphasizes that inflation has run persistently below 2 percent and cites this persistent undershooting in its rationale for the policy action. Unlike Alternative B, Alternative A maintains the “act as appropriate” language, which signals a greater openness to additional reductions in the target range for the federal funds rate.

Alternative C maintains the current target range for the federal funds rate. It notes that the unemployment rate declined in September and expresses the view that the current stance of policy is consistent with sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee’s symmetric 2 percent objective. Alternative C removes the reference to global developments and muted inflation pressures that have been cited as reasons for recent policy actions. As in Alternative B, Alternative C replaces the “act as appropriate” language to signal that future declines in the target range for the federal funds rate are less likely.

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

- The assessment of the incoming data:
  - The three alternatives have similar descriptions of the incoming data with respect to the labor market and economic activity. In particular, all three continue to describe economic growth as “moderate,” characterize the labor market and growth of household spending as “strong,” and note that business fixed investment and exports “have remained weak.” While all of the alternatives say that average job gains in recent months have been “solid,” Alternatives A and B describe the unemployment rate as remaining low, whereas Alternative C notes that the unemployment rate “declined.”
  - Alternatives B and C note that core and headline inflation rates “are running below 2 percent,” while Alternative A states that these measures “continue to run below 2 percent.” With regard to inflation expectations, all three alternatives continue to say that market-based measures of inflation compensation “remain low” and that survey-based measures of longer-term inflation expectations are “little changed.”
- The outlook for economic activity, the labor market, and inflation is the same across all three alternatives and is unchanged from the September FOMC statement, but the alternatives condition on different policy assumptions.
- The current policy decision and the outlook for policy:
  - Alternatives A and B lower the target range for the federal funds rate by  $\frac{1}{4}$  percentage point. As in the September postmeeting statement, Alternative B cites global developments and muted inflation pressures as reasons for this action. Alternative A cites inflation “running persistently below 2 percent” in its rationale for the policy action. Alternative C leaves the target range unchanged and removes the reference to global developments and muted inflation pressures.
  - Regarding the outlook for policy, Alternatives B and C replace the “act as appropriate” language with the statement that the Committee “will continue to monitor the implications of incoming information for the economic outlook as it assesses the appropriate path of the target range for the federal funds rate.” Alternative A retains the “act as appropriate” language.

**SEPTEMBER 2019 FOMC STATEMENT**

1. Information received since the Federal Open Market Committee met in July indicates that the labor market remains strong and that economic activity has been rising at a moderate rate. Job gains have been solid, on average, in recent months, and the unemployment rate has remained low. Although household spending has been rising at a strong pace, business fixed investment and exports have weakened. On a 12-month basis, overall inflation and inflation for items other than food and energy are running below 2 percent. Market-based measures of inflation compensation remain low; 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 light of the implications of global developments for the economic outlook as well as muted inflation pressures, the Committee decided to lower the target range for the federal funds rate to 1-3/4 to 2 percent. This action supports the Committee's view that sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective are the most likely outcomes, but uncertainties about this outlook remain. As the Committee contemplates the future path of the target range for the federal funds rate, it will continue to monitor the implications of incoming information for the economic outlook and will act as appropriate to 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.

**ALTERNATIVE A FOR OCTOBER 2019**

1. Information received since the Federal Open Market Committee met in ~~July~~ **September** indicates that the labor market remains strong and that economic activity has been rising at a moderate rate. Job gains have been solid, on average, in recent months, and the unemployment rate has remained low. Although household spending has been rising at a strong pace, business fixed investment and exports ~~have weakened~~ **remain weak**. On a 12-month basis, overall inflation and inflation for items other than food and energy ~~are running~~ **continue to run** below 2 percent. Market-based measures of inflation compensation remain low; 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 light of the implications of global developments for the economic outlook as well as ~~muted~~ inflation pressures **running persistently below 2 percent**, the Committee decided to lower the target range for the federal funds rate to **1-1/2 to 1-3/4** ~~to 2~~ percent. This action supports the Committee's view that sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective are the most likely outcomes, but uncertainties about this outlook remain. As the Committee contemplates the future path of the target range for the federal funds rate, it will continue to monitor the implications of incoming information for the economic outlook and will act as appropriate to 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.

**ALTERNATIVE B FOR OCTOBER 2019**

1. Information received since the Federal Open Market Committee met in ~~July~~ **September** indicates that the labor market remains strong and that economic activity has been rising at a moderate rate. Job gains have been solid, on average, in recent months, and the unemployment rate has remained low. Although household spending has been rising at a strong pace, business fixed investment and exports ~~have weakened~~ **remain weak**. On a 12-month basis, overall inflation and inflation for items other than food and energy are running below 2 percent. Market-based measures of inflation compensation remain low; 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 light of the implications of global developments for the economic outlook as well as muted inflation pressures, the Committee decided to lower the target range for the federal funds rate to **1-1/2 to 1-3/4 to 2 percent**. This action supports the Committee's view that sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective are the most likely outcomes, but uncertainties about this outlook remain. ~~As The Committee contemplates the future path of the target range for the federal funds rate, it will continue to monitor the implications of incoming information for the economic outlook and will act as appropriate to sustain the expansion, with a strong labor market and inflation near its symmetric 2 percent objective~~ **as it assesses the appropriate path of the target range for the federal funds rate.**
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 C FOR OCTOBER 2019**

1. Information received since the Federal Open Market Committee met in ~~July~~ **September** indicates that the labor market remains strong and that economic activity has been rising at a moderate rate. Job gains have been solid, on average, in recent months, and the unemployment rate has ~~remained low~~ **declined**. Although household spending has been rising at a strong pace, business fixed investment and exports ~~have weakened~~ **remain weak**. On a 12-month basis, overall inflation and inflation for items other than food and energy are running below 2 percent. Market-based measures of inflation compensation remain low; 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 ~~light of the implications of global developments for the economic outlook as well as muted inflation pressures~~ **support of these goals**, the Committee decided to ~~lower~~ **maintain** the target range for the federal funds rate ~~to~~ **at** 1-3/4 to 2 percent. ~~This action supports~~ The Committee's **continues to** view ~~that~~ sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective ~~are~~ **as** the most likely outcomes, but uncertainties about this outlook remain. ~~As The Committee contemplates the future path of the target range for the federal funds rate, it will continue to monitor the implications of incoming information for the economic outlook and will act as appropriate to sustain the expansion, with a strong labor market and inflation near its symmetric 2 percent objective~~ **as it assesses the appropriate path of the target range for the federal funds rate.**
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.

## ECONOMIC CONDITIONS AND OUTLOOK

- The staff projects that real GDP growth will slow from about 2.6 percent in the first half of 2019 to about 1.6 percent in the second half. The projection for real GDP growth over the short term and the medium term is almost unchanged from the September Tealbook.
  - Data through September suggest that spending by the household sector continues to grow at a healthy clip in the second half of this year. Data on auto sales and retail sales suggest continued strength in consumption spending, while recent data on housing permits and home sales point to a turn-up in residential investment spending. Moreover, consumer sentiment remains positive.
  - Trade tensions and global growth prospects continue to weigh on manufacturing, business fixed investment, and exports. In September, ISM indexes for manufacturing production and new exports orders reached the lowest levels recorded in the past decade.
  - Government purchases, which have contributed to the strength in aggregate demand this year, are projected to wane next year.
- Available data indicate that the labor market continued to strengthen, but job gains have slowed from last year's pace. The staff expects no further tightening in the labor market over the medium term.
  - Currently published data indicate that private nonfarm payroll gains averaged 156,000 jobs per month in the first half of the year and slowed to 119,000 in the third quarter. Job openings have declined somewhat from recent highs, while initial claims for unemployment insurance have remained low.
  - The unemployment rate fell to 3.5 percent in September, and the staff projects the unemployment rate to remain near this level for the remainder of the year. The labor force participation rate held steady at around 63 percent, and it is little changed since 2013 even though demographic changes imply a downward trend in participation over this period.
  - Average hourly earnings rose 2.9 percent over the 12 months ending in September, which is somewhat below the pace of roughly 3.2 percent seen in recent months.
- Inflation remains subdued, despite the sustained low levels of the unemployment rate.

- The staff estimates that core PCE prices increased 1.7 percent over the 12 months ending in September and that this measure of inflation will remain at this level through the end of the year. The staff projects that by the end of the first quarter of next year, core PCE price inflation will pick up to 2.0 percent as the low readings from earlier this year, which are seen as the result of idiosyncratic and temporary factors, drop out of the 12-month calculation. Thereafter, the staff expects core PCE price inflation to fall to 1.8 percent over the medium term, as the fading effects of the recent tariff increases and a rising dollar offset upward inflation pressure from high levels of resource utilization.
- The staff projects that energy prices will continue to fall through next year, and, as a result, that total PCE price inflation will run below core PCE price inflation during that period.
- Consistent with no further tightening in the labor market, the staff projects continued moderate wage growth over the medium term.
- Measures of longer-term inflation expectations from the Michigan survey and the FRBNY Survey of Consumer Expectations edged down since September. Market-based measures of inflation compensation declined somewhat, and they are at or near multi-year lows.
- Financial market developments over the early part of the intermeeting period were primarily driven by weaker-than-expected data releases, in particular, the ISM manufacturing and non-manufacturing surveys.<sup>1</sup> Later in the period, increased optimism regarding trade negotiations between the United States and China contributed to a partial rebound in market sentiment.
  - Since the September FOMC meeting, Treasury yields have posted modest declines, with larger movements at the short end of the yield curve.
  - On net, broad equity indexes are little changed over the intermeeting period.
  - Estimates from statistical models that rely solely on the term spread to give the probability that a recession will occur within the next 12 months have come down but remain elevated. Other models that include additional

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<sup>1</sup> See the Monetary Policy Expectations and Uncertainty box, presented elsewhere in this Tealbook, and the Financial Markets Developments section of Tealbook A for discussions of the effects of data releases over the intermeeting period on market-based measures of the probability of a reduction in the target range for the federal funds rate at the October FOMC meeting.

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## Monetary Policy Expectations and Uncertainty

Expectations for the near-term path of the federal funds rate moved down over the intermeeting period, predominantly in response to weaker-than-expected domestic data releases. Financial market prices, as well as results from the Desk's October surveys, currently suggest a high likelihood of a 25-basis-point reduction in the target range for the federal funds rate at the Committee's October meeting. Meanwhile, expectations for the path of the policy rate beyond mid-2020 were little changed, on net.

Figure 1 shows that, over the intermeeting period, the probability distribution for the level of the federal funds rate following the upcoming October meeting, based on options quotes and assuming zero term premiums, shifted toward lower outcomes, and it now points to a 25-basis-point reduction in the target range as the most likely outcome. The distribution currently attaches the same probability, only about 15 percent, to the target range for the federal funds rate being left unchanged and to a 50-basis-point reduction in the target range. The corresponding probability distribution from the October Desk surveys (not shown) suggests comparable odds, with survey respondents assigning on average 77 percent probability to a 25-basis-point reduction in the target range, 20 percent probability to no change, and 3 percent to a 50-basis point reduction. Over the intermeeting period, the market-implied probability of one or more 25-basis-point rate cuts at the October meeting (the blue line in figure 2) increased notably, in response to weaker-than-expected domestic data releases. The estimated probability of a rate decline now stands at a level similar to that prevailing just before the July and September FOMC meetings (the dark and orange lines, respectively).

As shown in Figure 3, the option-implied probability distribution of the federal funds rate for the end of 2019 also shifted toward lower values over the intermeeting period. The distribution now assigns roughly equal odds to the federal funds rate falling into either the 1.25 to 1.5 percent range or the 1.5 to 1.75 percent range, suggesting similar probabilities for a total of either one or two 25-basis-point rate cuts through the remainder of this year. In contrast, the shift to the left of the corresponding year-end probability distribution from the October Desk surveys was less noticeable (figure 4). This distribution continues to suggest that investors place the greatest odds on the federal funds rate falling into the 1.5 to 1.75 percent range. The differences between the market-implied and survey-implied distributions likely reflect, in part, negative risk premiums embedded in the options quotes.

As shown in the blue lines in figure 5, with regard to the period beyond mid-2020 the expected federal funds rate path implied by OIS quotes has changed little, on net, since the September FOMC meeting. Under the assumption of zero term premiums, these market-implied forward rates suggest that investors expect the federal funds rate to fall about 35 basis points by end-2019 relative to the midpoint of the current

Figure 1: Market-Implied Probability Distribution of the Federal Funds Rate in November 2019

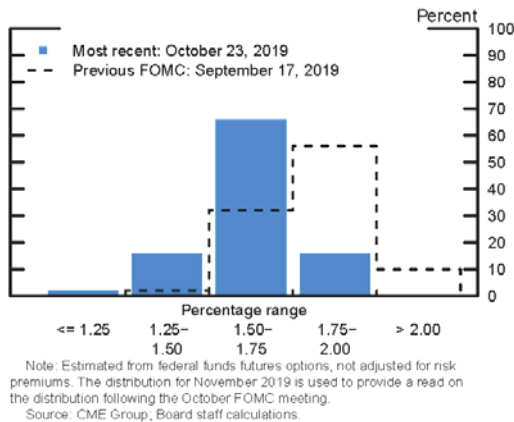


Figure 3: Market-Implied Probability Distribution of the Federal Funds Rate, Year-End 2019

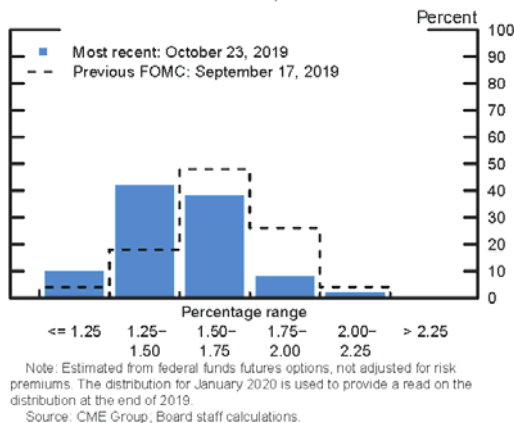


Figure 2: Option-Implied Probability of a Decline in the Federal Funds Rate at the Next Meeting

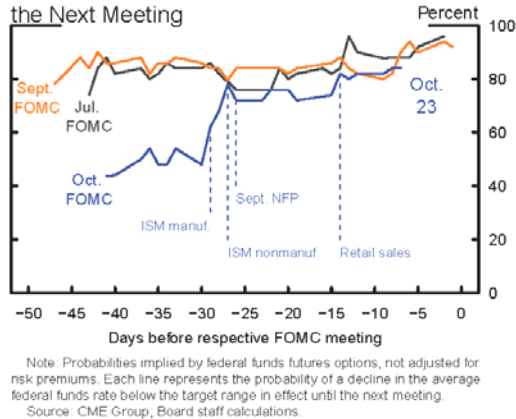
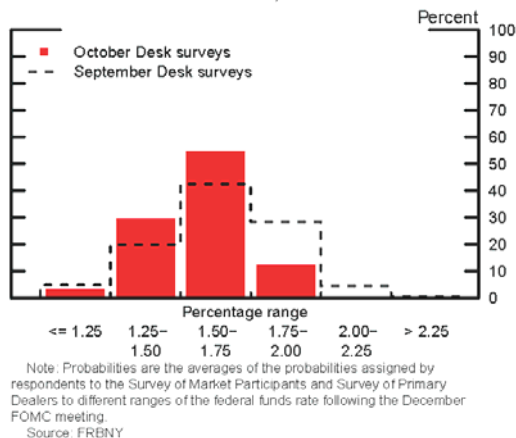


Figure 4: Desk Surveys Probability Distribution of the Federal Funds Rate, Year-End 2019



target range, to decline an additional 28 basis point by end-2020, and to remain flat thereafter. In contrast, the latest path from a staff term structure model that adjusts for term premiums (the purple lines) suggests a shorter easing cycle, with the federal funds rate expected to decline 26 basis points by end-2019, before rising around 20 basis points in both 2020 and 2021. The expected federal funds rate path implied by an alternative macro-finance model (not shown) lies closer to the unadjusted forward rate path and suggests a reduction in the federal funds rate of 30 basis points by end-2019 and an additional 17 basis points by end-2020.

Results from the Desk's October Surveys of Primary Dealers and Market Participants offered somewhat differing perspectives on the expected federal funds rate path. The modal path for the federal funds rate reported by the median respondent to the Survey of Primary Dealers (the open red circles in figure 5) points to expectations for a 25-basis-point decline in the target range by year-end 2019 and an additional 25-basis-point cut in the first quarter of 2020. In contrast, the implied modal path from the Survey of Market Participants (the black crosses), although similarly suggesting a 25-basis-point decline in the target range by year-end, has a flat path thereafter.

Figure 6 shows that the median probability of moving to the zero lower bound (ZLB) over the next three years edged up in the October surveys to about 40 percent, suggesting that investors continue to perceive the risks to the outlook to be skewed towards the downside. In contrast, market-based measures of the probability of moving below the ZLB—estimated from options on Eurodollar futures and without adjusting for risk premiums—were little changed, on net, over the intermeeting period. In particular, the option-implied probability of the three-month LIBOR being negative in two years ticked up early in the intermeeting period before retracing to a current level of around 7 percent (figure 7). Similarly, the probability that the three-month LIBOR will end up below 25 and 50 basis points in two years' time (not shown) was little changed, on net, at about 9 and 14 percent, respectively.<sup>1</sup> Of note, the median probability of the U.S. economy first entering a recession over the next three years was unchanged in the October Desk surveys from the September surveys, with respondents assigning on average 30 percent, 26 percent, and 15 percent probability to the onset of a recession in 2020, 2021, and 2022, respectively.

Figure 8 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) was about unchanged over the intermeeting period, and that it stands at 1.9 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) suggests that 5-to-10-year-ahead expectations remain above the unadjusted forward rates, at between 2.7 and 2.8 percent, consistent with a negative term premium at those horizons. Similarly, the median longer-run forecast from the Desk's October surveys (the green diamonds) lies above the unadjusted forward rates and stands at 2.5 percent, fairly close to the model-based projections for the federal funds rate.

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<sup>1</sup> The average spread between three-month LIBOR and three-month OIS rates has been about 25 basis points on average in 2019 thus far, but it has fluctuated between 14 and 40 basis points. Looking further back, this spread was larger during the 2008 financial crisis, in part due to the credit risk embedded in LIBOR, and was on average about 100 basis points between December 2007 and June 2009.

Figure 5: Federal Funds Rate Projections

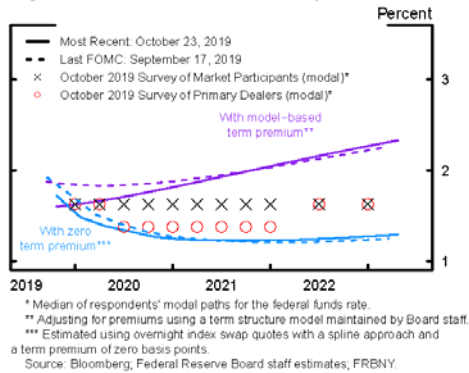


Figure 6: Probability of Returning to the Zero Lower Bound\*

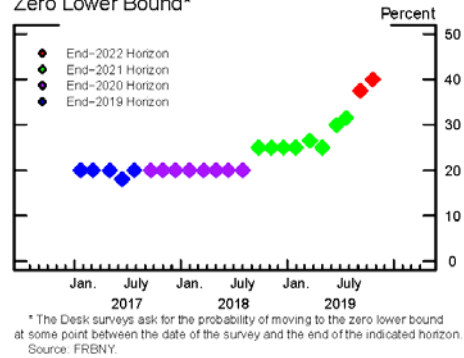


Figure 7: Market-Based Probability of the 3-Month LIBOR Turning Negative, Two Years Ahead

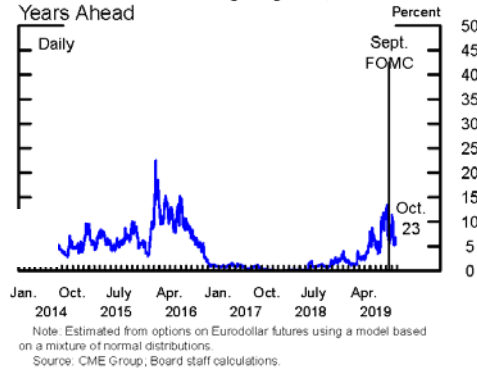
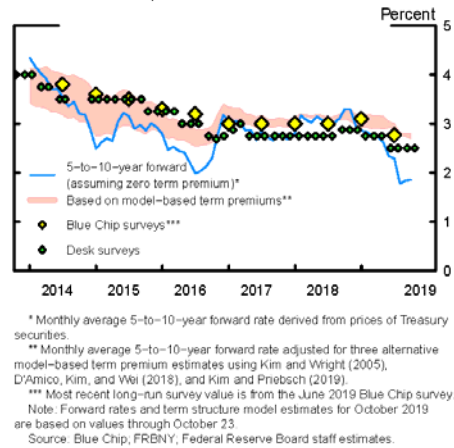


Figure 8: Measures of Longer-Run Federal Funds Rate Expectations





variables, such as the excess bond premium, continue to show somewhat lower probabilities.

- The staff projects annualized aggregate foreign growth in the second half of this year to be 1.8 percent, modestly weaker than projected in the September Tealbook and significantly below potential growth. The staff expects growth abroad to pick up to 2.3 percent next year. The staff continues to regard relatively benign outcomes for key developments on the international front as the most likely eventuality, but risks remain.
- The staff continues to judge that the risks to its outlook for U.S. real GDP growth are tilted to the downside over the next year, as well as further out. Uncertainties related to global developments—along with the potential for adverse reactions in financial markets to these risks—could have significant negative effects on U.S. economic activity beyond those already incorporated into the staff outlook. Additionally, disappointing data on business fixed investment and manufacturing production may be indicative of a more substantial slowing of economic activity than currently projected.

## THE CASE FOR ALTERNATIVE B

At the past two FOMC meetings, policymakers cited the implications of global developments for the U.S. economic outlook and muted inflation pressures as reasons for reducing the target range for the federal funds rate. With no indication that undue inflation pressures are building, continued weakness in certain sectors, and ongoing uncertainties related to trade policy and global developments, policymakers may determine that another modest easing in the stance of monetary policy is appropriate at this meeting.

Economic activity expanded at a solid pace during the first half of this year, but at present the expansion is mainly driven by strong household spending and by fiscal impetus that is expected to wane over the next year. Policymakers might note that uncertainty and global developments have already taken a toll on business fixed investment and exports, and that incoming information over the intermeeting period seems to indicate that these sectors will remain weak in the second half of the year. At the same time, they may judge that data on auto sales, housing permits, and home sales are evidence that the policy accommodation that the FOMC has already provided this year is starting to stimulate aggregate demand. Although policymakers may see continued economic expansion as the most likely outcome over coming quarters, they may judge that an additional, modest easing in the stance of policy is appropriate to help sustain economic growth in the face of continued headwinds from global developments.

Policymakers may see inflation rising to 2 percent over time as the most likely outcome and discern no unwelcome upward pressure on price inflation. They may note that, despite ongoing strength in the labor market, nominal wage growth remains moderate. Alternatively, they may regard the response of inflation to resource utilization as too small to be of concern. These muted inflation pressures along with recent low readings on longer-term inflation expectations may lead policymakers to conclude that additional policy accommodation is appropriate to support the timely, sustained return of inflation to 2 percent.

However, before determining any further adjustments to the target range for the federal funds rate, and barring significant new adverse developments, the Committee may see it as advantageous to take some time to assess the economic effects of its previous policy actions. In addition to shifting its policy stance directly through three 25 basis point cuts in the policy rate, the Committee has used changes in communications to

contribute to substantial declines in mortgage rates and longer-term Treasury yields since the beginning of the year. The full responses of economic activity to these lower interest rates may take some time to show up in incoming data. Reflecting this situation, Alternative B would remove the “act as appropriate” language to convey that the Committee sees a lower probability of additional rate cuts in the near term.

When considering the risks to the economic outlook, policymakers may observe that several staff models suggest that the probability of recession within a year is somewhat lower than was the case in September, though these probabilities remain elevated. Policymakers may judge that the stance of policy is reasonably well-calibrated at present in light of the asymmetry in the risks caused by the effective lower bound: Should the risks abate, and economic activity and inflation turn out to be stronger than expected, the Committee would be able to respond with increases in the policy rate, whereas the converse is less likely to be true.

Should policymakers choose the policy action in Alternative B, financial market responses to this decision would likely be relatively modest. Market prices, along with responses to the Desk’s latest surveys of primary dealers and market participants, currently indicate that a reduction in the target range by 25 basis points at the October meeting is widely viewed as the most likely outcome. Many market participants will likely interpret the removal of the “act as appropriate” language as an indication that the Committee is less likely to provide additional accommodation than currently perceived, in which case expectations for the path of short-term interest rates would likely move up and inflation compensation could edge down. Additionally, longer-term Treasury yields may rise modestly and equity prices could decline.

## THE CASE FOR ALTERNATIVE C

Policymakers may see incoming data as continuing to indicate that the economy is operating above its potential level and that the labor market is tightening further. They may also judge that weak inflation readings earlier in the year were the result of transitory factors, and that inflation is likely to move to 2 percent next year. At the same time, in light of recent weakness in business fixed investment and exports, they may judge that uncertainties to the economic outlook remain and prefer to maintain the current target range for the federal funds rate as they assess incoming information.

Policymakers may observe that, although certain sectors have displayed some weakness, household spending remains strong and the labor market has tightened further. They might also note that, while some of the recession-probability models reported by the staff and others show an elevated likelihood of a recession in the next 12 months, that inference may be fragile, as alternative models, which include either the excess bond premium or nonfinancial variables, do not show particularly high recession probabilities.

Policymakers may view current financial conditions as highly accommodative, noting the approximately 1 percentage point decline in the 10-year Treasury yield since the start of the year. They may argue that the full effect of that easing will take time to show through to expenditures. Additionally, policymakers may view monetary policy actions and associated communications as important determinants of financial conditions, irrespective of macroeconomic fundamentals, and be concerned about perceptions of market expectations of monetary policy influencing policy itself. As a result, they may choose to maintain the current target range for the federal funds rate and discourage the impression that the provision of further policy accommodation is likely in the near term.

Policymakers may observe that the factors that caused the softness in inflation readings earlier in the year were transitory, as expected. They may also note that the decline in the unemployment rate, together with the lagged effects of the accommodation that they have already provided, should support stronger nominal wage growth—a development that will be helpful in raising inflation.

In addition, policymakers may regard persistently low interest rates as exacerbating vulnerabilities to financial stability. For example, they may stress that prices in equity and bond markets are near historical peaks, while valuation pressures in leveraged loan and commercial real estate markets remain high. Additionally, they may

see borrowing by non-financial businesses as being historically high, with the most rapid increases in debt concentrated among the riskiest firms. As a result, they might judge that financial stability considerations strengthen the case for leaving the target range unchanged.

The policy action in Alternative C would be inconsistent with the widely-held market expectation of a reduction in the target range for the federal funds rate at the upcoming meeting. In combination with the removal of the “act as appropriate” language, Alternative C would likely result in a significant repricing in financial markets. Market expectations for the path of short-term interest rates would probably shift up. Equity prices and inflation compensation would likely fall. Although policymakers may view some revisions to market expectations as warranted, the apparent inconsistency of Alternative C with recent Federal Reserve communications could well cause confusion among investors about the Committee’s intentions.

## THE CASE FOR ALTERNATIVE A

Policymakers may be particularly concerned about the ongoing weakness in inflation and inflation expectations, or view risks to the economic outlook as significantly weighted to the downside. If so, they may deem it appropriate to signal their heightened concern and their willingness to provide a greater degree of monetary policy accommodation than would be the case under Alternative B. With Alternative A, policymakers would communicate that they decided to lower the target range for the federal funds rate in light of “the implications of global developments for the economic outlook as well as inflation running persistently below 2 percent.” In contrast to Alternative B, policymakers may choose to retain the “act as appropriate” language, thereby indicating greater openness to further near-term reductions in the target range for the federal funds rate.

With inflation continuing to run persistently below the Committee’s symmetric 2 percent objective, several survey-based measures of inflation expectations at or near the lower end of their historical ranges, and market-based measures of inflation compensation near multi-year lows, policymakers may be concerned that inflation expectations have already moved below levels consistent with the Committee’s 2 percent objective. They may therefore see significant risks that inflation could fail to return to 2 percent on a sustained basis unless the Committee signals its willingness to provide further accommodation. They might also note that growth of labor compensation appears to be muted, and they may judge that the string of underpredictions of the labor force participation rate by forecasters over the past few years indicates that the labor market has more room to run without inducing an undue increase in inflation. Policymakers might also argue that inflation running modestly above 2 percent for a time is needed to re-center inflation expectations on the 2 percent objective. They may see accomplishing this re-centering before the next recession as particularly important because higher inflation expectations would better enable monetary policy to provide accommodation in the event that the Committee finds itself constrained by the effective lower bound.

From a risk-management perspective, policymakers may judge that cutting the target range for the federal funds rate while remaining open to providing further policy accommodation in the future could help cushion the effects on the economy of possible adverse shocks. Policymakers may judge that, with many policy authorities around the world not well positioned to respond to a slowdown in demand, the global economy is in a fragile state and that unfavorable resolution of uncertainties facing the global economy

could weigh heavily on the U.S. economy. They might also point to recession-probability models that show elevated estimates of the likelihood of a recession in the United States over the next 12 months. Policymakers might judge that, in light of the proximity of the policy rate to its effective lower bound and the possibility that the neutral interest rate is lower than they previously thought, they should signal their willingness to act vigorously when confronted with such risks.

A statement such as Alternative A would likely be seen by market participants as implying a more accommodative path for the policy rate than had been anticipated. In particular, the language of “inflation running persistently below 2 percent,” would likely increase market expectations for further reductions in the federal funds rate. If market participants interpret Alternative A as expressing the Committee’s desire to provide additional accommodation so as to raise inflation to 2 percent or above, then equity prices and inflation compensation would likely rise. However, in the less-likely event that market participants interpreted Alternative A as amounting to a bleaker reading of the outlook for activity than they had been expecting, equity prices would likely fall.

**IMPLEMENTATION NOTE**

Draft implementation notes corresponding to each of the Alternatives appear on the following pages. Struck-out text indicates language deleted from the September implementation note, which has been amended to reflect the directive to the Desk issued on October 11, 2019. Bold red underlined text indicates added language, and blue underlined text indicates text that links to websites.



## Implementation Note for October 2019, Alternatives A and B

*Release Date: October 30, 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 ~~September 18, 2019~~ **October 30, 2019**:

- The Board of Governors of the Federal Reserve System voted ~~[ unanimously ]~~ to lower the interest rate paid on required and excess reserve balances to ~~1.80~~ **1.55** percent, effective ~~September 19, 2019~~ **October 31, 2019**. ~~Setting the interest rate paid on required and excess reserve balances 20 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 October 15, 2019~~ **October 31, 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 **1-1/2 to** ~~1-3/4 to 2~~ percent. In light of recent and expected increases in the Federal Reserve’s non-reserve liabilities, the Committee directs the Desk to purchase Treasury bills at least into the second quarter of next year to maintain over time ample reserve balances at or above the level that prevailed in early September 2019. The Committee also directs the Desk to conduct term and overnight repurchase agreement operations at least through January of next year to ensure that the supply of reserves remains ample even during periods of sharp increases in non-reserve liabilities, and to mitigate the risk of money market pressures that could adversely affect policy implementation. In addition, the Committee directs the Desk to conduct 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 ~~1.70~~ **1.45** 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.

The Committee directs the Desk to continue rolling over at auction all principal payments from the Federal Reserve’s holdings of Treasury securities and to continue reinvesting all principal payments from the Federal Reserve’s holdings of agency debt and agency mortgage-backed securities received during each calendar month. Principal payments from agency debt and agency mortgage-backed securities up to \$20 billion per month will continue to be reinvested in Treasury securities to roughly match the maturity composition of Treasury securities outstanding; principal payments in excess of \$20 billion per month will

continue to be reinvested in agency mortgage-backed securities. 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 a 1/4 percentage point decrease in the primary credit rate to ~~2.50~~ **2.25** percent, effective ~~September 19, 2019~~ **October 31, 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](#).

## Implementation Note for October 2019, Alternative C

*Release Date: October 30, 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 ~~September 18, 2019~~ **October 30, 2019**:

- The Board of Governors of the Federal Reserve System voted [ unanimously ] to ~~lower~~ **maintain** the interest rate paid on required and excess reserve balances to ~~at~~ 1.80 percent, effective ~~September 19, 2019~~ **October 31, 2019**. ~~Setting the interest rate paid on required and excess reserve balances 20 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 ~~October 15, 2019~~ **October 31, 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 1-3/4 to 2 percent. In light of recent and expected increases in the Federal Reserve’s non-reserve liabilities, the Committee directs the Desk to purchase Treasury bills at least into the second quarter of next year to maintain over time ample reserve balances at or above the level that prevailed in early September 2019. The Committee also directs the Desk to conduct term and overnight repurchase agreement operations at least through January of next year to ensure that the supply of reserves remains ample even during periods of sharp increases in non-reserve liabilities, and to mitigate the risk of money market pressures that could adversely affect policy implementation. In addition, the Committee directs the Desk to conduct 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 1.70 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.

The Committee directs the Desk to continue rolling over at auction all principal payments from the Federal Reserve’s holdings of Treasury securities and to continue reinvesting all principal payments from the Federal Reserve’s holdings of agency debt and agency mortgage-backed securities received during each calendar month. Principal payments from agency debt and agency mortgage-backed securities up to \$20 billion per month will continue to be reinvested in Treasury securities to roughly match the maturity composition of Treasury securities outstanding; principal payments in excess of \$20 billion per month will

continue to be reinvested in agency mortgage-backed securities. 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 a 1/4 percentage point decrease in the establishment of the primary credit rate to at the existing level of 2.50 percent. ~~effective September 19, 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 Chicago, Minneapolis, Dallas, and San Francisco.~~

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

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The staff has prepared projections of the Federal Reserve's balance sheet and the associated income statement that are consistent with the projections in Tealbook A.<sup>1</sup> The balance sheet projections are substantially changed from the September Tealbook. The changes reflect revised assumptions about policy regarding the evolution of the SOMA portfolio and the minimum level of reserve balances to ensure that the supply of reserves remains ample.

To be consistent with the Committee's Statement Regarding Monetary Policy Implementation released on October 11, the current projections are based on an assumed minimum level of reserve balances of \$1.46 trillion, the average level that prevailed in early September. In the near term, this minimum level is achieved through a combination of Treasury bill purchases and repo operations. For the period from May 2020 onward, we assume that reserve balances and the overall balance sheet will grow in line with nominal GDP.

Our assumption that reserve balances grow from their current level, rather than from the previously assumed minimum value of \$1 trillion, implies that reserve balances and the SOMA portfolio begin growing about 1½ years earlier and increase to a level about \$750 billion above that in the September Tealbook by the end of the projection. As a consequence, the balance sheet remains close to its current share of 19 percent of nominal GDP, 3 percentage points higher than its long-run share in the previous Tealbook (see the exhibit titled "Total Assets and Selected Balance Sheet Items"). While the higher assumed minimum level of reserves has important implications for the projected size and composition of the balance sheet, the minimum level of reserves consistent with remaining in an ample-reserves regime is uncertain and will likely need to be reassessed as information accrues about banks' demand for reserve balances.<sup>2</sup>

**Reserve balances.** Reserve balances at the start of the projection are about \$310 billion higher than they were projected to be at this point in the September Tealbook. This higher level largely reflects the amount of repo operations outstanding

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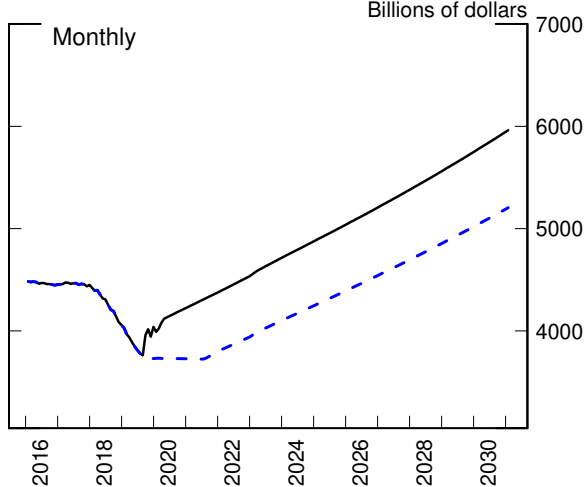
<sup>1</sup> The federal funds rate projection is lower in the near term than it was in the September Tealbook, and projected longer-term interest rates are lower after 2022 than in the September Tealbook.

<sup>2</sup> These issues were discussed in the March 2019 FOMC memo, "Transitioning to an Ample Reserves Regime with Lower Reserves."

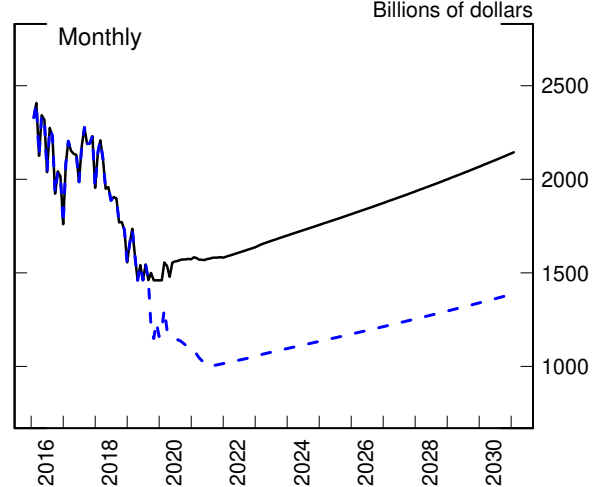
# Total Assets and Selected Balance Sheet Items

— October Tealbook baseline      - - - September Tealbook baseline

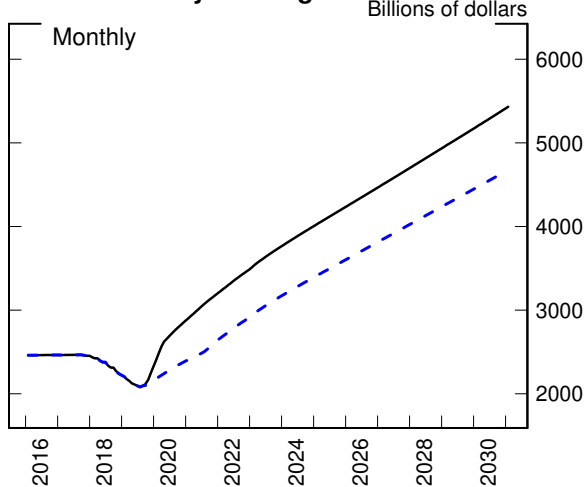
## Total Assets



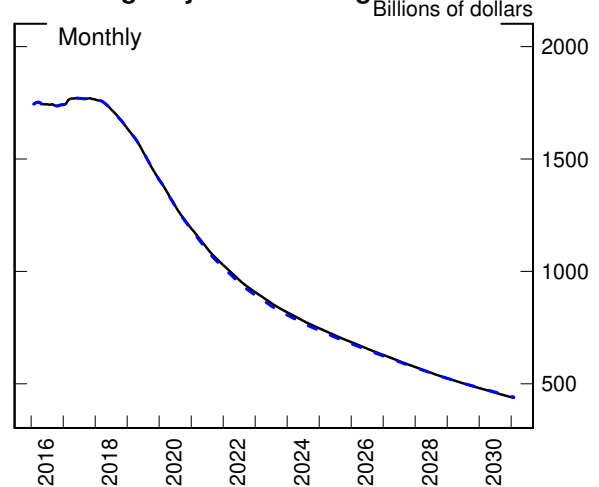
## Reserve Balances



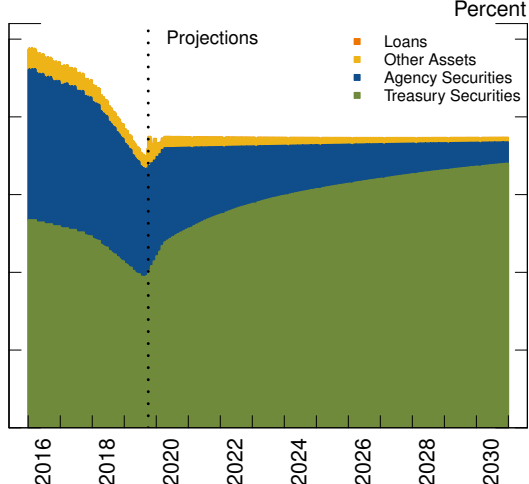
## SOMA Treasury Holdings



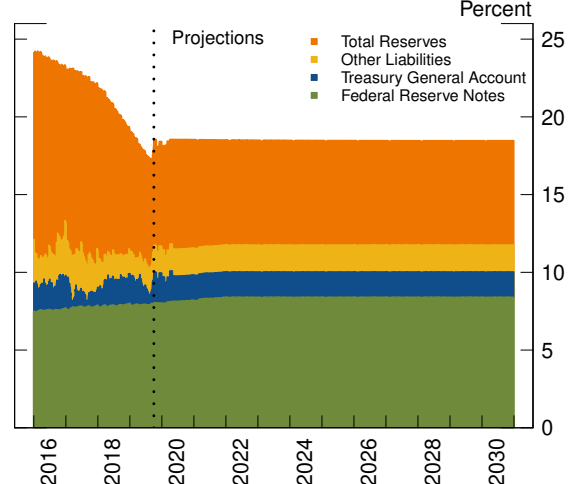
## SOMA Agency MBS Holdings



## Assets as a Percent of GDP



## Liabilities as a Percent of GDP



since September. Through mid-April 2020, purchases of Treasury bills and repo operations are assumed to keep reserves at or above \$1.46 trillion; these operations offset increases in currency and in the Treasury's General Account (TGA) balance that would otherwise cause reserve balances to fall below this level (see the upper chart in the exhibit titled "SOMA Open Market Operations and Their Near-Term Effect on Reserve Balances").<sup>3</sup> From May 2020 onward, reserves are projected to grow in line with nominal GDP.<sup>4</sup> This assumption implies a level that is about \$575 billion higher than was projected in the September Tealbook by 2021:Q3, which was the date when reserves had declined to their assumed minimum level of \$1 trillion in the previous projection.

***Evolution of the SOMA portfolio.*** As of September 2019, the size of the SOMA portfolio was roughly \$3.6 trillion, consisting of about \$2.1 trillion of Treasury securities and \$1.5 trillion of agency securities (see the exhibit titled "Federal Reserve Balance Sheet Month-end Projections—October Tealbook"). Consistent with the Statement Regarding Monetary Policy Implementation, we assume that the Desk will purchase Treasury bills at a pace of \$60 billion per month from mid-October to mid-April.<sup>5</sup> Thereafter, we assume that the SOMA portfolio continues expanding in order to accommodate trend increases in reserves and in other Federal Reserve liabilities at a pace that is roughly in line with nominal GDP growth (see the exhibit titled "Total Assets and Selected Balance Sheet Items").<sup>6</sup> As a result of these assumptions, the size of the balance sheet stays at its current level of 19 percent of nominal GDP through the projection horizon, 3 percentage points higher than in the previous Tealbook.<sup>7</sup>

The weighted-average duration of the SOMA Treasury portfolio is currently 6¾ years. As shown in the exhibit "Projections for the Characteristics of SOMA

<sup>3</sup> The projection incorporates the staff's near-term forecast for TGA balances through April 2020. Thereafter, TGA balances are assumed to grow in line with nominal GDP for the remainder of the projection horizon.

<sup>4</sup> We assume that liability items other than currency, reserves, and the TGA, such as the foreign repo pool and Designated Financial Market Utilities (DFMU) balances, grow in line with nominal GDP from the start of the projection period.

<sup>5</sup> Median expectations from the Desk's October surveys were for bill purchases to continue at a pace of \$60 billion per month through March, and then step down over the next three months to \$30 billion in June.

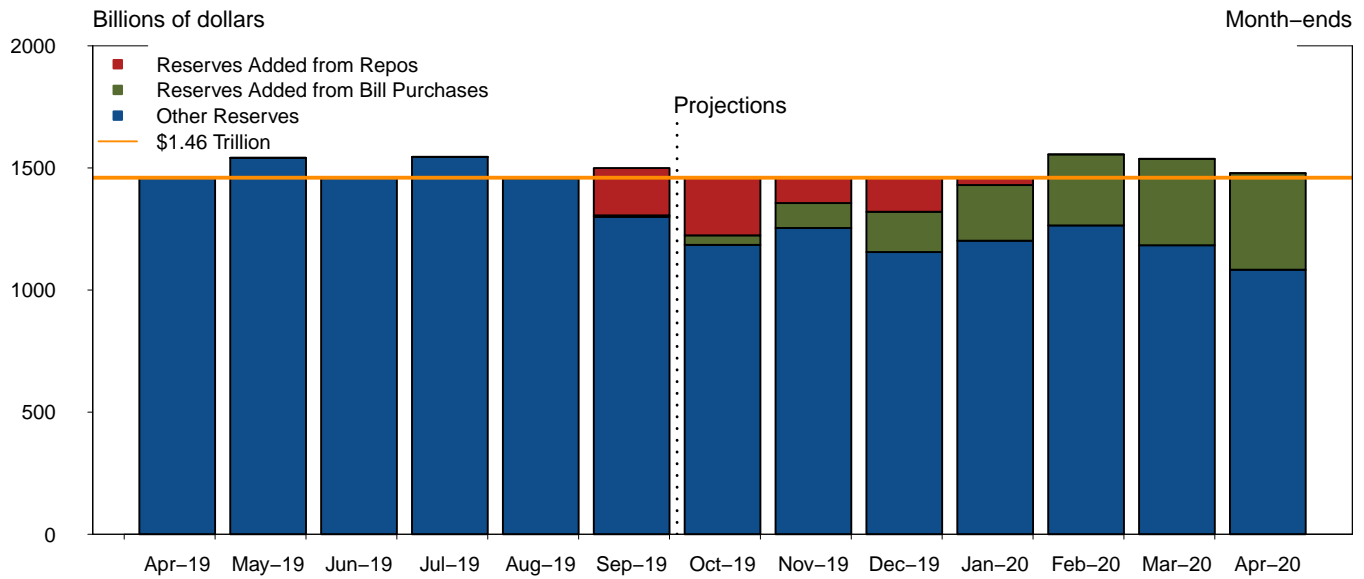
<sup>6</sup> We assume that rollovers of maturing Treasury securities will continue to be directed to newly issued securities at Treasury auctions in proportion to the maturity distribution of Treasury debt issued at the time of rollover.

<sup>7</sup> Liabilities plus Federal Reserve Bank capital equals total assets, which include the SOMA securities portfolio and also items such as unamortized premiums and discounts, and other assets.



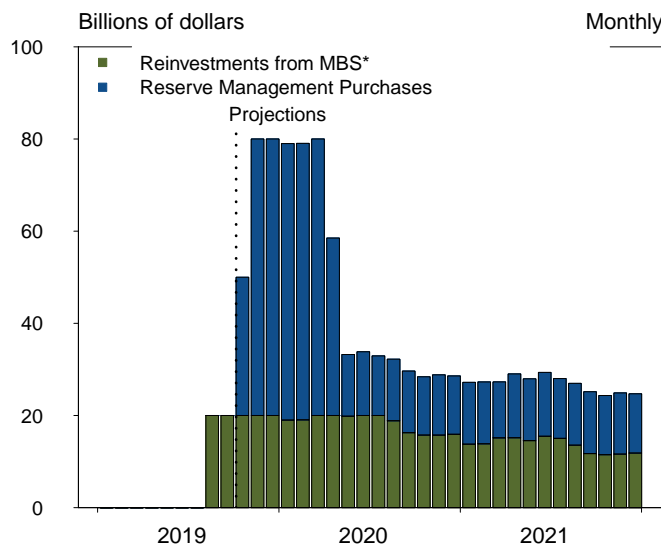
# SOMA Open Market Operations and Their Near-Term Effect on Reserve Balances

## Decomposing the Path of Reserve Balances

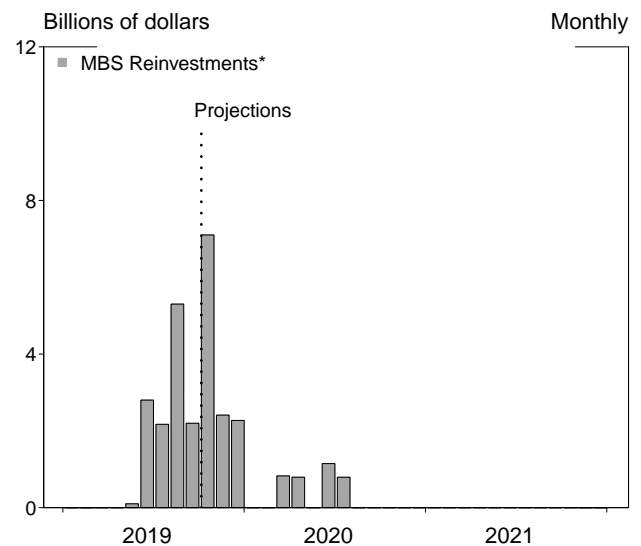


Date	Reserve Management Purchases of Treasury Securities		Reinvestments from Agency Securities*			
	Period	Since Oct 2019	to Treasury Securities		to Agency MBS	
			Period	Since Aug 2019	Period	Since Aug 2019
2019: October	30.0	30.0	20.0	60.0	7.1	14.6
2019: November	60.0	90.0	20.0	80.0	2.4	17.0
2019: December	60.0	150.0	20.0	100.0	2.3	19.3
2020:Q1	180.0	330.0	58.1	158.1	0.8	20.1
2019	150.0	150.0	100.0	100.0	24.3	19.3
2020	323.7	473.7	220.5	320.5	3.6	22.8
2021	158.9	632.6	163.3	483.8	0.0	22.8
2022	163.3	795.9	120.6	604.4	0.0	22.8

## SOMA Treasury Securities



## SOMA MBS Securities



\* 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.

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

	Historical*			Projections				
	Aug 2014	Sep 2017	Sep 2019	Dec 2019	Dec 2020	Dec 2022	Dec 2025	Dec 2030
Total assets	4,416	4,460	3,957	4,039	4,222	4,534	5,037	5,945
Selected assets								
Loans and other credit extensions**	2	6	1	0	0	0	0	0
Securities held outright	4,157	4,240	3,585	3,737	4,067	4,397	4,921	5,853
U.S. Treasury securities	2,437	2,465	2,116	2,326	2,874	3,487	4,233	5,411
Agency debt securities	42	7	2	2	2	2	2	2
Agency mortgage-backed securities	1,678	1,768	1,467	1,408	1,192	908	686	441
Unamortized premiums	209	162	127	125	114	96	74	47
Unamortized discounts	-19	-14	-13	-12	-11	-10	-8	-6
Total other assets	66	66	256	190	50	50	50	50
Total liabilities	4,360	4,419	3,917	3,999	4,181	4,490	4,987	5,882
Selected liabilities								
Federal Reserve notes in circulation	1,249	1,533	1,716	1,740	1,847	2,034	2,262	2,669
Reverse repurchase agreements	277	432	294	301	312	336	374	441
Deposits with Federal Reserve Banks	2,825	2,447	1,902	1,954	2,017	2,115	2,346	2,766
Reserve balances held by depository institutions	2,762	2,190	1,500	1,460	1,572	1,636	1,813	2,138
U.S. Treasury, General Account	49	176	328	423	371	399	443	523
Other deposits	15	82	74	72	74	80	89	105
Earnings remittances due to the U.S. Treasury	3	2	1	0	0	0	0	0
Total Federal Reserve Bank capital***	56	41	39	39	40	44	50	63

Source: Federal Reserve H.4.1 daily data and staff calculations.

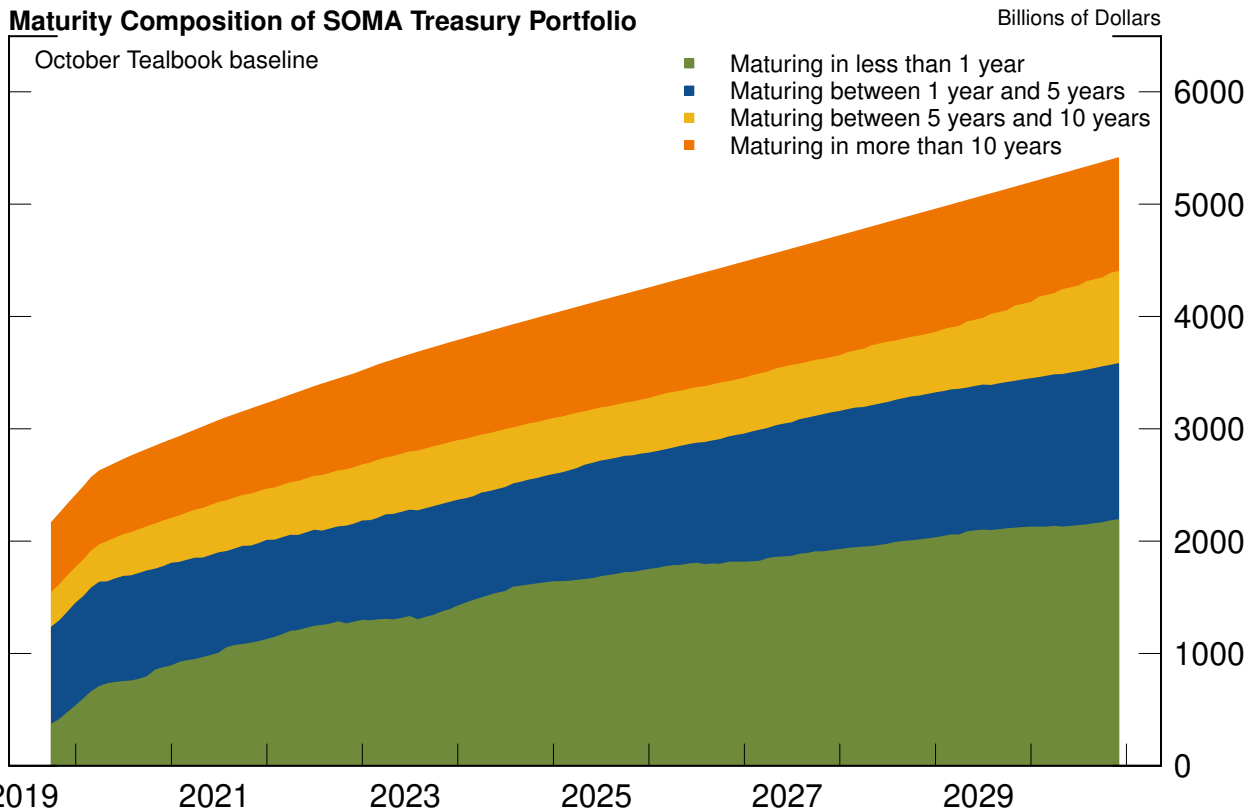
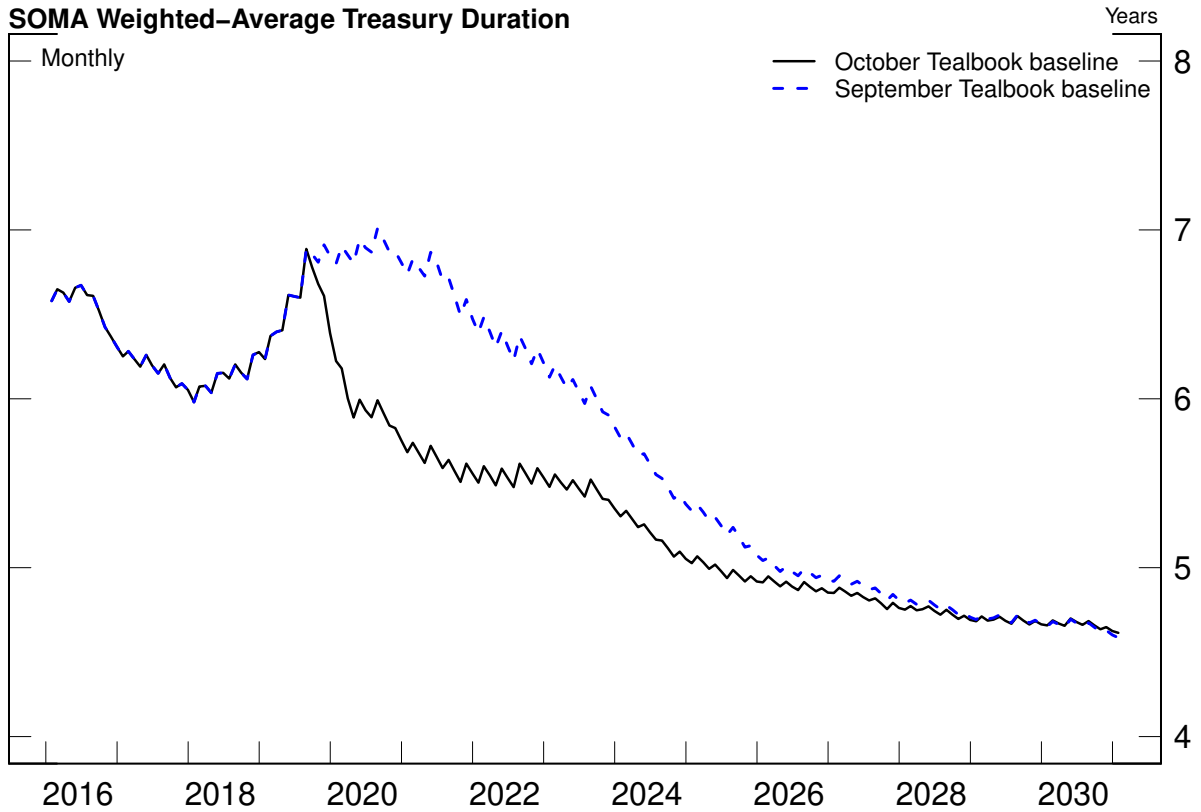
Note: Components may not sum to totals due to rounding.

\*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; September 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.

# Projections for the Characteristics of SOMA Treasury Securities Holdings



Treasury Securities Holdings,” the path for duration diverges considerably from that in the September projection. Duration is projected to decline to about 6 years by April 2020, a faster decline than in the previous projection, as the share of bills increases to 15 percent of the SOMA Treasury portfolio. The decline in duration then decelerates, reflecting the slower pace of bill purchases.<sup>8</sup> After 2021, the decline in duration is more gradual than previously projected, reflecting the revised assumption that reinvestments of principal payments from agency securities holdings into Treasury securities will be spread across the maturity spectrum of outstanding Treasury securities for the entire projection period.<sup>9</sup> All told, the portfolio attains its assumed longer-run composition, consisting of one-third Treasury bills, in 2025:Q3, two quarters earlier than in the September Tealbook.

Principal payments from holdings of agency securities are projected to exceed the \$20 billion cap on reinvestment into Treasury securities in most months through the middle of 2020, and then fall below \$20 billion as projected MBS prepayments decline (see the table and lower charts in the exhibit titled “SOMA Open Market Operations and Their Near-Term Effect on Reserve Balances”).<sup>10</sup> As agency MBS holdings and associated prepayments continue to decline, reinvestments of agency securities into MBS are expected to cease in mid-2020. The share of agency MBS in the SOMA portfolio, which currently stands at about 40 percent, is expected to decline to about 14 percent by the end of 2025, a smaller share than in the September projection, due to the larger size of the Treasury portfolio.

***Unrealized gains or losses.*** The SOMA portfolio was in a net unrealized gain position of about \$200 billion at the end of September (see the exhibit titled “Income Projections”). With longer-term interest rates projected to rise, the unrealized gain position is expected to decline over the next few years before turning into an unrealized loss position by early-2023. The position bottoms out at an unrealized loss of around

<sup>8</sup> As the Committee has not yet reached a decision on the long-run composition of the SOMA portfolio, we continue to assume that purchases aimed at accommodating trend growth in Federal Reserve liabilities will be directed entirely towards Treasury bills until bills constitute approximately one-third of the Federal Reserve’s portfolio of Treasury securities, close to the pre-crisis composition. Once that composition is reached, further purchases aimed at accommodating growth in Federal Reserve liabilities are assumed to reflect the projected maturity distribution of Treasury securities outstanding at that time.

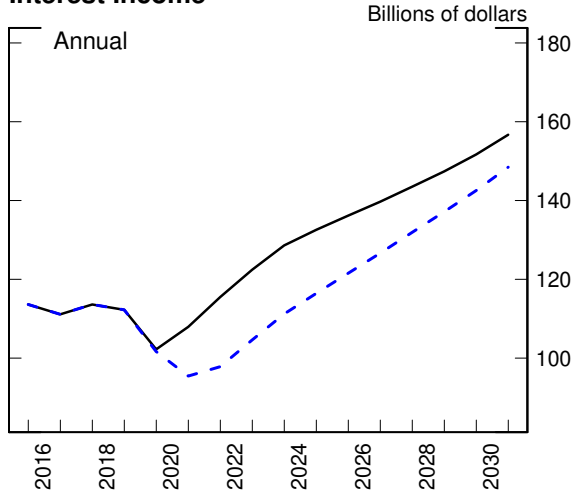
<sup>9</sup> In previous projections, it was assumed that the maturity distribution of these reinvestments mirrored that of purchases aimed at accommodating growth in Federal Reserve liabilities (see footnote 8).

<sup>10</sup> The exhibit no longer presents information on Treasury security rollovers, due to the anticipated high rate of turnover of Treasury bills in the SOMA portfolio.

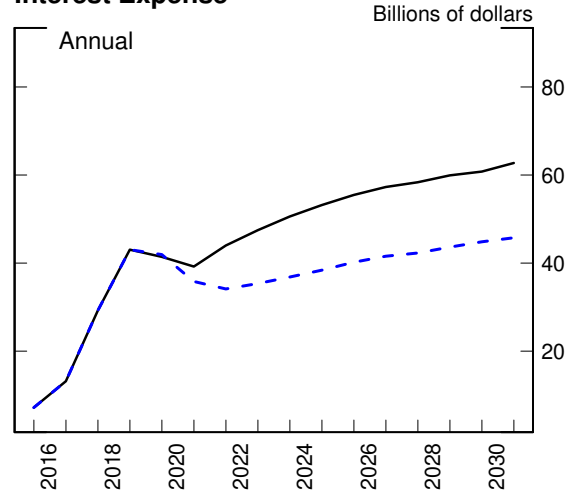
## Income Projections

— October Tealbook baseline      - - - September Tealbook baseline

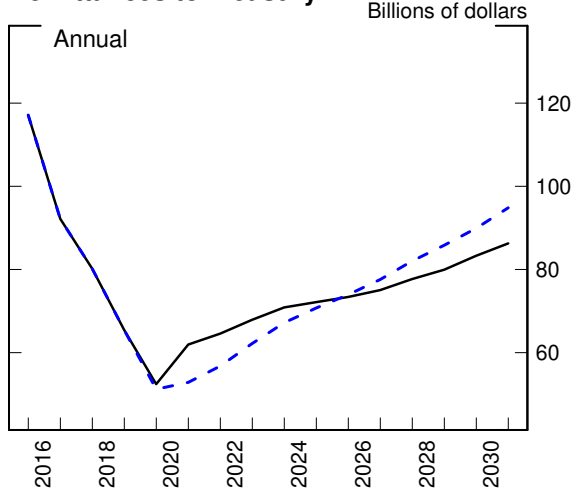
### Interest Income



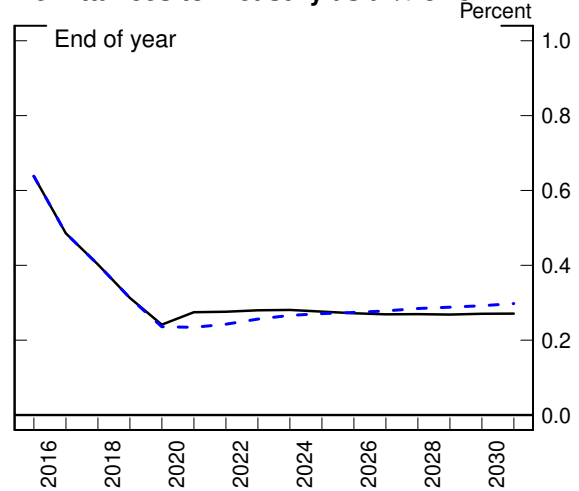
### Interest Expense



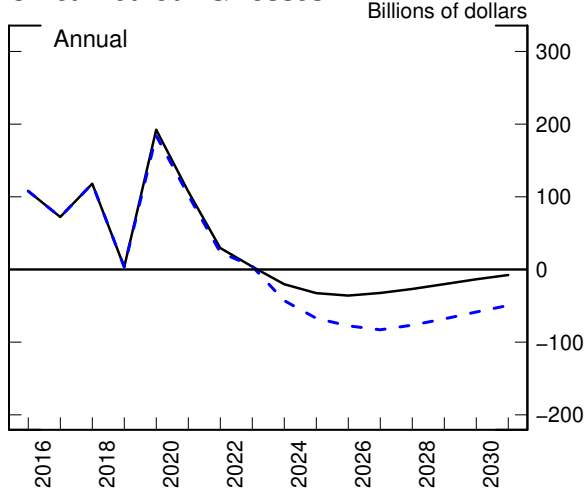
### Remittances to Treasury



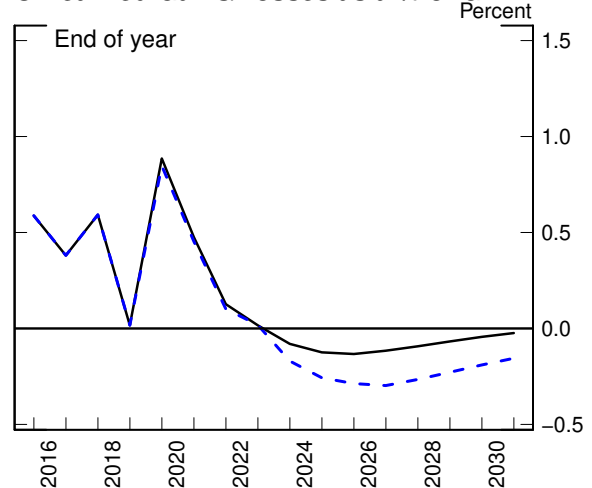
### Remittances to Treasury as a % of GDP



### Unrealized Gains/Losses



### Unrealized Gains/Losses as a % of GDP



\$37 billion in 2025:Q3. Compared with the September Tealbook, the path for the unrealized position of the SOMA portfolio is higher after 2022, reflecting the lower path for longer-term interest rates.<sup>11</sup>

***Total Term Premium Effect.*** As shown in the table “Projections for the 10-Year Treasury Total Term Premium Effect (TTPE),” the securities held in the SOMA portfolio are estimated to be reducing the term premium embedded in the 10-year Treasury yield by about 135 basis points in the current quarter, 7 basis points more than in the September Tealbook.<sup>12</sup> Over the projection horizon, the magnitude of the downward pressure exerted on the term premium in longer-term Treasury yields is estimated to diminish gradually, at an average pace of about 2.5 basis points per year. The gradual decline reflects the decrease in the duration of the Federal Reserve’s securities holdings over the projection horizon. At the end of 2030, the total term premium effect of the SOMA portfolio on the 10-year Treasury yield is estimated to be about 110 basis points.

Over the projection horizon, the SOMA portfolio is expected to exert a little more downward pressure on Treasury term premiums than was the case in September. Although duration of the SOMA portfolio is projected to be lower over the next few years than in the September Tealbook, the portfolio’s size is expected to be larger. The greater magnitude of the TTPE also reflects the assumption that reinvestments of principal payments from agency securities into Treasury securities will be spread across the maturity spectrum of outstanding Treasury securities for the entire projection period (see footnote 9). All else equal, the longer duration of the securities acquired from these reinvestments increases the downward pressure of the SOMA portfolio on term premiums.

***Remittances.*** Remittances to the Treasury are projected to decline to \$54 billion this year from \$65 billion in 2018 (see the exhibit titled “Income Projections”). This reduction mainly reflects lower interest income resulting from the reduction in SOMA securities holdings through September 2019. Total interest expense is projected to be

<sup>11</sup> 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. In this projection, the lower path for longer term interest rates reflects a downward revision to the staff’s assumption for the long-run value of the term premium.

<sup>12</sup> The overall 10-year Treasury term premium is assumed to gradually approach its long-run value of 50 basis points.

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

Date	October Tealbook	September Tealbook
Quarterly Averages		
2019:Q4	-137	-130
2020:Q1	-136	-129
Q2	-135	-128
Q3	-135	-127
Q4	-134	-125
2021:Q4	-131	-121
2022:Q4	-128	-117
2023:Q4	-124	-112
2024:Q4	-122	-109
2025:Q4	-120	-107
2026:Q4	-118	-105
2027:Q4	-116	-103
2028:Q4	-115	-101
2029:Q4	-113	-99
2030:Q4	-111	-97

\$41 billion this year, slightly lower than in 2018.<sup>13</sup> Remittances are expected to increase to \$62 billion next year and then continue rising. The upward-sloping path of remittances reflects an increase in net interest income associated with a growing balance sheet, as yields on longer-term securities in the SOMA portfolio exceed the rate paid on reserve balances.

The projected path for remittances is higher through 2024 than it was in the September Tealbook, largely reflecting the increased size of the SOMA portfolio. After 2024, this effect is more than offset by the downward revision to long-term Treasury yields; this downward revision reduces the interest rate paid on securities in the SOMA portfolio and causes remittances to fall below their value in the previous projection.

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<sup>13</sup> 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 September 2019 Implementation Note, we assume that the IOER will be set 20 basis points below the top of the target range, and the offering rate on overnight RRP's will be set 5 basis points below the bottom of the range.



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## Abbreviations

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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
MEP	Maturity Extension Program
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
TTPE	Total Term Premium Effect
WAM	Weighted Average Maturity
ZLB	zero lower bound