Prefatory Note

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

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

Content last modified 1/13/2023.

Class I FOMC – Restricted Controlled (FR)

Report to the FOMC on Economic Conditions and Monetary Policy

Book B

Monetary Policy Alternatives

October 26, 2017

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

(This page is intentionally blank.)

Monetary Policy Alternatives

Incoming data since the September FOMC meeting show solid growth in economic activity and a strengthening labor market alongside soft readings on inflation (aside from a hurricane-related spike in gasoline prices). In light of this continuing tension, the key question facing the Committee is whether the anticipated path for the federal funds rate implied by recent communications remains appropriate for achieving the Committee's objectives, and in particular what signal to send about the likelihood of a rate increase in the near term.

- Alternative C emphasizes the strength of both economic activity and the labor market and signals that further gradual rate hikes will be needed—with one likely in the near future—to return output and employment growth to sustainable rates and to stabilize inflation around the Committee's 2 percent objective over the medium term. Alternative C is consistent with either confidence that soft inflation readings will not persist or concern that continued strong growth of the real side of the economy may ultimately undermine price stability and lead to a need to tighten monetary policy rapidly.
- By contrast, Alternative A places greater emphasis on the continuing softness in core inflation and signals that the Committee is unlikely to increase the federal funds rate until incoming information gives policymakers greater confidence that inflation will rise to 2 percent. Moreover, Alternative A raises the possibility that the Committee might lower the federal funds rate if the softness in inflation continues in coming months.
- Balancing the strength of the real economy and the softness in inflation, Alternative B repeats the Committee's intention to withdraw monetary policy accommodation gradually as inflation rises to 2 percent and the labor market strengthens somewhat further.

With regard to the specifics of the draft statement language:

- The Alternatives differ only modestly in their assessments of current conditions and the economic outlook:

  - In characterizing the labor market, Alternatives A and B note that it has continued to "strengthen." By contrast, Alternative C states that the labor market has continued to "tighten."
  - Alternatives B and C refer to economic activity as "rising at a solid rate," whereas Alternative A continues to refer to economic activity as "rising moderately so far this year."
  - All three alternatives acknowledge that the 12-month measures of overall and core inflation have declined this year. All three also note the effect of higher gasoline prices on overall inflation in September, but Alternatives A and B add that recent readings on inflation excluding food and energy have "remained soft" while Alternative C omits those words.

- All three Alternatives maintain the current 1 to 1¼ percent target range for the federal funds rate. However, they give different signals concerning the future path of the federal funds rate:
  - Alternative B maintains the message of recent postmeeting statements by repeating the Committee's expectation that, with "gradual adjustments in the stance of monetary policy," the economy will expand at a moderate pace, labor market conditions will strengthen somewhat further, and inflation will stabilize around the Committee's 2 percent objective over the medium term. Alternative B also retains the language that the federal funds rate is likely to remain, "for some time," below its longer-run normal level.
  - Alternative A does not take a position on the pace—or even the direction—of future policy actions. Instead, it states that "appropriate monetary policy accommodation" is required for the economy to expand at a moderate pace and for labor market conditions to strengthen somewhat further. In addition, Alternative A signals that an increase in the federal funds rate will not be warranted until the data indicate that inflation is moving toward the Committee's 2 percent objective. Moreover, Alternative A admits the possibility that the Committee might even lower the federal funds rate if the softness in inflation continues.
  - Alternative C states that with "further gradual reductions in monetary policy accommodation," growth in economic activity and employment "will moderate to sustainable rates in the medium term." This language indicates greater concern that economic growth will remain unsustainably strong and

less worry that inflation will continue to be soft. By adding the words "for the time being" immediately after the policy announcement in paragraph 3, Alternative C suggests that a rate increase will take place as soon as at the next meeting. Finally, the statement for this Alternative omits the language that "the federal funds rate is likely to remain, for some time," below longer-run normal levels.

- All three Alternatives offer the choice of keeping or deleting a final paragraph that says, "The balance sheet normalization program initiated in October 2017 is proceeding."

SEPTEMBER 2017 FOMC STATEMENT

1. Information received since the Federal Open Market Committee met in July indicates that the labor market has continued to strengthen and that economic activity has been rising moderately so far this year. Job gains have remained solid in recent months, and the unemployment rate has stayed low. Household spending has been expanding at a moderate rate, and growth in business fixed investment has picked up in recent quarters. On a 12-month basis, overall inflation and the measure excluding food and energy prices have declined this year and are running below 2 percent. Market-based measures of inflation compensation remain low; survey-based measures of longer-term inflation expectations are little changed, on balance.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. Hurricanes Harvey, Irma, and Maria have devastated many communities, inflicting severe hardship. Storm-related disruptions and rebuilding will affect economic activity in the near term, but past experience suggests that the storms are unlikely to materially alter the course of the national economy over the medium term. Consequently, the Committee continues to expect that, with gradual adjustments in the stance of monetary policy, economic activity will expand at a moderate pace, and labor market conditions will strengthen somewhat further. Higher prices for gasoline and some other items in the aftermath of the hurricanes will likely boost inflation temporarily; apart from that effect, inflation on a 12-month basis is expected to remain somewhat below 2 percent in the near term but to stabilize around the Committee's 2 percent objective over the medium term. Near-term risks to the economic outlook appear roughly balanced, but the Committee is monitoring inflation developments closely.

3. In view of realized and expected labor market conditions and inflation, the Committee decided to maintain the target range for the federal funds rate at 1 to 1- 1/4 percent. The stance of monetary policy remains accommodative, thereby supporting some further strengthening in labor market conditions and a sustained return to 2 percent inflation.

4. 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 objectives of maximum employment and 2 percent inflation. This assessment will take into account a wide range of information, including measures of labor market conditions, indicators of inflation pressures and inflation expectations, and readings on financial and international developments. The Committee will carefully monitor actual and expected inflation developments relative to its symmetric inflation goal. The Committee expects that economic conditions will evolve in a manner that will warrant gradual increases in the federal funds rate; the federal funds rate is likely to remain, for some time, below levels that are expected to prevail in the longer run. However, the actual path of the federal funds rate will depend on the economic outlook as informed by incoming data.

5. In October, the Committee will initiate the balance sheet normalization program described in the June 2017 Addendum to the Committee's Policy Normalization Principles and Plans.

OCTOBER-NOVEMBER 2017 ALTERNATIVE A

1. Information received since the Federal Open Market Committee met in ~~July~~ **September** indicates that**, apart from hurricane-related disruptions,** the labor market has continued to strengthen and that economic activity has been rising moderately so far this year. ~~Job gains have remained solid in recent months~~ **Although the hurricanes caused a drop in payroll employment in September**, ~~and~~ the unemployment rate ~~has stayed low~~ **declined further**. Household spending has been expanding at a moderate rate, and growth in business fixed investment has picked up in recent quarters. **Gasoline prices rose in the aftermath of the hurricanes, boosting overall inflation in September; however, inflation for items other than food and energy remained soft.** On a 12-month basis, ~~overall inflation and the measure excluding food and energy prices~~ **both inflation measures** have declined this year and are running below 2 percent. Market-based measures of inflation compensation remain low; survey-based measures of longer-term inflation expectations are little changed, on balance.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. ~~Hurricanes Harvey, Irma, and Maria have devastated many communities, inflicting severe hardship. Storm~~ **Hurricane**-related disruptions and rebuilding will **continue to** affect economic activity**, employment, and inflation** in the near term, but past experience suggests that the storms are unlikely to materially alter the course of the national economy over the medium term. ~~Consequently,~~ The Committee ~~continues to~~ expect**s** that, with ~~gradual adjustments in the stance of~~ **appropriate** monetary policy **accommodation**, economic activity will expand at a moderate pace, and labor market conditions will strengthen somewhat further. ~~Higher prices for gasoline and some other items in the aftermath of the hurricanes will likely boost inflation temporarily; apart from that effect,~~ Inflation on a 12-month basis is expected to remain somewhat below 2 percent in the near term but to stabilize around the Committee's 2 percent objective over the medium term. Near-term risks to the economic outlook appear roughly balanced, but the Committee is monitoring inflation developments closely.

3. In view of realized and expected labor market conditions and inflation, the Committee decided to maintain the target range for the federal funds rate at 1 to 1-1/4 percent **while assessing incoming information that bears on the outlook for inflation**. The stance of monetary policy remains accommodative, thereby supporting some further strengthening in labor market conditions and a sustained return to 2 percent inflation.

4. 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 objectives of maximum employment and 2 percent inflation. This assessment will take into account a wide range of information, including measures of labor market conditions, indicators of inflation pressures

and inflation expectations, and readings on financial and international developments. The Committee will carefully monitor actual and expected inflation developments relative to its symmetric inflation goal. ~~The Committee expects that economic conditions will evolve in a manner that will warrant gradual increases in the federal funds rate; the federal funds rate is likely to remain, for some time, below levels that are expected to prevail in the longer run. However, the actual path of the federal funds rate will depend on the economic outlook as informed by incoming data.~~

5. ~~In October, the Committee will initiate the balance sheet normalization program described in the June 2017 Addendum to the Committee's Policy Normalization Principles and Plans.~~ **[The balance sheet normalization program initiated in October 2017 is proceeding.]**

OCTOBER-NOVEMBER 2017 ALTERNATIVE B

1. Information received since the Federal Open Market Committee met in ~~July~~ **September** indicates that the labor market has continued to strengthen and that economic activity has been rising ~~moderately so far this year~~ **at a solid rate despite hurricane-related disruptions**. ~~Job gains have remained solid in recent months~~ **Although the hurricanes caused a drop in payroll employment in September**, ~~and~~ the unemployment rate ~~has stayed low~~ **declined further**. Household spending has been expanding at a moderate rate, and growth in business fixed investment has picked up in recent quarters. **Gasoline prices rose in the aftermath of the hurricanes, boosting overall inflation in September; however, inflation for items other than food and energy remained soft.** On a 12-month basis, ~~overall inflation and the measure excluding food and energy prices~~ **both inflation measures** have declined this year and are running below 2 percent. Market-based measures of inflation compensation remain low; survey-based measures of longer-term inflation expectations are little changed, on balance.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. ~~Hurricanes Harvey, Irma, and Maria have devastated many communities, inflicting severe hardship. Storm~~ **Hurricane**-related disruptions and rebuilding will **continue to** affect economic activity**, employment, and inflation** in the near term, but past experience suggests that the storms are unlikely to materially alter the course of the national economy over the medium term. Consequently, the Committee continues to expect that, with gradual adjustments in the stance of monetary policy, economic activity will expand at a moderate pace, and labor market conditions will strengthen somewhat further. ~~Higher prices for gasoline and some other items in the aftermath of the hurricanes will likely boost inflation temporarily; apart from that effect,~~ Inflation on a 12-month basis is expected to remain somewhat below 2 percent in the near term but to stabilize around the Committee's 2 percent objective over the medium term. Near-term risks to the economic outlook appear roughly balanced, but the Committee is monitoring inflation developments closely.

3. In view of realized and expected labor market conditions and inflation, the Committee decided to maintain the target range for the federal funds rate at 1 to 1-1/4 percent. The stance of monetary policy remains accommodative, thereby supporting some further strengthening in labor market conditions and a sustained return to 2 percent inflation.

4. 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 objectives of maximum employment and 2 percent inflation. This assessment will take into account a wide range of information, including measures of labor market conditions, indicators of inflation pressures

and inflation expectations, and readings on financial and international developments. The Committee will carefully monitor actual and expected inflation developments relative to its symmetric inflation goal. The Committee expects that economic conditions will evolve in a manner that will warrant gradual increases in the federal funds rate; the federal funds rate is likely to remain, for some time, below levels that are expected to prevail in the longer run. However, the actual path of the federal funds rate will depend on the economic outlook as informed by incoming data.

5. ~~In October, the Committee will initiate the balance sheet normalization program described in the June 2017 Addendum to the Committee's Policy Normalization Principles and Plans.~~ **[The balance sheet normalization program initiated in October 2017 is proceeding.]**

October-November 2017 Alternative C

1. Information received since the Federal Open Market Committee met in ~~July~~ **September** indicates that the labor market has continued to ~~strengthen~~ **tighten** and that economic activity has been rising ~~moderately so far this year~~ **at a solid rate despite hurricane-related disruptions**. ~~Job gains have remained solid in recent months~~ **Although the hurricanes caused a drop in payroll employment in September**, ~~and~~ the unemployment rate ~~has stayed low~~ **declined further**. Household spending has been expanding at a moderate rate, and growth in business fixed investment has picked up in recent quarters. **Gasoline prices rose in the aftermath of the hurricanes, boosting overall inflation in September.** On a 12-month basis, overall inflation and the measure excluding food and energy prices have declined this year and are running below 2 percent. Market-based measures of inflation compensation ~~remain low;~~ **and** survey-based measures of longer-term inflation expectations are little changed, on balance.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. ~~Hurricanes Harvey, Irma, and Maria have devastated many communities, inflicting severe hardship. Storm~~ **Hurricane**-related disruptions and rebuilding will **continue to** affect economic activity**, employment, and inflation** in the near term, but past experience suggests that the storms are unlikely to materially alter the course of the national economy over the medium term. ~~Consequently,~~ The Committee ~~continues to~~ expect**s** that, with **further** gradual ~~adjustments in the stance of~~ **reductions in** monetary policy **accommodation**, **growth in** economic activity **and employment** will ~~expand at a~~ moderate ~~pace~~ **to sustainable rates in the medium term**~~, and labor market conditions will strengthen somewhat further~~. ~~Higher prices for gasoline and some other items in the aftermath of the hurricanes will likely boost inflation temporarily; apart from that effect,~~ Inflation on a 12-month basis is expected to remain somewhat below 2 percent in the near term but to stabilize around the Committee's 2 percent objective over the medium term. Near-term risks to the economic outlook appear roughly balanced, but the Committee is monitoring inflation developments closely.

3. In view of realized and expected labor market conditions and inflation, the Committee decided to maintain the target range for the federal funds rate at 1 to 1¼ percent **for the time being**. The stance of monetary policy remains accommodative, thereby supporting some further strengthening in labor market conditions and a sustained return to 2 percent inflation.

4. 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 objectives of maximum employment and 2 percent inflation. This assessment will take into account a wide range of information, including measures of labor market conditions, indicators of inflation pressures and inflation expectations, and readings on financial and international developments. The

Committee will carefully monitor actual and expected inflation developments relative to its symmetric inflation goal. The Committee expects that economic conditions will evolve in a manner that will warrant **further** gradual increases in the federal funds rate~~; the federal funds rate is likely to remain, for some time, below levels that are expected to prevail in the longer run~~. However, the actual path of the federal funds rate will depend on the economic outlook as informed by incoming data.

5. ~~In October, the Committee will initiate the balance sheet normalization program described in the June 2017 Addendum to the Committee's Policy Normalization Principles and Plans.~~ **[The balance sheet normalization program initiated in October 2017 is proceeding.]**

THE CASE FOR ALTERNATIVE B

Economic Conditions and Outlook

- Though hurricane-related disruptions distorted some labor market data, the September employment report indicated that, on balance, the labor market strengthened further.
    - The unemployment rate fell to 4.2 percent in September even as the labor force participation rate rose to 63.1 percent from 62.9 percent. The BLS noted no discernible effect of the hurricanes on these rates.
    - Other information in the employment report, however, reflected the effects of hurricane-related disruptions. Total nonfarm payroll employment fell by 33,000 and private nonfarm payroll employment fell by 40,000. The staff estimates that, abstracting from hurricane-related disruptions, the monthly gain in private payrolls was near 160,000. The negative effects of the hurricanes on private payrolls are expected to be reversed in the next few months.
    - Average hourly earnings of employees on private nonfarm payrolls rose faster than expected in September, and earnings in previous months were revised up, boosting the 12-month change to 2.9 percent. The September rise, which in part reflected a hurricane-related reduction in the employment of low-wage workers, is likely to be partly reversed in coming months. The staff projects that the 12-month change in average hourly earnings will be 2.8 percent in December of this year, the same as in December 2016, but higher than in the preceding several years.
    - Although the Federal Reserve Bank of Atlanta's Wage Growth Tracker reports a higher growth rate for wages than suggested by the data on average hourly earnings due to differences in methodology between the two series, neither series indicates strong acceleration in wage growth relative to a year ago.
- Over the 12 months ending in August, headline PCE inflation was 1.4 percent, the same as in July. Core PCE inflation edged down 0.1 percentage point, reaching 1.3 percent in August. Core inflation is expected to pick up in March of next year as the unusually large decline in the price of cell phone service seen in March 2017 drops out of the 12-month window underlying the computation of these inflation series. Some other factors that have contributed to the recent soft inflation readings are also expected to be transitory.

  - The hurricanes led to temporarily higher prices of gasoline. The sizable increase in gasoline prices boosted headline CPI inflation in September. Prices of other goods and services, however, seem not to have been affected by the hurricanes.
  - Measures of longer-run inflation expectations, both market- and survey-based, were little changed over the intermeeting period.
- Economic activity has been expanding at a solid pace despite the hurricane-related disruptions, with increases in a broad set of expenditure categories including those for personal consumption and business fixed investment.
- Despite the continuing tension between the developments on the real side of the economy and inflation, policymakers may nonetheless see the medium-term outlook for inflation and the labor market as essentially unchanged, with the unemployment rate falling somewhat further below its longer-run normal value next year, and with inflation reaching 2 percent by 2019.

Policy Strategy

- Policymakers may view the available information, although somewhat distorted by the hurricanes, as indicating, on balance, that the economy is evolving about in line with their modal forecast. They may continue to believe that the labor market will strengthen somewhat further and that inflation will likely rise toward 2 percent next year as the factors currently holding down core inflation fade.
- Policymakers may continue to see the risks to the outlook for inflation as roughly balanced: On the one hand, the continued soft readings on inflation could indicate that more pressure on resource utilization is needed to return inflation to the Committee's 2 percent objective. On the other hand, the strength of the labor market could result in the unemployment rate falling even farther below its longer-run normal level, a development that could prove difficult to reverse without tipping the economy into recession.
- Furthermore, policymakers may want to obtain additional information on the effects of the start of balance sheet normalization on financial markets, or to gain more clarity on the distortions in the data that arose from the hurricanes, before reassessing the path of the federal funds rate.
- Policymakers may judge that market expectations regarding the future path of the federal funds rate are broadly consistent with the Committee achieving its objectives

over the medium term. Alternatively, policymakers may hold the view that it is premature to try to realign market expectations before seeing how incoming data affect the perceived probabilities of future rate increases. In either case, policymakers might conclude that a change in statement language designed to induce a reassessment by markets of future monetary policy actions is not necessary at this meeting.

- For the reasons stated above, policymakers may view adopting the draft statement of Alternative B as appropriate at this meeting.
- As shown in the "Monetary Policy Expectations and Uncertainty" box, federal funds futures quotes imply that market participants, on average, regard the odds of a rate hike at the upcoming meeting as negligible but see a high probability that the federal funds rate will be raised by the end of the year. Respondents to the Desk's latest surveys have broadly similar expectations. Thus, maintaining the current target range and repeating September's language about the likely future path of the federal funds rate, as in paragraphs 3 and 4 of Alternative B, would probably generate a muted response in financial markets.

THE CASE FOR ALTERNATIVE C

Economic Conditions and Outlook

- The staff projects that, despite hurricane-related disruptions, real GDP growth will step up from 2.1 percent at an annual rate in the first half of the year to around 3 percent in the second half. The solid expansion in economic activity is broad-based.
- The labor market continues to tighten. The unemployment rate declined to 4.2 percent in September, below all FOMC participants' estimates of its longer-run normal level, even as the labor force participation rate rose another 0.2 percentage point to reach 63.1 percent. The increase in the labor force participation rate, against the backdrop of a downward trend arising from demographic forces, may not be sustainable. The payroll employment data for September were depressed by the effects of hurricanes; the reported reduction in payrolls will likely completely dissipate in coming months. Moreover, total nonfarm payrolls are projected to rise in coming quarters at a pace that is well above that commonly regarded as necessary to deliver a constant unemployment rate. Policymakers may view the tightening labor market as evidence that the economy is at risk of overheating.

Monetary Policy Expectations and Uncertainty

Over the intermeeting period, market participants appeared to become increasingly confident that the Committee will announce a 25-basis-point rate hike at the December FOMC meeting (the black line in figure 1). Quotes on federal funds futures contracts assuming zero term premiums suggest that investors now attach a probability of about 80 percent to such an outcome, while seeing virtually no chance of a rate hike at the upcoming FOMC meeting (not shown).[1] The probability of a December rate increase is about 10 to 15 percentage points above where the corresponding probability stood at this time in 2015 and 2016 (the blue and red lines in figure 1), even though the September SEP projections in all three years showed that most FOMC participants viewed it as appropriate to raise the federal funds rate a quarter percentage point by year-end. The higher conviction this year likely reflects recent FOMC and policymaker communications that were interpreted as indicating support among FOMC participants for another rate increase by December, as well as reduced downside risks to the economic outlook both in the United States and abroad.

As shown in figure 2, conditional on a rate increase occurring in December and assuming zero term premiums, federal funds futures quotes imply that market participants assign a probability of close to 40 percent to a subsequent rate hike in March 2018; this probability is higher than at the time of the September meeting. Looking further ahead, the probability distribution of the level of the federal funds rate at the end of 2018 implied by options quotes assuming zero term premiums shifted somewhat to higher values over the intermeeting period. That distribution now attaches about equal probabilities to the federal funds rate falling into the 1½ to 1¾ percent range or the 1¾ to 2 percent range at the end of 2018 (figure 3). The average distribution across respondents to the Desk's latest surveys similarly assigns the highest odds to the funds rate being in the 1.51 to 2 percent range at that time (figure 4).

The forward rates implied by OIS quotes (the black line in figure 5) moved up over the intermeeting period, increasing up to 25 basis points by the end of 2020. Under the assumption of zero term premiums, these market-implied forward rates are consistent with an expected federal funds rate of about 1.7 percent at the end of 2018 and 2.0 percent at the end of 2020. The expected path of the federal funds rate adjusting for term premiums as estimated by a staff term structure model (the light-blue line) also increased since the September FOMC meeting, albeit to a lesser extent. The model-based path continues to suggest a faster pace of rate increases than the unadjusted path, with an expected federal funds rate of 2.2 percent at the end of 2018 and 3.0 percent at the end of 2020. The model-based path is similar to the

[1] Respondents to the October/November Desk surveys on average also assigned negligible odds to the next rate increase occurring at the October/November meeting and high odds to the next rate increase occurring at the December meeting.

Committee's September median SEP projections (the dark blue dots) and to the modal path from the Desk's latest surveys (the brown line).

The staff term structure model assumes that shocks to the economy are normally distributed and therefore implies mean and modal short rate paths that largely coincide when the short rate is sufficiently away from the zero lower bound (ZLB). However, the median respondent to the Desk surveys continues to attach about 20 percent probability to a return to the ZLB sometime over the next three years, suggesting that investors perceive risks to the outlook to be skewed towards the downside. Consistent with this view, the survey-implied mean path (the golden squares in figure 5), which is constructed from respondents' probability distributions under certain assumptions, lies noticeably below the survey-implied modal path and coincides with the unadjusted path.[2]

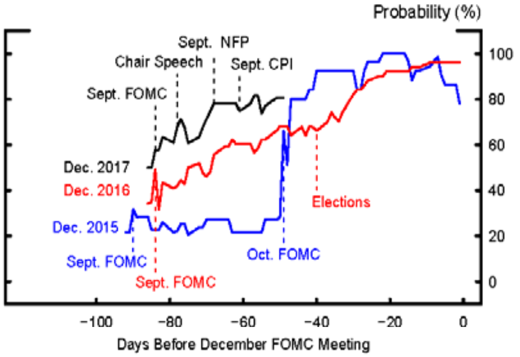
Results from the model and the surveys also offer different perspectives on expectations of the longer-run level of the federal funds rate (the far-right dots in figure 5). The staff term structure model estimates that the federal funds rate will average 3.8 percent over the period five to ten years ahead, largely unchanged since before the September FOMC meeting. This level remains about 1 percentage point above the median projection for the longer-run federal funds rate from the September SEP and the median projection from the latest Desk surveys.

Survey respondents estimated that the neutral real federal funds rate is currently ¼ percent and will rise gradually over time, reaching 1 percent by the end of 2020. The estimates of the current level as well as the levels at the end of 2018 and 2019 were largely unchanged from July when these questions were last asked. Responses to a new question indicated that investors appear to hold quite diverse views about the level of the neutral real rate at the end of 2018. While respondents on average assigned a 50 percent probability to the neutral rate falling between 0 and 1 percent, they also assigned a 16 percent probability to the neutral rate being negative and a 9 percent probability to the rate exceeding 2 percent.

The Desk's latest surveys also returned to a July question on the distribution of PCE inflation between two and three years from now. Respondents' average distribution was largely unchanged from July (figure 6). The median respondent viewed PCE inflation of 1.9 percent as the most likely outcome two to three years hence, about 0.1 percentage point lower than in July.

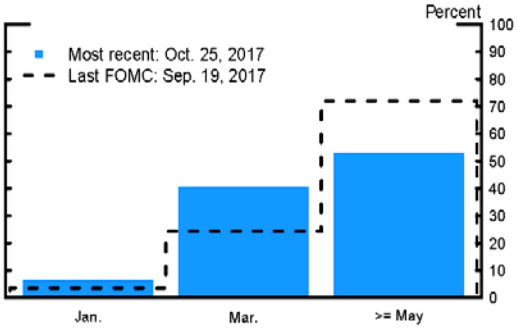
[2] A new question in the most recent Desk surveys asked respondents to decompose the 2-year OIS rate (1.6 percent at the time of the surveys) into two components—the market's expectation of the average effective federal funds rate over the next two years and the term premium. Respondents' estimates of the term premium spanned a wide range; the median estimate of -0.14 percent is consistent with a path that lies between the survey-based modal and mean paths, although much closer to the latter. Of note, the corresponding term premium based on the staff term structure model is -0.46 percent.

Figure 1: Market−Implied Probability of the Next Rate Increase in December Implied by Federal Funds Futures



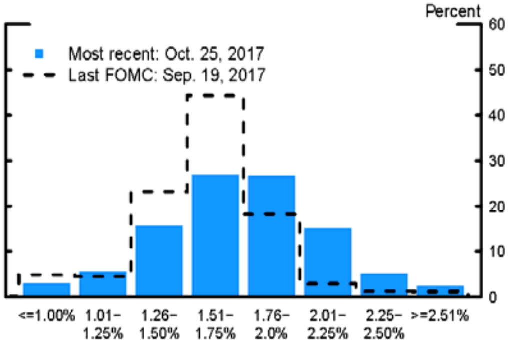
Note: Probabilities implied by a binomial tree fitted to settlement prices on fed funds futures contracts, assuming the next policy action is either no change or a 25 basis point increase in rates and no intermeeting moves. The effective federal funds rate until the next FOMC meeting is assumed to be equal to the observed rate on the previous non−month−end business day.
Source: CME Group; Federal Reserve Board staff estimates.

Figure 2: Market−Implied Probability Distribution of the Timing of Next Rate Increase Conditional on a December Rate Hike



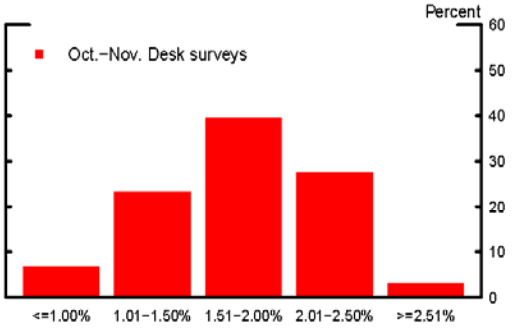
Note: Probabilities implied by a binomial tree fitted to settlement prices on fed funds futures contracts, assuming the next policy action is either no change or a 25 basis point increase in rates and no intermeeting moves. The effective federal funds rate until the next FOMC meeting is assumed to be equal to the observed rate on the previous non−month−end business day.
Source: CME Group; Federal Reserve Board staff estimates.

Figure 3: Market−Implied Probability Distribution of the Federal Funds Rate, Year−End 2018



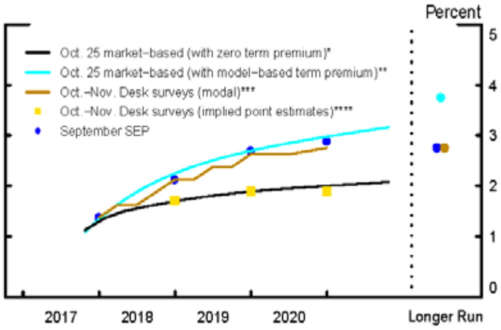
Note: Estimated from Eurodollar futures options, accounting for the differences in the levels and option−implied volatilities of LIBOR and the federal funds rate, but not adjusted for risk premiums.
Source: CME Group; Federal Reserve Board staff estimates.

Figure 4: Desk Survey Probability Distribution of the Federal Funds Rate, Year−End 2018



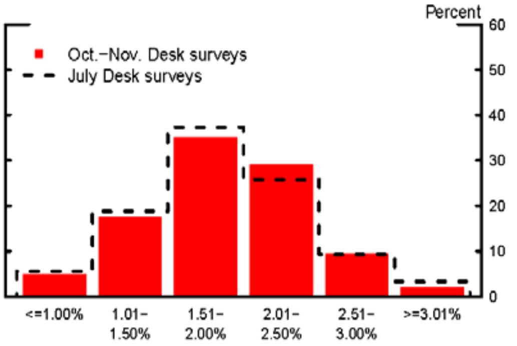
Note: Average unconditional probabilities across primary dealers and market participants for different ranges of the federal funds rate at the end of 2018.
Source: FRBNY.

Figure 5: Federal Funds Rate Projections



* Estimated using overnight index swap quotes with a spline approach and no term premium.
** Estimated using a term structure model maintained by Board staff and adjusted for term premiums. The longer−run model−implied forecast is for the expected federal funds rate 5 to 10 years ahead.
*** Median of the respondents' modal paths for the federal funds rate.
**** Estimated from respondents' conditional year−end probability distributions.
Source: Bloomberg; Blue Chip Financial Forecasts; Federal Reserve Board staff estimates; FRBNY.

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 October 1, 2019 to September 30, 2020.
Source: FRBNY.

- Some information points to the possibility that wages are growing more rapidly than is evident in most aggregate wage series. The Federal Reserve Bank of Atlanta's Wage Growth Tracker, which measures growth of the wages received by individuals that are continuously full-time employed, reports faster wage growth than other measures. Furthermore, related research at the Federal Reserve Bank of San Francisco shows that demographic shifts may have held down the growth in wages measured by most aggregate wage series. Policymakers may see this information, in combination with strong growth in employment, as evidence of a tight labor market.

- The staff's October QS Assessment of Financial Stability indicated that asset valuation pressures remain elevated. Over the intermeeting period, broad equity prices continued to increase from their already high levels. As a result, the equity price-earnings ratio is near its highest value outside of the dot-com era. Spreads on yields of both investment- and speculative-grade corporate bonds over comparable-maturity Treasury securities are quite narrow.

- A range of indexes continue to characterize financial conditions as more accommodative than average, and in particular as looser than in late 2015.[1] Over the intermeeting period, all of them registered a small further loosening in financial conditions.

Policy Strategy

- In light of the continued tightening of the labor market and the solid expansion of real economic activity, policymakers may be concerned that reducing accommodation at the very gradual pace that market participants currently seem to anticipate could result in the economy continuing to grow at an unsustainably rapid rate. In particular, they may see the unemployment rate as on course to undershoot the longer-run normal rate of unemployment substantially. Policymakers may judge that such an undershooting poses significant upside risks to inflation and appreciably raises the likelihood that policy may need to be tightened abruptly in the future.

- Policymakers may also be concerned that the undershooting of the longer-run normal rate of unemployment and loose financial conditions could contribute to an inefficient allocation of resources and pose risks to financial stability.

[1] These financial conditions indexes include: the National Financial Conditions Index (NFCI) compiled by the Federal Reserve Bank of Chicago, the Kansas City Financial Stress Index (KCFSI), the St. Louis Fed Financial Stress Index (STLFSI), and Goldman Sachs' Financial Conditions Index.

- Policymakers may interpret the recent decline in inflation as having been caused largely or entirely by idiosyncratic and temporary factors. They may be confident that inflation will rise to the Committee's 2 percent objective over time even as policy accommodation is withdrawn at a faster pace than communicated by the Committee's recent statements.
- For all of the above reasons, policymakers may opt to reinforce market expectations of an increase in the federal funds rate in the near future, and to suggest that more increases in the federal funds rate might be warranted than policymakers previously thought, or that increases could come more rapidly. Accordingly, policymakers might favor a statement along the lines of Alternative C.
- A statement like Alternative C would quite likely surprise market participants. If the public were to infer that the Committee intends to pursue a less accommodative policy stance in the future as a matter of policy preferences—that is, given their outlook for the economy—then medium- and longer-term real interest rates would likely rise, as would the exchange value of the dollar, and equity prices and inflation compensation would probably fall. If the public were instead to interpret a statement like Alternative C as primarily reflecting a more upbeat assessment of the strength of the economy, then equity prices might fall less than otherwise or even rise, and inflation compensation might rise as well.

THE CASE FOR ALTERNATIVE A

Economic Conditions and Outlook

- On a 12-month basis, both headline and core inflation rates continue to run noticeably below the Committee's 2 percent inflation objective. In nearly every reading from March through September, both the CPI and PCE price indexes have come in softer than generally expected. Furthermore, the 12-month trimmed mean inflation rate calculated by the Federal Reserve Bank of Dallas, a measure of the trend in core inflation, remained at only 1.6 percent in August after slipping 0.1 percentage point in July. Policymakers may note that, notwithstanding the recent and projected strength in economic activity, the staff has revised down its forecasts for both headline and core PCE inflation in 2018. Headline PCE inflation, measured on a four-quarter basis, is projected to be low this year, at 1.5 percent, and to remain somewhat below 2 percent in 2018.

- Recent readings on market-based measures of inflation compensation and survey-based measures of longer-term inflation expectations remain low by historical standards.

- Although the labor market continues to strengthen, the combination of low wage pressures and solid job gains over the recent months suggests that the labor market may not yet have reached maximum sustainable employment and that available estimates of the longer-run normal rate of unemployment may be too high.[2] Recent increases in payroll employment have been well above what is commonly thought to be necessary to deliver a constant unemployment rate, but at the same time there has been a string of positive surprises in the extent of labor force participation this year.

- The evidence discussed in the "Monetary Policy Strategies" section of Tealbook A suggests that the equilibrium real federal funds rate in the longer run, r^{LR}, stepped down markedly since prior to the Global Financial Crisis in 2007–2008 and has stayed at historically low levels since. Policymakers may conclude that r^{LR} is more likely to remain near its current low level than to return to earlier levels.

Policy Strategy

- Although economic activity has been rising moderately on average in the last few quarters, policymakers may see the absence of inflation pressures as allowing the Committee to be even more patient in removing accommodation. Taking into account this year's generally soft inflation readings and the uncertainty surrounding the inflation outlook, policymakers may judge that a prolonged period of even lower unemployment is necessary for inflation to step up, or that allowing higher levels of activity would be an acceptable risk for policymakers to take.

- Inflation continues to run persistently below the Committee's 2 percent objective. The softness in inflation could cause longer-term inflation expectations to drift down, along the lines of the "Different Inflation Process" alternative scenario shown in the "Risks and Uncertainty" section of Tealbook A. In turn, such a decline in inflation expectations could offset the modest upward pressure on actual inflation from high resource utilization. Policymakers may see a non-negligible probability of such outcomes and be concerned that removing policy accommodation too quickly could harm the credibility of the Committee's 2 percent longer-run inflation objective and

[2] The memo to the FOMC "Some Implications of Uncertainty and Misperception for Monetary Policy" offers a broader perspective on the consequences of uncertainty and misperception about the true value of the longer-run normal rate of unemployment for monetary policy.

of its statement that positive and negative deviations from this objective are treated symmetrically.

- If policymakers conclude that the factors holding down r^{LR} will not abate, they may judge that the current stance of monetary policy is only modestly accommodative. Furthermore, estimates of r^{LR} are subject to considerable uncertainty; policymakers may worry that r^{LR} might be even lower than suggested by these estimates. All else equal, a lower value of r^{LR} would imply a higher likelihood of the federal funds rate returning to the effective lower bound after a negative shock to the economy. Such an outcome could further slow convergence of inflation to 2 percent.

- Policymakers also might judge that uncertainty about the effects of recent hurricanes on activity, employment, and prices would support a cautious approach to removing policy accommodation.

- On the basis of these arguments, policymakers may want to communicate that an increase in the target range for the federal funds rate is not warranted at this meeting and that future increases are unlikely until it becomes evident that the recent softness in inflation is being reversed. They may also want to suggest that the Committee would consider reducing the target range if inflation does not increase as expected. Policymakers may therefore prefer a statement along the lines of Alternative A.

- Financial market quotes and the Desk's latest surveys indicate that market participants see little or no chance of an adjustment in the federal funds rate at this meeting, but they assign a high probability of a rate increase in December. Thus, a statement along the lines of Alternative A would likely be regarded as a significant change in the Committee's policy outlook. If the public inferred that the Committee had lowered its outlook for inflation, then market-based measures of inflation compensation would presumably decline. In addition, medium- and longer-term real interest rates would likely fall, as would the exchange value of the dollar and equity prices. If instead the public saw this statement as primarily reflecting policymakers' determination to push inflation up to 2 percent, then inflation compensation could rise, real longer-term interest rates would probably fall less than under the alternative interpretation, and equity prices might rise as well. The effect on the dollar would be ambiguous, with lower real rates and higher future inflation pointing to depreciation, but stronger economic activity suggesting the opposite.

Implementation Note for October-November 2017 Alternatives A, B, and C

Release Date: November 1, 2017

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 20~~ **November 1**, 2017:

- The Board of Governors of the Federal Reserve System voted [unanimously] to maintain the interest rate paid on required and excess reserve balances at 1.25 percent.

- 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 ~~September 21~~ **November 2**, 2017, 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 to 1- 1/4 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 1.00 percent, in amounts limited only by the value of Treasury securities held outright in the System Open Market Account that are available for such operations and by a per-counterparty limit of $30 billion per day.
  >
  > ~~The Committee directs the Desk to continue rolling over at auction Treasury securities maturing during September, and to continue reinvesting in agency mortgage-backed securities the principal payments received through September from the Federal Reserve's holdings of agency debt and agency mortgage-backed securities.~~
  >
  > ~~Effective in October 2017,~~ 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 $6 billion, and to **continue** reinvest**ing** 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 $4 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 1.75 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 ~~the details of operational plans for reducing~~ reinvestments may be found on the Federal Reserve Bank of New York's website.

(This page is intentionally blank.)

Projections

Balance Sheet and Income

The staff has prepared projections of the Federal Reserve's balance sheet and key elements of the associated income statement that are consistent with the staff's baseline economic outlook presented in Tealbook A. Key features of these projections are described below.

SOMA redemptions and reinvestments. As reported in a new exhibit titled "Redemptions and Reinvestments of SOMA Principal Payments," under the balance sheet normalization program initiated in October 2017, $18 billion in Treasury securities and $12 billion in agency securities are projected to be redeemed in the fourth quarter of this year. Over the first twelve months of this program, $175 billion in Treasury securities and about $117 billion in agency securities are projected to be redeemed.[1] While the timing and amount of principal payments of existing Treasury securities holdings are known, agency MBS paydowns are uncertain and have historically displayed considerable variability.

Normalization of the size of the balance sheet. The size of the balance sheet is projected to normalize in the third quarter of 2021, the same quarter as projected in the September Tealbook (see the exhibit titled "Total Assets and Selected Balance Sheet Items" and the table that follows the exhibit). At the time that the size of the balance sheet is normalized:

- Reserve balances reach the assumed longer-run level of $500 billion;[2]

[1] Once the cap on monthly reductions in SOMA holdings of Treasury securities has been fully phased in, reinvestment of principal from maturing Treasury securities will primarily take place in the middle month of each quarter. In contrast, the maximum $20 billion cap on monthly redemptions of agency securities is not projected to bind under the staff's current baseline path of rising longer-term interest rates.

[2] Other noteworthy assumptions underlying the liabilities projections are as follows: Federal Reserve notes in circulation and the Treasury General Account are assumed to increase at the same rate as nominal GDP; the foreign repo pool and balances in the accounts of designated financial market utilities (DFMUs) remain at their September 30, 2017, levels of about $240 billion and $75 billion, respectively; and take-up at the overnight RRP facility is assumed to maintain a value of $100 billion until the level of reserve balances reaches $1 trillion, at which point it declines to zero over the course of one year.

Balance Sheet & Income

Redemptions and Reinvestments of SOMA Principal Payments

Projections for Treasury Securities
(Billions of dollars)

	Redemptions		Reinvestments	
	Period	Cumulative*	Period	Cumulative*
2017: Q4	18.0	18.0	27.1	27.1
2018: Q1	36.0	54.0	74.7	101.9
2018: Q2	54.0	108.0	65.8	167.6
2018: Q3	67.0	175.0	27.4	195.1
2018: Q4	72.1	247.1	29.2	224.3
2019	269.0	516.0	115.0	339.3
2020	210.3	726.3	88.4	427.7

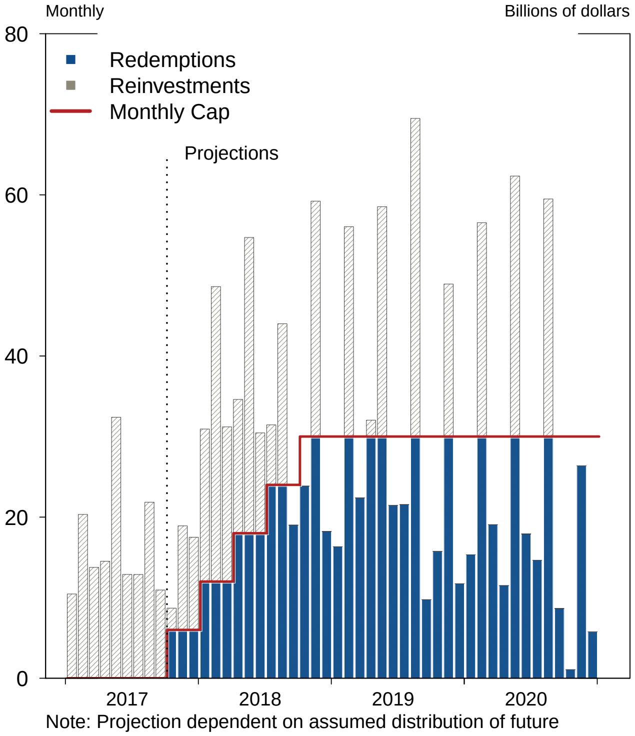
* Since October 2017.

Projections for Agency Securities
(Billions of dollars)

	Redemptions		Reinvestments	
	Period	Cumulative*	Period	Cumulative*
2017: Q4	12.0	12.0	54.1	54.1
2018: Q1	24.0	36.0	24.7	78.8
2018: Q2	36.0	72.0	15.8	94.5
2018: Q3	44.5	116.5	0.6	95.1
2018: Q4	40.3	156.9	0.0	95.1
2019	153.2	310.1	0.0	95.1
2020	140.9	451.0	0.0	95.1

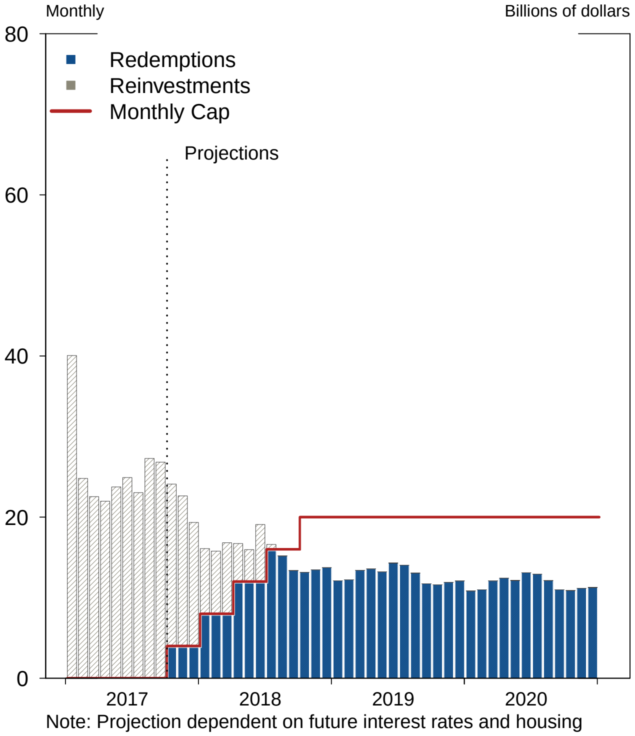
* Since October 2017.

SOMA Treasury Securities Principal Payments



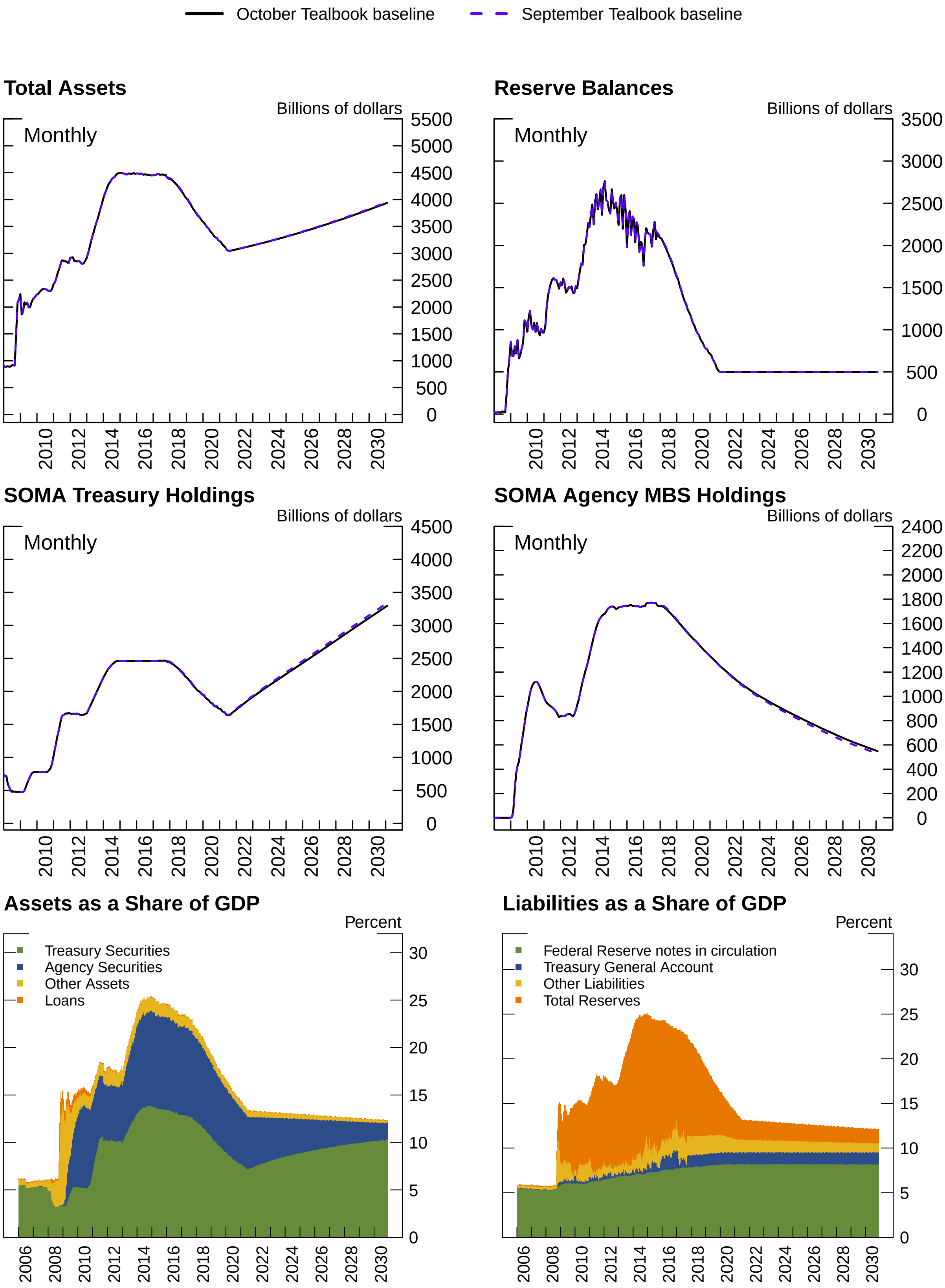
Note: Projection dependent on assumed distribution of future Treasury issuance.

SOMA Agency Debt and MBS Principal Payments



Note: Projection dependent on future interest rates and housing market developments.

Total Assets and Selected Balance Sheet Items



Federal Reserve Balance Sheet
End-of-Year Projections -- October Tealbook
(Billions of dollars)

	Sep 29, 2017	2017	2019	2021	2023	2025	2030
Total assets	4,460	4,382	3,587	3,072	3,224	3,399	3,927
Selected assets							
Loans and other credit extensions*	6	0	0	0	0	0	0
Securities held outright	4,240	4,183	3,419	2,927	3,095	3,283	3,836
U.S. Treasury securities	2,465	2,437	1,945	1,723	2,092	2,429	3,280
Agency debt securities	7	4	2	2	2	2	2
Agency mortgage-backed securities	1,768	1,742	1,472	1,202	1,001	852	553
Unamortized premiums	162	158	125	99	82	68	41
Unamortized discounts	-14	-14	-11	-9	-7	-6	-4
Total other assets	45	47	47	47	47	47	47
Total liabilities	4,419	4,340	3,543	3,024	3,172	3,342	3,856
Selected liabilities							
Federal Reserve notes in circulation	1,532	1,563	1,761	1,892	2,019	2,165	2,608
Reverse repurchase agreements	557	340	340	240	240	240	240
Deposits with Federal Reserve Banks	2,318	2,432	1,437	887	908	932	1,003
Reserve balances held by depository institutions	2,073	2,088	1,071	500	500	500	500
U.S. Treasury, General Account	159	263	286	307	328	351	423
Other deposits	86	80	80	80	80	80	80
Earnings remittances due to the U.S. Treasury	2	0	0	0	0	0	0
Total Federal Reserve Bank capital**	41	41	44	48	52	57	72

Source: Federal Reserve H.4.1 statistical releases and staff calculations.
Note: Components may not sum to totals due to rounding.
*Loans and other credit extensions includes primary, secondary, and seasonal credit; central bank liquidity swaps; and net portfolio holdings of Maiden Lane LLC.
**Total capital includes capital paid-in and capital surplus accounts.

- Total assets are projected to stand at roughly $3 trillion, with about $2.9 trillion in total SOMA securities holdings composed of $1.6 trillion of Treasury securities and $1.3 trillion of MBS;
- Assets and liabilities are each projected to stand at roughly 13 percent of nominal GDP, compared with a peak ratio of about 25 percent in late 2014 and a pre-crisis average of about 6 percent;
- SOMA redemptions from October 2017 to the date when the size of the balance sheet is normalized are projected to total nearly $1.4 trillion, consisting of about $830 billion of Treasury securities and $530 billion of agency debt and MBS.

After the size of the balance sheet is normalized, SOMA holdings rise, keeping pace with the projected increases in Federal Reserve Bank capital and in Federal Reserve liabilities including currency in circulation and the Treasury General Account (TGA).

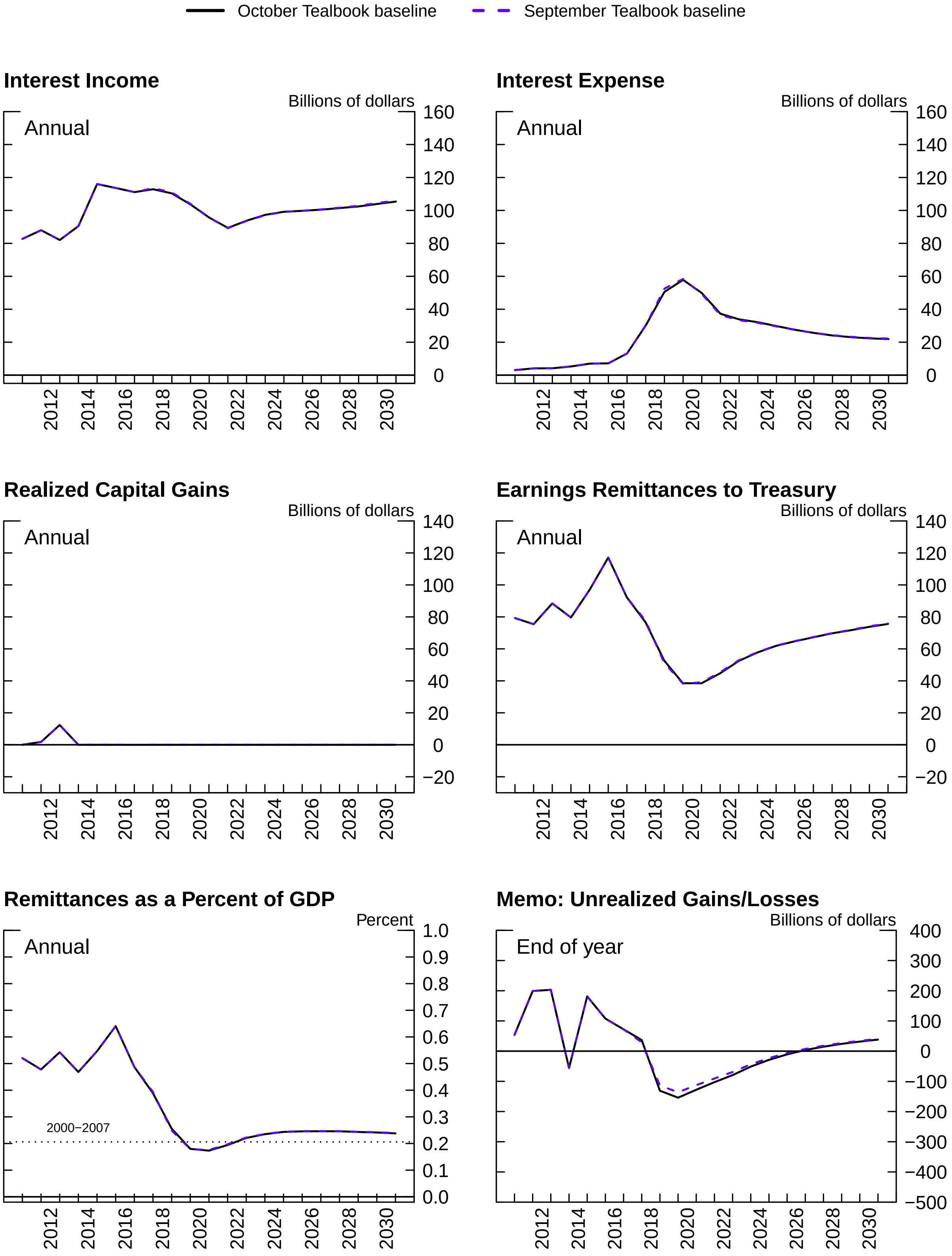
Federal Reserve remittances. Remittances to the Treasury are projected to decline this year to about $78 billion from $92 billion in 2016, reflecting higher interest expense as a result of the increase in the interest rate paid on reserves (see the "Income Projections" exhibit).[3] As the size of the SOMA portfolio decreases and the target range for the federal funds rate moves up further, remittances reach a low of $38 billion in 2020. Thereafter, remittances begin to increase, particularly once the size of the balance sheet is normalized and Treasury securities are added to the SOMA portfolio. As shown in the bottom left panel of the "Income Projections" exhibit, annual remittances average about 0.25 percent of nominal GDP over the projection period, slightly higher than the pre-crisis average share.

Unrealized gains or losses. The staff estimates that the SOMA portfolio was in a net unrealized gain position of about $94 billion at the end of September.[4] With longer-term interest rates expected to rise over the next couple of years in the October Tealbook baseline projection, the portfolio is expected to shift to an unrealized loss position at the start of next year and to record a peak unrealized loss of $160 billion in 2019:Q2; $50 billion of this amount is attributable to Treasury securities and $110 billion to agency

[3] We continue to assume that the FOMC will set a 25 basis-point-wide target range for the federal funds rate and that the interest rate paid on excess reserve balances and the offering rate on overnight RRPs will be set at the top and bottom of the range, respectively.

[4] The Federal Reserve publishes the quarter-end net unrealized gain/loss position of the SOMA portfolio in the "Federal Reserve Banks Combined Quarterly Financial Reports," available on the Board's website at http://www.federalreserve.gov/monetarypolicy/bst_fedfinancials.htm#quarterly.

Income Projections



MBS. The unrealized loss position subsequently narrows, primarily because the value of securities acquired under the Federal Reserve's large-scale asset purchase programs returns to par as those securities approach maturity. This projection is similar to that in the September Tealbook.

Term premium effects. As shown in the table "Projections for the 10-Year Treasury Term Premium Effect," the elevated amount of securities held in the SOMA is currently estimated to be reducing the term premium in the 10-year Treasury yield by 87 basis points, and this effect will gradually fade over time.[5] This projection is nearly identical to that in the previous Tealbook.

SOMA characteristics. As shown in the top panel of the "Projections for the Characteristics of SOMA Treasury Securities Holdings" exhibit, the weighted-average duration of the SOMA Treasury portfolio is currently about 6 years. The weighted-average duration of the portfolio is projected to increase during the balance sheet normalization process as the pace of redemptions picks up and longer-duration securities account for a larger share of the remaining portfolio.

After normalization of the size of the balance sheet, the duration of the SOMA Treasury portfolio is projected to decline as the Federal Reserve resumes purchases of Treasury securities. The initial sharp decline in duration at that time results from the staff's assumption that these purchases will be limited to Treasury bills until they account for one-third of the Treasury portfolio, close to the pre-crisis composition (currently the SOMA portfolio holds no Treasury bills). Thereafter, purchases of Treasury securities are assumed to be spread across the maturity spectrum (see the bottom panel of the exhibit).

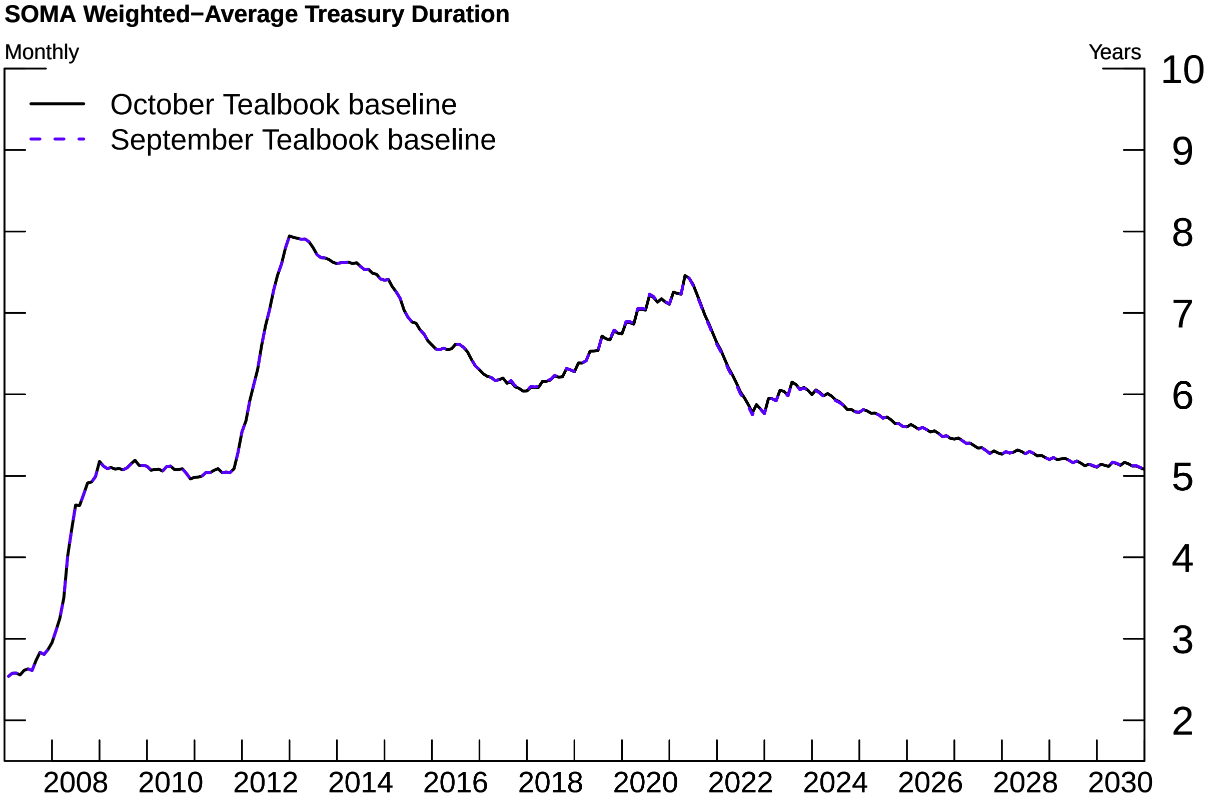
[5] The estimated path of the term premium effect depends on the difference between the expected path of the Federal Reserve's balance sheet over coming years and a benchmark counterfactual projection for the balance sheet based on the configuration of the balance sheet that prevailed before the financial crisis of 2007-2008. In particular, in the benchmark counterfactual balance sheet projection, the staff assumes a longer-run level of reserves of $100 billion and a constant, minimal TGA level, consistent with the pre-crisis behavior of reserve balances and Treasury's pre-crisis cash management policy.

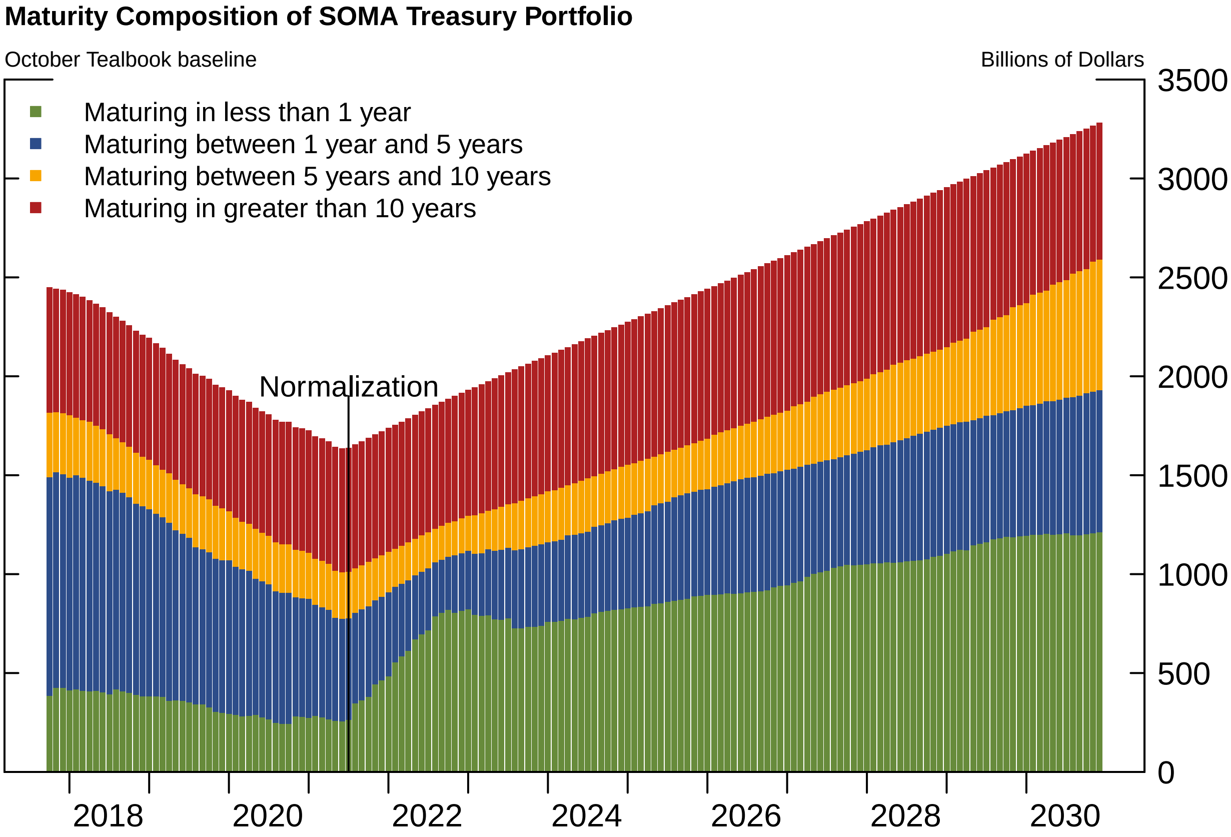
Projections for the 10-Year Treasury Term Premium Effect

(Basis Points)

Date	October Tealbook	September Tealbook
	Quarterly Averages	
2017:Q4	-87	-87
2018:Q4	-75	-75
2019:Q4	-65	-65
2020:Q4	-57	-57
2021:Q4	-51	-51
2022:Q4	-48	-48
2023:Q4	-45	-45
2024:Q4	-42	-42
2025:Q4	-39	-39
2026:Q4	-37	-36
2027:Q4	-35	-34
2028:Q4	-33	-32
2029:Q4	-31	-31
2030:Q4	-29	-29

Projections for the Characteristics of SOMA Treasury Securities Holdings





(This page is intentionally blank.)

Abbreviations

ABS	asset-backed securities
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
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)
TGA	U.S. Treasury’s General Account
TIPS	Treasury inflation-protected securities
TPE	Term premium effects
ZLB	zero lower bound