Prefatory Note

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

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

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Class I FOMC – Restricted Controlled (FR)

Report to the FOMC on Economic Conditions and Monetary Policy

Book B

Monetary Policy Alternatives

January 24, 2019

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

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Monetary Policy Alternatives

Despite the volatility in financial markets in recent months, information received since the Committee met in December indicates that real activity continued to increase at a solid pace through the end of last year and that the labor market has continued to strengthen. The staff estimates that real GDP rose at an annual pace of 2.8 percent in the fourth quarter of 2018, led by strong household spending and a pickup in business fixed investment. Job growth remained robust in the fourth quarter, with payrolls expanding at an average monthly pace of about 250,000. The unemployment rate edged up to 3.9 percent in December, but this rise was accompanied by an increase in the labor force participation rate. The staff continues to project above-trend real GDP growth through 2019 and high levels of resource utilization over the medium term. Over the 12-months ending in December, the staff estimates that total and core PCE prices increased 1.7 percent and 1.9 percent, respectively. The staff continues to project that core PCE inflation will run near 2 percent over the medium term, while total PCE inflation is expected to run below core inflation in the near term, due to recent energy price declines, but to move back in line with it over the medium term. Although TIPS-based measures of inflation compensation have moved down noticeably in recent months, survey-based measures of longer-run inflation expectations have changed little.

Against this backdrop, the alternative policy statements presented below offer a range of options for communicating about the likely future path of monetary policy. The draft of Alternative B is substantially revised from the December 2018 statement and is consistent with the general shift in policymakers' communications over the intermeeting period. Regarding the economic outlook, Alternative B affirms that the most likely outcome remains one of solid growth, strong labor market conditions, and inflation close to the 2 percent objective. However, in light of the tightening in financial conditions over recent months and concerns about a slowdown in global growth, Alternative B emphasizes a flexible and data-dependent approach to monetary policy decisions. In particular, Alternative B replaces the reference to "some further gradual increases" in the federal funds rate with the statement that "the Committee will be patient as it determines what future adjustments to the target range for the federal funds rate may be appropriate" to support the Committee's continued outlook for "sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective."

Another key change in Alternative B is the deletion of the sentence on the balance of risks. In the current environment, the inclusion of such a sentence may convey a stronger signal about the future course of monetary policy than the Committee may wish to send at a time when the new draft language emphasizes that the Committee will be patient in assessing the implications for policy of recent global and financial developments.

Alternative A is broadly similar to Alternative B. The key difference is that Alternative A indicates that "the Committee judges that the risks to the economic outlook are tilted to the downside." This addition gives more weight to the likelihood that an easing in the stance of policy may soon become appropriate. Alternative A states that the Committee "will be patient as it determines what, if any, adjustments to the target range" may be appropriate to achieve its objectives, suggesting more strongly than Alternative B that the federal funds rate may have reached the peak of the current cycle.

Alternative C is written from the perspective that global economic and financial developments do not justify a material change in the policy outlook since last year. Accordingly, the draft adheres closely to the December postmeeting statement. It also conveys, in the first paragraph, a somewhat more upbeat assessment of the incoming data.

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

- The assessment of the incoming data:
    - Alternatives A and B share the same characterizations of the incoming data, both of which are similar to the December FOMC statement. Both alternatives acknowledge the sizable declines in market-based measures of inflation compensation that occurred in recent months, but note that survey measures of longer-term inflation expectations are little changed.
    - Alternative C offers a slightly stronger characterization of the incoming data, citing "robust" job gains, and noting that "business fixed investment appears to have picked up." This alternative also retains the previous language that "indicators of longer-term inflation expectations are little changed."
- The outlook for economic activity and inflation, the associated risks, and the monetary policy path upon which the outlook is conditioned:

Alternatives

- Alternatives A and B note that the Committee "continues to view sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective as the most likely outcomes." Both alternatives mention "global economic and financial developments and muted inflation pressures" as factors altering the outlook for policy.
- Alternative B states that the Committee "will be patient as it determines what future adjustments to the target range for the federal funds rate may be appropriate" to support the Committee's outlook.
- Alternative A adds that the Committee "judges that the risks to the economic outlook are tilted to the downside," and that the Committee will be patient as it determines "what, if any, adjustments" to the target range may support its objectives.
- Alternative C projects "sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective over the medium term," and notes that risks to this outlook are "roughly balanced." These outcomes will likely be achieved with "some further gradual increases" in the target range for the federal funds rate.

- The current policy decision and the outlook for policy:
  - All three alternatives maintain the current target range for the federal funds rate at this meeting.
  - Alternatives A and B now report the target range decision in paragraph 2 before turning to the outlook for the economy and policy. Alternative C, as noted above, adheres closely to the December statement and thus reports the target range decision in paragraph 3.
  - Unlike Alternatives A and B, Alternative C retains the judgement that "some further gradual increases" in the federal funds rate will be appropriate.

DECEMBER 2018 FOMC STATEMENT

1. Information received since the Federal Open Market Committee met in November indicates that the labor market has continued to strengthen and that economic activity has been rising at a strong rate. Job gains have been strong, on average, in recent months, and the unemployment rate has remained low. Household spending has continued to grow strongly, while growth of business fixed investment has moderated from its rapid pace earlier in the year. On a 12-month basis, both overall inflation and inflation for items other than food and energy remain near 2 percent. Indicators 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. The Committee judges that some further gradual increases in the target range for the federal funds rate will be consistent with sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective over the medium term. The Committee judges that risks to the economic outlook are roughly balanced, but will continue to monitor global economic and financial developments and assess their implications for the economic outlook.

3. In view of realized and expected labor market conditions and inflation, the Committee decided to raise the target range for the federal funds rate to 2-1/4 to 2-1/2 percent.

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

Alternatives

Alternative A for January 2019

1. Information received since the Federal Open Market Committee met in ~~November~~ **December** indicates that the labor market has continued to strengthen and that economic activity has been rising at a strong rate. Job gains have been strong, on average, in recent months, and the unemployment rate has remained low. Household spending has continued to grow strongly, while growth of business fixed investment has moderated from its rapid pace earlier ~~in the~~ **last** year. On a 12-month basis, both overall inflation and inflation for items other than food and energy remain near 2 percent. ~~Indicators of longer-term inflation expectations are little changed, on balance.~~ **Although market-based measures of inflation compensation have moved lower in recent months, survey-based measures of longer-term inflation expectations are little changed.**

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. **In support of these goals, the Committee decided to maintain the target range for the federal funds rate at 2-1/4 to 2-1/2 percent.** The Committee ~~judges that some further gradual increases in the target range for the federal funds rate will be consistent with~~ **continues to view** sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective ~~over the medium term~~ **as the most likely outcomes**. **In light of global economic and financial developments and muted inflation pressures, the Committee judges that the risks to the economic outlook are tilted to the downside and that it will be patient as it determines what, if any, adjustments to the target range for the federal funds rate may be appropriate to support these outcomes.** ~~The Committee judges that risks to the economic outlook are roughly balanced, but will continue to monitor global economic and financial developments and assess their implications for the economic outlook.~~

~~3. In view of realized and expected labor market conditions and inflation, the Committee decided to raise the target range for the federal funds rate to 2-1/4 to 2-1/2 percent.~~

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

Alternatives

Alternative B for January 2019

1. Information received since the Federal Open Market Committee met in ~~November~~ **December** indicates that the labor market has continued to strengthen and that economic activity has been rising at a strong rate. Job gains have been strong, on average, in recent months, and the unemployment rate has remained low. Household spending has continued to grow strongly, while growth of business fixed investment has moderated from its rapid pace earlier ~~in the~~ **last** year. On a 12-month basis, both overall inflation and inflation for items other than food and energy remain near 2 percent. ~~Indicators of longer-term inflation expectations are little changed, on balance.~~ **Although market-based measures of inflation compensation have moved lower in recent months, survey-based measures of longer-term inflation expectations are little changed.**

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. **In support of these goals, the Committee decided to maintain the target range for the federal funds rate at 2-1/4 to 2-1/2 percent.** The Committee ~~judges that some further gradual increases in the target range for the federal funds rate will be consistent with~~ **continues to view** sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective ~~over the medium term~~ **as the most likely outcomes**. **In light of global economic and financial developments and muted inflation pressures, the Committee will be patient as it determines what future adjustments to the target range for the federal funds rate may be appropriate to support these outcomes.** ~~The Committee judges that risks to the economic outlook are roughly balanced, but will continue to monitor global economic and financial developments and assess their implications for the economic outlook.~~

~~3. In view of realized and expected labor market conditions and inflation, the Committee decided to raise the target range for the federal funds rate to 2-1/4 to 2-1/2 percent.~~

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 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 JANUARY 2019

1. Information received since the Federal Open Market Committee met in ~~November~~ **December** indicates that the labor market has continued to strengthen and that economic activity has been rising at a strong rate. Job gains have been ~~strong~~ **robust**, on average, in recent months, and the unemployment rate has remained low. Household spending has continued to grow strongly, while growth of business fixed investment ~~has~~ **appears to have** ~~moderated from its rapid pace earlier in the year~~ **picked up**. On a 12-month basis, both overall inflation and inflation for items other than food and energy remain near 2 percent. Indicators 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. The Committee judges that some further gradual increases in the target range for the federal funds rate will be consistent with sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective over the medium term. The Committee judges that risks to the economic outlook are roughly balanced, but will continue to monitor global economic and financial developments and assess their implications for the economic outlook.

3. In view of realized and expected labor market conditions and inflation, the Committee decided to ~~raise~~ **maintain** the target range for the federal funds rate ~~to~~ **at** 2-1/4 to 2-1/2 percent.

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

Alternatives

THE CASE FOR ALTERNATIVE B

Economic Conditions and Outlook

- Although incoming data for the labor market and the real economy have been strong and inflation has remained close to 2 percent, a number of the factors that propelled growth in 2018 appear to be waning. Risky asset prices have declined and financial conditions have tightened, on net, since last September amid increased concerns about the domestic and global economic outlook. While asset valuations have partially recovered since the year end, the tightening in financial conditions and less buoyant economic conditions abroad are headwinds for the U.S. outlook. These factors, along with waning fiscal stimulus and the cumulative effects of previous reductions in monetary policy accommodation, should contribute to a step-down in growth this year. Despite high levels of resource utilization, inflationary pressures continue to be subdued.
- Available data indicate that the labor market has continued to strengthen.
  - Nonfarm payroll gains averaged about 250,000 in the three months ending in December, well above the pace that the staff estimates is consistent with no change in resource utilization.
  - The unemployment rate rose slightly to 3.9 percent in December, but this rise was accompanied by an increase in labor force participation. The unemployment rate is down 0.2 percentage point since the end of 2017, and although it remains below all participants' estimates of the longer-run rate of unemployment in the December Summary of Economic Projections, policymakers do not expect high levels of labor utilization to generate notable upward pressure on inflation.
  - Average hourly earnings rose 3.2 percent over the year ending in December, consistent with a strong labor market.
- Inflation is projected to remain close to the Committee's symmetric 2 percent goal.
  - The staff expects the change in total and core PCE prices to be 1.7 percent and 1.9 percent, over the twelve months ending in December. While core inflation came in notably below 2 percent over the six months ending in November, at an annual rate of 1.5 percent, the staff attributes some of this shortfall to residual seasonality and projects core PCE inflation to bounce back and remain close to 2 percent on a 12-month basis. Recent declines in oil prices

are expected to weigh on total PCE inflation in the near term, but the effect of these declines on inflation is anticipated to be transitory and this measure is expected to return to 2 percent over the medium term.

- o Despite some increases in wage growth, unit labor costs have decelerated as productivity growth has picked up.
- o The decline in market-based measures of inflation compensation that occurred in the fall has persisted, leaving the level of inflation compensation 5-to-10 years ahead about 30 basis points lower than in October. Staff models attribute more of this decline to reduced risk premiums rather than to lower expected inflation.[1] Survey-based measures of longer-term inflation expectations have changed little and remain within the range of readings over recent years. On balance, measures of inflation expectations continue to suggest that longer-term inflation expectations remain well-anchored.

- Financial market participants' appetite for risk deteriorated markedly late last year, with enhanced sensitivity to changing perceptions of the future path of monetary policy and the growth outlook. Over the fourth quarter of 2018, equity prices fell sharply and risk spreads on corporate bonds widened. Meanwhile, Treasury yields declined notably and financial conditions for businesses and households tightened, according to a range of indicators. That said, over the intermeeting period alone, changes in U.S. risk asset prices were positive, on net.
- Risks appear to be shifting somewhat to the downside.
  - o Household and business sentiment, while broadly consistent with solid growth and strong labor market outcomes, have softened in recent months. The apparent slowdown in foreign growth, continuing trade policy disputes, the prospect of significant further tightening in financial conditions, and, to a lesser extent, waning fiscal impetus pose downside risks for economic activity.

Policy Strategy

- Policymakers may continue to see economic conditions evolving in line with their expectations as the most likely outcome, but in light of the four increases in the target range in 2018 and the tightening of financial conditions in recent months, they may

[1] See also the box "The Decline in Longer-Horizon Inflation Compensation," in the Financial Market Developments section of Tealbook A.

deem it prudent to leave the target range unchanged at the January meeting and to cease signaling that further increases in the target range are likely.

- By adopting Alternative B, policymakers would acknowledge that with softer global economic and financial conditions and muted inflation pressures, it is advisable for the Committee to exercise patience, while awaiting the arrival of data that can inform its judgment about the appropriate stance of monetary policy.
- At the same time, policymakers may prefer to withhold an explicit characterization of the balance of risks to avoid conveying too strong a signal about the future course of monetary policy.
- Policymakers may expect that inflation will continue to run close to the Committee's symmetric 2 percent inflation goal over the medium term. However, policymakers may judge that, with muted inflation pressures, further increases in the federal funds rate could result in inflation running persistently below the 2 percent objective.
- Market quotes along with responses to the Desk's latest surveys of primary dealers and market participants indicate that an increase in the target range at either the January or March meetings is seen as highly unlikely. Alternative B appears to be largely consistent with the tone of policymakers' communications over the intermeeting period and with subsequent market adjustments to the expected path of the policy rate. However, results from the Desk's surveys suggest that some market participants could be surprised by the extent of revisions to the statement, including the removal of "some further gradual increases." Consequently, a statement along the lines of Alternative B could lead to modest declines in market expectations for the federal funds rate and some increases in equity prices and inflation compensation. That said, in the current environment of heightened sensitivity to policy communications, predicting the market reaction is particular uncertain at this meeting.

Alternatives

Monetary Policy Expectations and Uncertainty

Despite declining substantially early in the intermeeting period, measures of federal funds rate expectations for the next few years based on financial market prices ended the period only slightly lower. However, respondents to the Desk's January surveys have pushed back the most likely timing of further rate hikes in 2019 and moderately revised down their federal funds rate expectations for 2020.

Quotes on federal funds futures contracts imply that investors attach virtually no odds to a 25-basis-point increase in the target range for the federal funds rate at the January FOMC meeting (not shown). Looking further ahead, the probability distribution for the federal funds rate at the end of 2019 implied by options quotes changed little, on net (figure 1); a straight read of the distribution suggests that investors continue to place roughly equal odds on either no change to the target range for the federal funds rate or one 25-basis-point increase in 2019.

Financial market measures of the expected federal funds rate over the next few years varied significantly over the intermeeting period but ended the period only slightly lower on net. Early in the period, a deterioration in investors' risk sentiment prompted substantial declines in forward rates derived from overnight index swaps (OIS) quotes; at one point, end-2019 and end-2020 forward rates had declined by 29 and 41 basis points, respectively (the dash-dotted blue line in figure 2). But risk sentiment subsequently rebounded, in part because of some robust data releases and comments from FOMC participants that were interpreted as signaling greater flexibility in the conduct of monetary policy in response to adverse developments. On net, end-2019 and end-2020 forward rates ended the period only 5 and 8 basis points lower, respectively (the solid blue line). Movements in the expected federal funds rate path adjusted for term premiums using a staff term structure model were more muted (the red lines).

Figure 3 compares the current level of various measures of the expected federal funds rate. A straight read of OIS forward rates suggests that investors expect the federal funds rate to remain unchanged during 2019 and to decline about 15 basis points in 2020. In contrast, the latest path from the staff's model continues to suggest that investors expect two 25-basis-point rate increases by the end of 2019 and further gradual increases thereafter, which is close to the Committee's December median SEP projections (the dark blue dots). The modal path reported by the median respondent to the Desk's January surveys similarly points to two further rate hikes in 2019 (the brown line),[1] although the most likely timing of those hikes has been pushed back from the first and third quarters of 2019 in

[1] The staff model incorporates survey forecasts for the federal funds rate from Blue Chip Financial Forecasts, which generally lie fairly close to the modal path from the most recent Desk surveys. The model and surveys are therefore not independent sources of information.

the December surveys (not shown), to the second and fourth quarters in the January surveys. The survey-based modal path at end-2020 has fallen by 25 basis points since December, and the path now points to no rate increases after 2019.

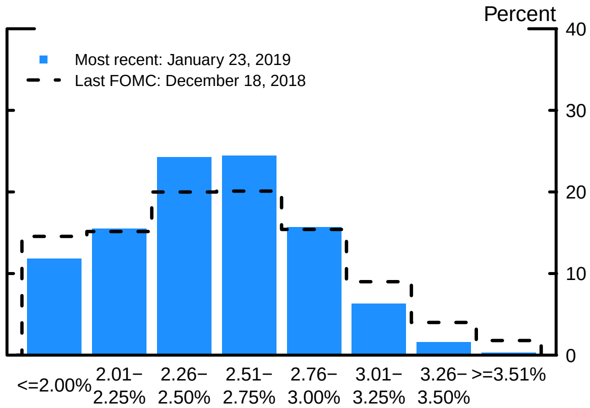
Figure 4 shows measures of the longer-run expected federal funds rate. A straight read of forward rates at longer horizons implied by Treasury securities (the blue line) suggests that investors' current expectation for the average federal funds rate 5 to 10 years ahead is about 2.9 percent, just slightly below its level at the time of the December meeting. Adjusting for term premiums using various staff term structure models (with the light-red-shaded region showing a range of three such model estimates) continues to suggest that 5-to-10-year-ahead expectations are above the unadjusted forward rates, at between 3.1 and 3.9 percent.[2] In contrast, surveys of professional forecasters suggest that longer-run expectations lie closer to the unadjusted forward rates; the average longer-run forecast from the December Blue Chip survey (the yellow diamonds) and the median forecast from the latest Desk surveys (the green diamonds) were 3.1 and 2.8 percent, respectively.

The January Desk surveys asked respondents for their estimates of the current and future levels of the neutral real federal funds rate. Figure 5 shows the dispersion of responses at different horizons. Each dot is centered on a different projected rate and is scaled in size by the number of respondents making that projection. The median estimate of the current neutral rate was 0.60 percent, 0.10 percentage point higher than in the July/August 2018 survey, when this question was last asked. The median estimate for the end of 2019 was little changed at 0.75 percent, while the end-2020 estimate declined by 0.20 percentage point to 0.80 percent. The median estimate for the end of 2021, which was asked for the first time in the January surveys, was 0.75 percent.

A new question in the January Desk surveys asked respondents for their projections of the level of the par value of the SOMA portfolio at the end of 2019, conditional on different levels for the target federal funds rate at year-end. Figure 6 shows the medians and interquartile ranges of the individual responses. If the federal funds rate ends the year at or above its current level, the median respondent expects the level of the SOMA portfolio to decline from its current level of about \$3.9 trillion (shown by the dotted line) to about \$3.4 trillion by year end. However, if the federal funds rate ends the year below its current level, the median respondent expects the SOMA portfolio to decline by less: to \$3.6 billion or \$3.7 billion dollars if the federal funds rate ends the year between 1.76 percent and 2.25 percent or below 1.76 percent, respectively.

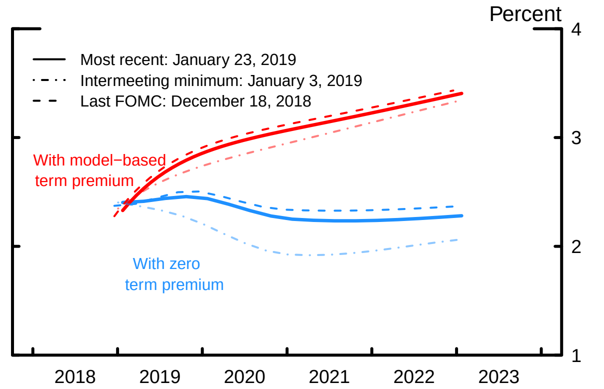
[2] Versions of this chart shown in previous editions of this box reported a range of estimates that was erroneously narrow. While the upper end of the corrected range is unchanged, the lower end of the range since 2015 is on average 11 basis points lower than the values previously shown.

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



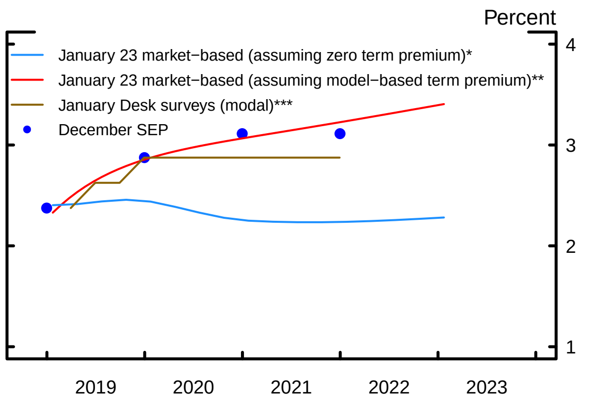
Note: Estimated from Eurodollar futures options, accounting for the differences in the levels and option−implied volatilities of LIBOR and the federal funds rate, but not adjusted for risk premiums.
Source: CME Group; Federal Reserve Board staff estimates.

Figure 2: Market−Implied Federal Funds Rate Expectations



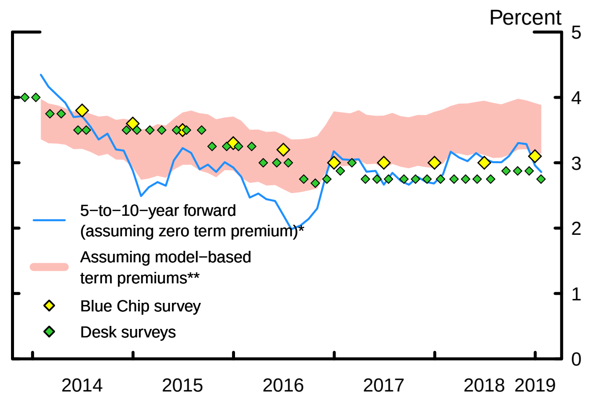
Note: Zero term premium path is estimated using overnight index swap quotes with a spline approach and a term premium of zero basis points. Model−based term premium path is estimated using a term structure model maintained by Board staff and corrects for term premium.
Source: Bloomberg; Federal Reserve Board staff estimates.

Figure 3: Federal Funds Rate Projections



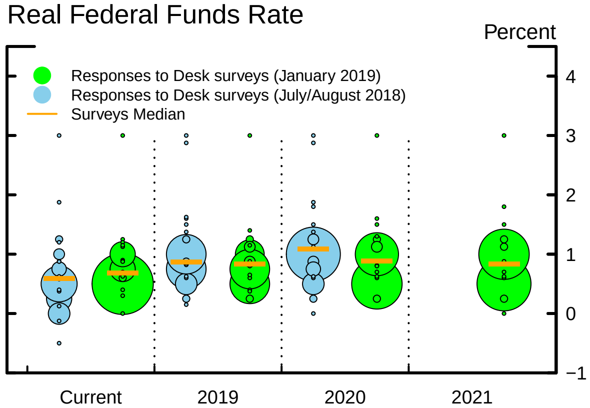
* Estimated using overnight index swap quotes with a spline approach and a term premium of zero basis points.
** Adjusting for premiums using a term structure model maintained by Board staff.
*** Median of respondents' modal paths for the federal funds rate.
Source: Bloomberg; Federal Reserve Board staff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

Figure 4: Measures of Longer−Run Federal Funds Rate Expectations



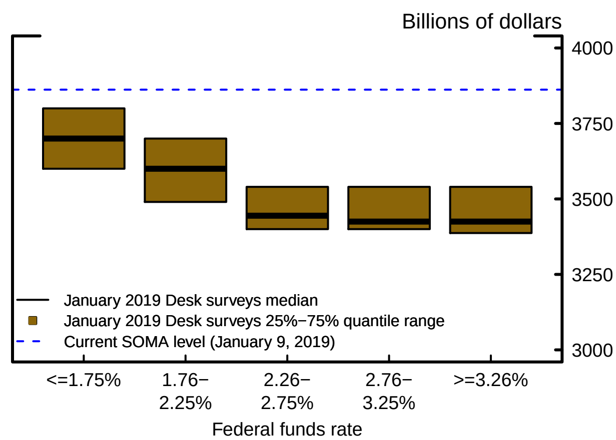
* Monthly average 5−to−10−year forward rate derived from prices of Treasury securities.
** Monthly average 5−to−10−year forward rate adjusted for three alternative model−based term premium estimates using Kim and Wright (2005), D'Amico, Kim, and Wei (2018), and Priebsch (2017).
Source: Blue Chip; FRBNY; Federal Reserve Board staff estimates.

Figure 5: Desk Survey Estimates of the Neutral Real Federal Funds Rate



Note: Dots scaled by number of respondents.
Source: FRBNY.

Figure 6: Desk Survey Projections for the Par Value of the SOMA Portfolio at end−2019



Note: Projections are shown conditional on different ranges of the target federal funds rate at year−end 2019.
Source: FRBNY.

THE CASE FOR ALTERNATIVE A

Economic Conditions and Outlook

- Policymakers may view slowing global economic growth and the reduced risk appetite in financial markets as evidence that the balance of risks for the outlook has shifted to the downside.
- Policymakers may also note that the strong growth rate of real GDP in 2018 was associated with a number of temporary factors, and that real GDP growth is projected to decline steadily over the next few years, in part reflecting waning fiscal impetus.
    - Policymakers may also point to the recent softening of household and business sentiment, the deterioration of readings in most regional manufacturing surveys, and the ongoing sluggishness in residential construction as factors that could hold down economic growth in the near term.
- Policymakers may observe that, while real growth has been robust recently, the economy has shown no signs of widespread overheating. The labor market has improved at a steady pace over the past few years without generating a sizable increase in either growth in unit labor costs or inflation.
    - Although measures of labor compensation have firmed over the past two years, so has productivity growth. As a result, growth of unit labor costs has been modest, making it less likely that the low level of the unemployment rate will lead to inflation rising appreciably above 2 percent.
    - Labor force participation has increased steadily since last September, notably exceeding staff's projections.
- Policymakers may note that core PCE prices rose at an annual rate of only 1.5 percent in the second half of 2018 and may have doubts that inflation will bounce back promptly. Policymakers may judge that some survey measures of inflation expectations remain too low, and may also point to the persistent decline in market-based measures of inflation compensation since last October as evidence that longer-term inflation expectations may be softening.
- Policymakers may see developments in Treasury markets—particularly the flattening of the nominal yield curve—as supporting the view that the current level of the federal funds rate is close to its neutral level. Policymakers may also note that an inversion of the yield curve has historically been associated with recessions.

Policy Strategy

- Policymakers may judge that while both objectives of the dual mandate are nearly fulfilled at present, risks to the outlook are tilted to the downside. They might also note that inflation pressures are still muted, reducing any need for near-term policy tightening. They may therefore deem it prudent to leave the target range for the federal funds rate unchanged at this meeting and to signal an intention to be patient in assessing what, if any, adjustments in the target range may be appropriate to promote the Committee's objectives.
    - Policymakers may wish to adopt a flexible approach to adjusting the monetary policy stance to sustain economic activity in the face of increased headwinds to growth and to prevent further softening of inflation below the Committee's 2 percent objective.
    - Policymakers might note that monetary policy affects economic activity with a lag, and that the removal of accommodation that has taken place over the past few years will continue to restrain economic activity for some time.
    - By referring explicitly to downside risks, policymakers might wish to suggest that lower settings for the target range for the federal funds rate may soon become appropriate.
- Policymakers may continue to view the current state of the financial system as sound and the potential for a significant buildup of risks to financial stability as limited. However, policymakers may be concerned that a slowdown in growth, even if generally expected, may lead to a further tightening of financial conditions, particularly if firms' credit ratings are downgraded or earnings fall short of expectations. Such developments could further weaken the economic outlook.
- Although Alternative A would be consistent with the widely-held expectation of no change in the target range at the upcoming meeting, if market participants viewed the explicit reference to risks being tilted to the downside as signaling pessimism on the part of the Committee regarding the economic outlook, market expectations for the federal funds rate would likely fall, together with equity prices, the exchange value of the dollar, and inflation compensation. However, to the extent that market participants judged Alternative A as confirming a more accommodative policy reaction function, then equity prices, and inflation compensation would likely rise, while market expectations for the federal funds rate would fall.

THE CASE FOR ALTERNATIVE C

Economic Conditions and Outlook

- Policymakers may judge that the labor market is operating beyond full employment and that economic activity will continue to be spurred by expansionary fiscal policy, still-buoyant levels of consumer and business confidence and the associated momentum in the economy.
  - The unemployment rate is below the estimates of all participants of the longer-run normal level of unemployment reported in the December Summary of Economic Projections, and it is projected to decline slightly further.
- Policymakers may note that incoming data on core PCE inflation have for some time been close to 2 percent, and may predict that upward pressure on inflation could emerge amid a prolonged period of significant labor market tightness. Policymakers may judge that inflation expectations are little changed, and note that survey measures of longer-run inflation expectations have remained steady.
- Policymakers may take positive signals, on net, from incoming data for the economic outlook, which have surprised staff to the upside. In particular, they may note indications of a rebound in the growth rate of business fixed investment from the moderate pace recorded in the third quarter. Additionally, growth in household spending continues to be strong.
- Policymakers may judge that the decline in equity prices and the upward move in corporate risk spreads since last September are a healthy correction of excess valuation pressures. They may further note that the decline in risk asset prices that occurred late last year has already partly retraced, and that increases in market volatility have largely subsided. More generally, policymakers may view broader financial conditions as still accommodative, relative to historical experience.

Policy Strategy

- To keep inflation near 2 percent and sustain the economic expansion over the medium term, policymakers may judge that the target range for the federal funds rate will likely need to be raised somewhat further.
  - Policymakers may be focused on indicators of a strong labor market, such as the employment-to-population ratio of prime-age workers, which at nearly 80 percent has returned to levels last seen in 2007. They may be concerned that this labor market tightness, combined with ongoing above-trend economic

growth, could result in inflation pressures building to an extent that would require sizeable interest rate increases later on, unless the Committee continued on the course of gradual increases for somewhat longer.

- Policymakers may note that, even after the rate hike at the December meeting, the federal funds rate would still lie below prescriptions from a wide range of policy strategies—including those from most of the simple policy rules shown in the "Monetary Policy Strategies" section of Tealbook A. If they judge that the rules underlying these prescriptions have provided reasonable characterizations of past Committee behavior, policymakers may believe that large, prolonged deviations from these prescriptions may increase the risk that inflation will eventually rise appreciably above 2 percent.
- For the above reasons, policymakers may opt to continue to express their judgment that "some further gradual increases" in the target range for the federal funds rate are consistent with meeting their dual-mandate objectives.
- Policymakers may also wish to communicate that, although they will continue to monitor global economic and financial developments, the risks to the outlook remain roughly balanced.
- Although Alternative C would be consistent with the widely-held expectation of no change in the target range at the upcoming meeting, retaining the forward guidance in Alternative C could come as a surprise in light of policymakers' communications over the intermeeting period. Such a statement would likely cause policy rate expectations to ratchet up in the near term, while equity prices and inflation compensation would probably fall, and the dollar could appreciate.

IMPLEMENTATION NOTE

Under any of the Alternatives, the Committee would issue an implementation note that indicates no change to the Federal Reserve's administered rates—the interest rate on required and excess reserve balances, the offering rate on overnight reverse repurchase agreements, and the primary credit rate. In the draft implementation note on the following pages, struck-out text indicates language deleted from the December directive and implementation note, bold red underlined text indicates added language, and blue underlined text indicates text that links to websites.

Implementation Note for January 2019 (all Alternatives)

Release Date: January 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 (FOMC) in its statement on ~~December 19, 2018~~ **January 30, 2019**:

- The Board of Governors of the Federal Reserve System voted [unanimously] to ~~raise~~ **maintain** the interest rate paid on required and excess reserve balances ~~to~~ **at** 2.40 percent, effective ~~December 20, 2018~~ **January 31, 2019**. ~~Setting the interest rate paid on required and excess reserve balances 10 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 ~~December 20, 2018~~ **January 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 2-1/4 to 2-1/2 percent, including overnight reverse repurchase operations (and reverse repurchase operations with maturities of more than one day when necessary to accommodate weekend, holiday, or similar trading conventions) at an offering rate of 2.25 percent, in amounts limited only by the value of Treasury securities held outright in the System Open Market Account that are available for such operations and by a per-counterparty limit of $30 billion per day.

  The Committee directs the Desk to continue rolling over at auction the amount of principal payments from the Federal Reserve's holdings of Treasury securities maturing during each calendar month that exceeds $30 billion, and to continue reinvesting in agency mortgage-backed securities the amount of principal payments from the Federal Reserve's holdings of agency debt and agency mortgage-backed securities received during each calendar month that exceeds $20 billion. Small deviations from these amounts for operational reasons are acceptable.

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

Alternatives

Alternatives

- In a related action, the Board of Governors of the Federal Reserve System voted **[** unanimously **]** to approve ~~a 1/4 percentage point increase in~~ **the establishment of** the primary credit rate ~~to~~ **at the existing level of** 3.00 percent~~, effective December 20, 2018. In taking this action, the Board approved requests to establish that rate submitted by the Boards of Directors of the Federal Reserve Banks of Boston, Cleveland, Richmond, Atlanta, Chicago, 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.

Balance Sheet and Income Projections

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

The projections incorporate a revised assumption for future balances of the Treasury General Account (TGA). To account for the recent historical pattern, we now set the TGA balance at the start of the projection period to a more recent average, rather than to the previously-used longer-run average. This change shifts up the path of the TGA by roughly $80 billion. For the remainder of the projection period we continue to assume that the TGA grows in line with nominal GDP.

As in the December Tealbook, the projections assume that the FOMC's current balance sheet reduction program continues until reserve balances decline to $1 trillion, roughly $600 billion lower than their current level. Staff projects that this level of reserve balances will be reached in the first quarter of 2020, one quarter earlier than under the previous projection because of the upward revision to the path for the TGA.

Evolution of the SOMA portfolio. The balance sheet normalization program initiated in October 2017 has led to the redemption of $247 billion of Treasury securities and $173 billion of agency securities through the end of 2018 (see the table in the exhibit "Redemptions and Reinvestments of SOMA Principal Payments"). During this same period, reinvestments of principal payments on Treasury and agency securities were $224 billion and $152 billion, respectively. If the current plan were to continue through the end of 2019, redemptions of Treasury securities and agency MBS this year would total approximately $270 and $180 billion, respectively.[1] All told, under these projections, redemptions would total about $950 billion by the time they cease in the first quarter of 2020. Of this total, redemptions of Treasury and agency securities comprise about $570 billion and $380 billion, respectively.

[1] Further reinvestments of agency MBS are unlikely to occur and future reinvestments of principal from maturing Treasury securities will take place primarily in the middle month of each quarter (see the bottom panel in the exhibit "Redemptions and Reinvestments of SOMA Principal Payments"). However, the projections for agency MBS are subject to considerable uncertainty because of unscheduled prepayments.

Balance Sheet & Income

Redemptions and Reinvestments of SOMA Principal Payments

Projections for Treasury Securities
(Billions of dollars)

	Redemptions		Reinvestments	
	Period	Since Oct. 2017	Period	Since Oct. 2017
2019: Q1	68.7	315.7	26.1	250.3
2019: Q2	81.5	397.2	30.5	280.8
2019: Q3	64.5	461.7	39.5	320.2
2019: Q4	56.2	517.9	18.2	338.4
2018	229.1	247.1	197.1	224.2
2019	270.8	517.9	114.2	338.4
2020*	47.3	565.1	23.6	362.0

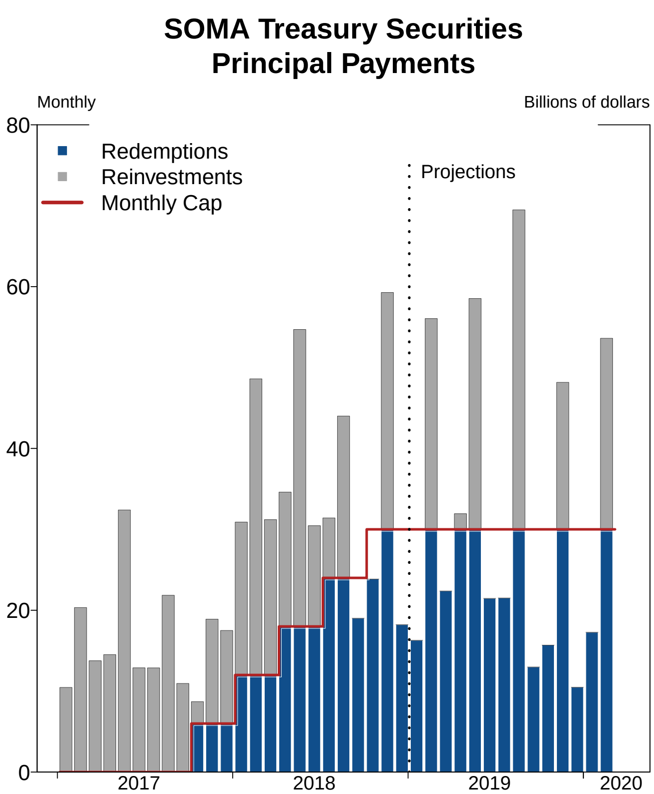
*Until projected normalization in February 2020.

Projections for Agency Securities
(Billions of dollars)

	Redemptions		Reinvestments	
	Period	Since Oct. 2017	Period	Since Oct. 2017
2019: Q1	45.2	218.0	0	152.3
2019: Q2	48.4	266.3	0	152.3
2019: Q3	48.5	314.8	0	152.3
2019: Q4	38.4	353.3	0	152.3
2018	160.8	172.8	87.6	152.3
2019	180.5	353.3	0.0	152.3
2020*	24.0	377.2	0.0	152.3

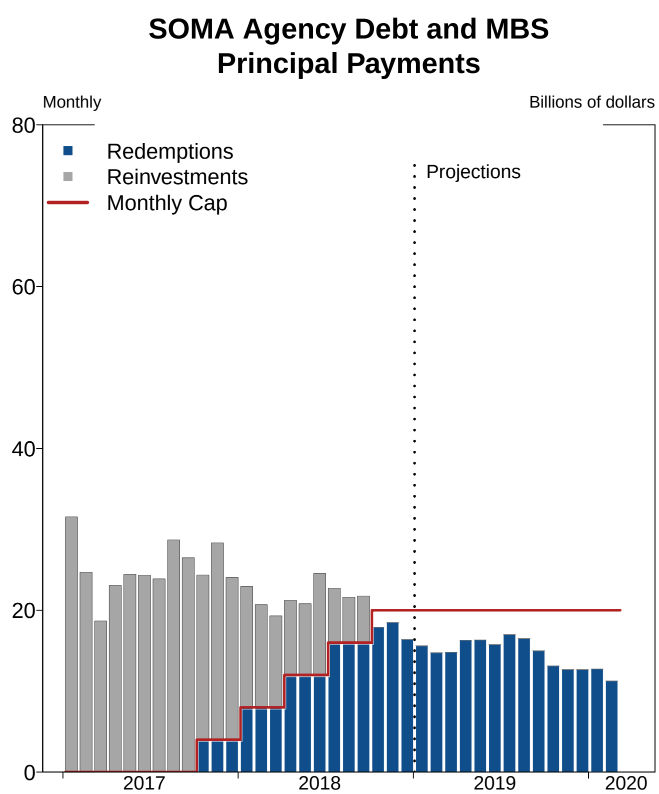
*Until projected normalization in February 2020.

Balance Sheet & Income



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

Source: Federal Reserve Board staff calculations



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

By the time that redemptions end, the SOMA portfolio is projected to be slightly less than $3.4 trillion, consisting of about $1.9 trillion in Treasury securities and $1.4 trillion in agency securities. At that time, the size of the balance sheet is projected to stand at roughly 16 percent of nominal GDP, with non-reserve liabilities totaling 11 percent (see the exhibit titled "Total Assets and Selected Balance Sheet Items"). For comparison, the size of the balance sheet as a share of nominal GDP peaked at about 25 percent in 2014 and averaged about 6 percent prior to the crisis. After redemptions cease, SOMA holdings will begin to rise, keeping pace with the increases in Federal Reserve liabilities, including Federal Reserve notes in circulation, the TGA, and Federal Reserve Bank capital.

The share of agency MBS in the SOMA portfolio, which currently stands at 42 percent, is expected to rise slightly in the near term, reflecting the faster pace of Treasury roll-offs. This share begins to decline once redemptions end, reaching 25 percent in the middle of 2024.

SOMA portfolio characteristics. The weighted-average duration of the SOMA Treasury portfolio is currently about six years (see the top panel of the exhibit titled "Projections for the Characteristics of SOMA Treasury Securities Holdings"). This measure is projected to increase until early-2020 as redemptions continue and longer-duration securities become a larger share of the portfolio. After normalization of the size of the balance sheet in 2020, the duration of the SOMA Treasury portfolio is projected to decline as the Desk is assumed to add Treasury bills to the portfolio, reflecting the reinvestment of maturing securities and the expansion of non-reserve liabilities. Once Treasury bills are one-third of the Federal Reserve's Treasury securities portfolio, close to their pre-crisis share, further purchases of Treasury securities are assumed to be spread across the maturity spectrum (see the bottom panel of the exhibit).[2]

Federal Reserve remittances. Remittances to the Treasury are projected to decline to $42 billion this year from $65 billion in 2018, reflecting the increases in the interest rate paid on reserve balances in 2019 (see the "Income Projections" exhibit).[3]

[2] Excluding securities acquired through small-value test operations, the SOMA portfolio currently contains no Treasury bills.

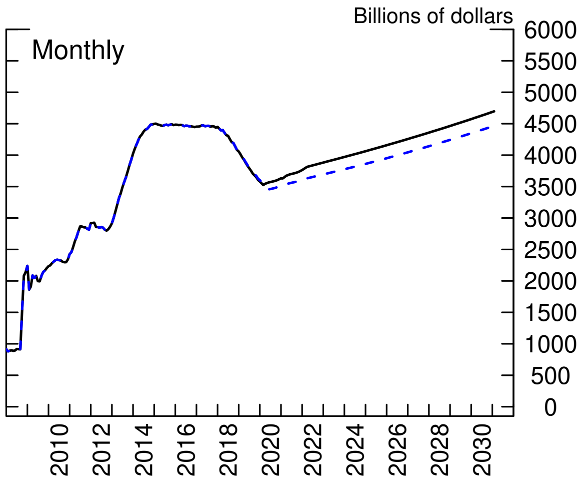
[3] Remittances in 2018 include two mandated transfers to the Treasury due to reductions to the statutory limit on aggregate Reserve Bank surplus. First, $2.5 billion was transferred in February 2018 following an amendment to Section 7 of the Federal Reserve Act by the Bipartisan Budget Act of 2018,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

Balance Sheet & Income

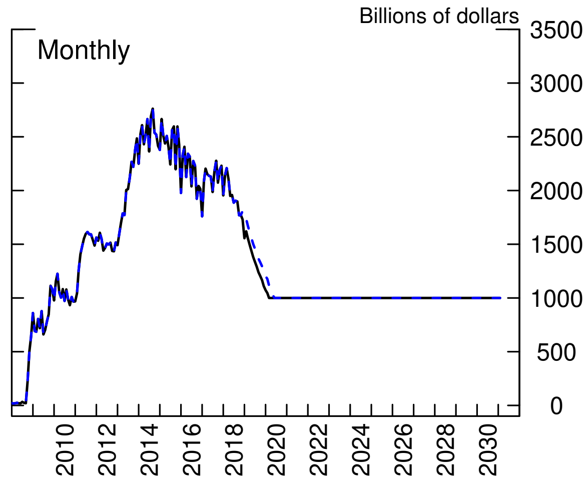
Total Assets and Selected Balance Sheet Items

January Tealbook baseline — December Tealbook baseline

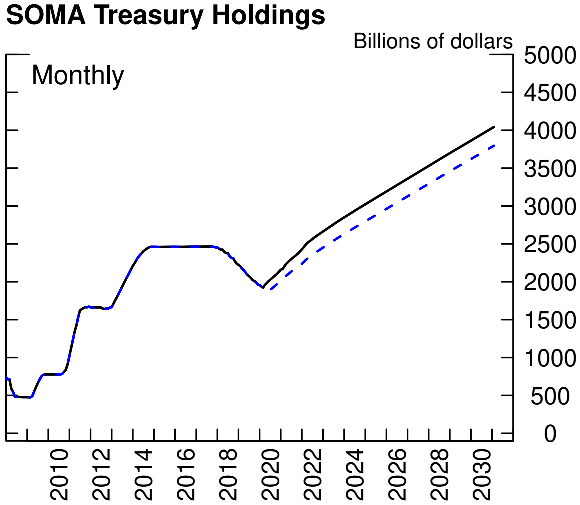
Total Assets



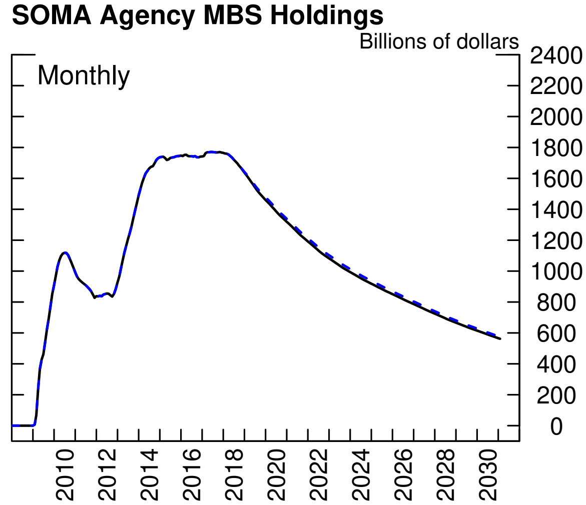
Reserve Balances



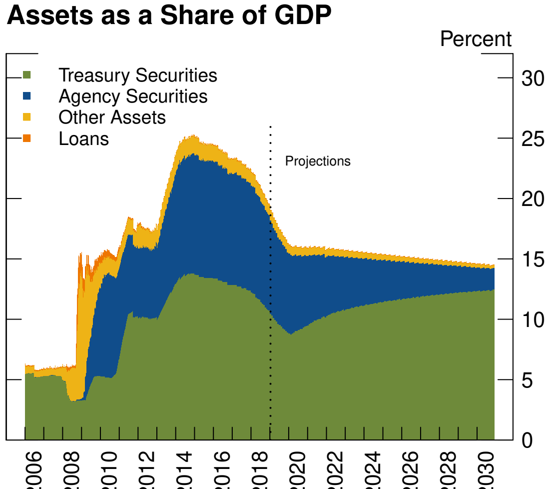
SOMA Treasury Holdings



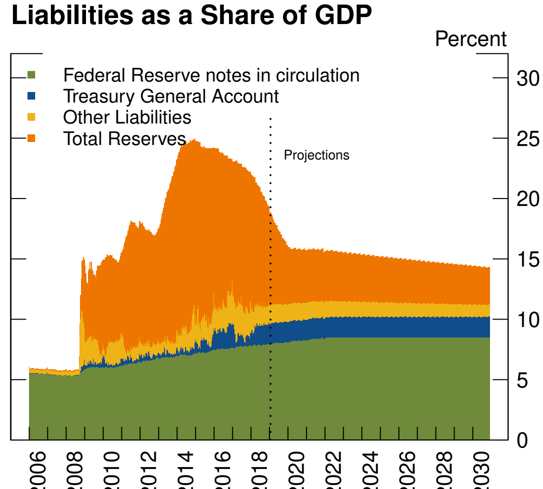
SOMA Agency MBS Holdings



Assets as a Share of GDP



Liabilities as a Share of GDP

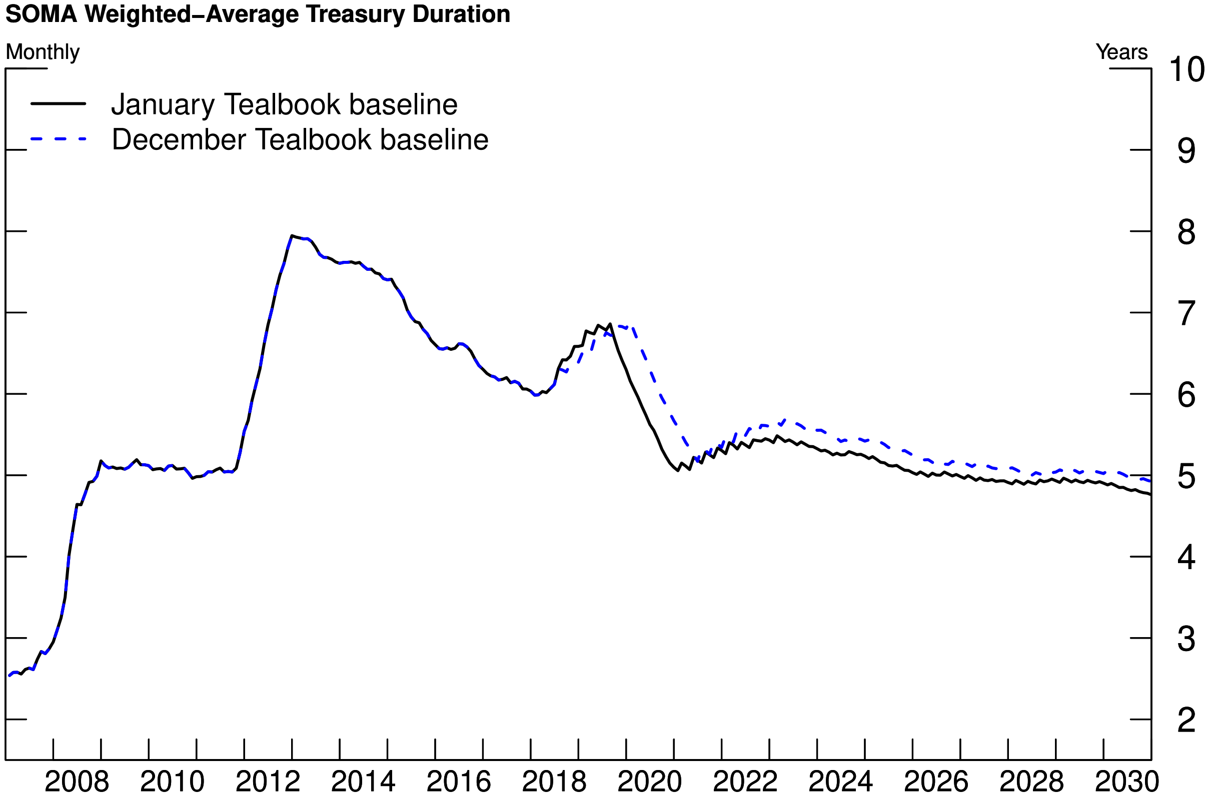


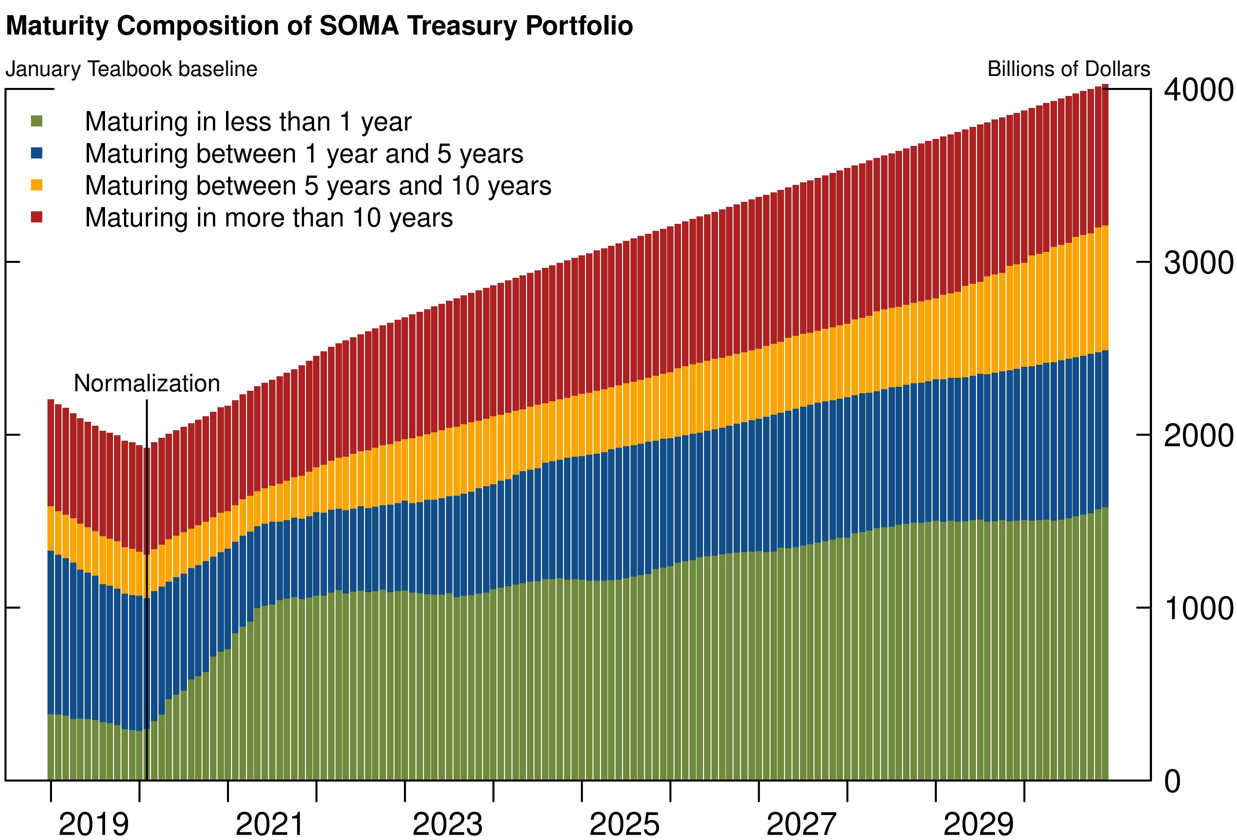
Federal Reserve Balance Sheet
Month-end Projections -- January Tealbook
(Billions of dollars)

	Historical*			Projections				
	Aug 2014	Sep 2017	Dec 2018	Dec 2019	Dec 2020	Dec 2022	Dec 2025	Dec 2030
Total assets	4,416	4,460	4,058	3,581	3,631	3,882	4,157	4,687
Selected assets								
Loans and other credit extensions**	2	6	4	0	0	0	0	0
Securities held outright	4,157	4,240	3,862	3,417	3,480	3,748	4,044	4,597
U.S. Treasury securities	2,437	2,465	2,223	1,955	2,159	2,664	3,191	4,029
Agency debt securities	42	7	2	2	2	2	2	2
Agency mortgage-backed securities	1,678	1,768	1,637	1,460	1,319	1,082	851	566
Unamortized premiums	209	162	140	123	109	89	67	41
Unamortized discounts	-19	-14	-13	-12	-10	-8	-7	-5
Total other assets	66	66	65	53	53	53	53	53
Total liabilities	4,360	4,419	4,019	3,543	3,593	3,841	4,110	4,627
Selected liabilities								
Federal Reserve notes in circulation	1,249	1,532	1,671	1,776	1,886	2,100	2,325	2,755
Reverse repurchase agreements	277	557	304	241	240	240	240	240
Deposits with Federal Reserve Banks	2,825	2,323	2,036	1,520	1,462	1,496	1,541	1,627
Reserve balances held by depository institutions	2,762	2,073	1,556	1,073	1000	1000	1000	1000
U.S. Treasury, General Account	49	159	402	372	387	420	465	551
Other deposits	15	91	78	75	75	75	75	75
Earnings remittances due to the U.S. Treasury	3	2	2	0	0	0	0	0
Total Federal Reserve Bank capital***	56	41	39	38	38	41	47	59

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; December 2018 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





Balance Sheet & Income

Total interest expense is projected to rise by nearly $10 billion, to $51 billion, this year.[4] In addition, the reduction in SOMA securities holdings this year results in a slight decrease in projected interest income to $102 billion. Remittances are expected to decline further and to bottom out at $41 billion in 2020. Thereafter, remittances rise due to an increase in interest income associated with a growing balance sheet. The projected path for remittances is similar to that in the December Tealbook. 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 their pre-crisis average.

Unrealized gains or losses. The SOMA portfolio was in a net unrealized loss position of about $6 billion at the end of December.[5] With longer-term interest rates expected to rise over the next few years, the unrealized loss position is expected to peak at $215 billion in 2020:Q3. Of this amount, $90 billion is attributable to Treasury securities and $125 billion to agency MBS. The net unrealized loss position subsequently narrows, as securities acquired under the Federal Reserve's large-scale asset purchase programs approach maturity. Compared to the December Tealbook, the unrealized loss position is projected to be a bit smaller in the near term.

Term premium effect. SOMA securities held as a result of the Federal Reserve's asset purchase programs are currently estimated to be reducing the term premium in the 10-year Treasury yield by about 77 basis points (see the table, "Projections for the 10-Year Treasury Term Premium Effect"). This term premium effect (or TPE) is little changed from the December estimates.[6] As was shown in the corresponding table in the

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

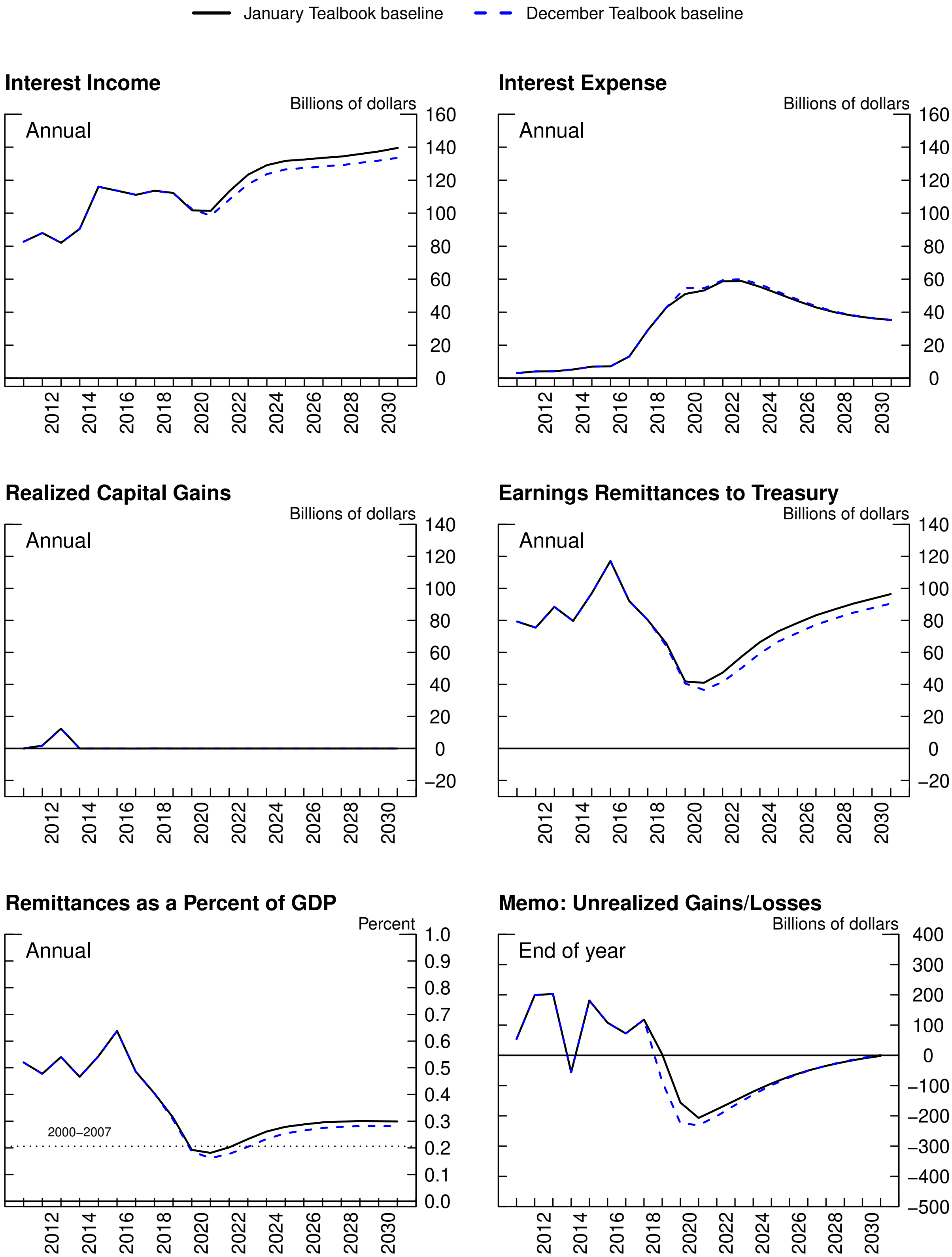
[4] We continue to assume that the FOMC will set a 25-basis-point-wide target range for the federal funds rate throughout the projection period. Consistent with the FOMC's December Implementation Note, we assume that the interest rates paid on reserve balances will be set 10 basis points below the top of the target range. We continue to assume that the offering rate on overnight RRPs will be set at the bottom of the range.

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

[6] The estimated path of the TPE depends on the difference between the expected path of the Federal Reserve's balance sheet over coming years and a counterfactual projection based on the configuration of the Federal Reserve's balance sheet that prevailed before the financial crisis of 2007-2008. In the counterfactual projection, it is assumed that reserve balances reach their longer-run level at $100 billion.

Balance Sheet & Income

Income Projections



December 2018 Tealbook, the increase in the assumption for the longer-run level of reserve balances—from $500 billion to $1 trillion—had only modest effects on the projected path of the TPE. The path of the TPE is instead mostly driven by how the projected trend growth in Federal Reserve liabilities affects the amount of longer-term securities held by the Federal Reserve and by the private sector.

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

Date	January Tealbook	December Tealbook
Quarterly Averages		
2019:Q1	-77	-76
Q2	-75	-74
Q3	-73	-72
Q4	-71	-70
2020:Q4	-66	-64
2021:Q4	-63	-61
2022:Q4	-60	-58
2023:Q4	-57	-55
2024:Q4	-54	-51
2025:Q4	-51	-49
2026:Q4	-49	-46
2027:Q4	-47	-44
2028:Q4	-45	-42
2029:Q4	-43	-40
2030:Q4	-41	-39

* The figures show the estimated effects on the 10-year Treasury term premium resulting from the Federal Reserve's large-scale asset purchases.

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Abbreviations

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

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