<u>Prefatory Note</u>

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 1/16/2026.

Report to the FOMC on Economic Conditions and Monetary Policy

Book B

Monetary Policy Alternatives

June 4, 2020

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

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Alternatives

Monetary Policy Alternatives

The numerous actions undertaken by the Federal Reserve since March and the tremendous uncertainty associated with the economic outlook will bear importantly on policymakers' thinking regarding the appropriate path for monetary policy. In particular, at this meeting, policymakers may judge that the current stance of monetary policy—including the federal funds rate at its effective lower bound, the associated forward guidance regarding the federal funds rate, and substantial past and ongoing asset purchases—remains appropriate for the time being. They may observe that, at this time, the immediate priority is to ensure that the various lending facilities established by the Federal Reserve in recent months are facilitating the flow of credit to households and businesses, and that other policy measures support smooth market functioning and the effective transmission of monetary policy. They may also note that by the end of the summer, the Committee is likely to gain a considerably clearer picture of the outlook for the course of the virus, the economy, and the effectiveness of various policy actions currently being implemented. Against this backdrop, it may be prudent for the Committee to maintain the current stance of policy.

A draft policy statement for the June FOMC meeting is presented below and is designed to reflect the considerations outlined above. In the draft statement, the Committee maintains the target range for the federal funds rate at 0 to ¼ percent and indicates it will increase its holdings of Treasury securities and agency residential and commercial mortgage-backed securities at least at the current pace to sustain the smooth functioning of financial markets, thereby fostering effective transmission of monetary policy.

The discussion that immediately follows describes the draft policy statement and notes the specific revisions in language from the April FOMC statement. This discussion proceeds to lay out some possible rationales for the draft statement, drawing on the economic outlook. It concludes by presenting the April FOMC statement and the current draft statement and associated implementation note.

Revisions to the Statement Language

The draft statement retains most of the language used in the April FOMC statement. The first paragraph reiterates the Federal Reserve's strong commitment to support the economy, while signaling the readiness of the Committee to take additional actions if needed. The third and fourth paragraphs are also unrevised from the April statement.

The second paragraph, which provides a high-level description of current economic conditions, has been updated in light of recent readings on economic indicators and the improvement in financial conditions. The virus and associated public health measures are now said to "have induced" sharp declines in economic activity and a surge in job losses, consistent with tentative evidence that the most severe economic effects of the coronavirus crisis have already materialized. As in the April FOMC statement, the paragraph points to low oil prices and weaker demand as factors holding down inflation. The final sentence has been changed to recognize improvements in financial conditions, partly owing to "policy measures to support the economy."

The final paragraph has been modified to provide some guidance about the likely pace at which the Federal Reserve will increase its holdings of Treasury securities and agency residential and commercial mortgage-backed securities (MBS.) In particular, the paragraph includes an explicit timeframe that was not in the April statement—"over coming months"—and adds quantitative information on the rate of increase in its holdings—"at least at the current pace"—of Treasury and agency MBS. In recognition of the progress witnessed in financial markets since April, the statement characterizes these purchases as being intended "to sustain smooth market functioning." The final sentence of the paragraph indicates that the Committee is prepared to adjust its plans and will closely monitor "developments," a slightly broader characterization than used in the April FOMC statement.

Rationales for the Statement

With regard to the rationale underlying the draft statement, policymakers may judge that with the recent extraordinary actions taken by the Federal Reserve—including setting the federal funds rate at the effective lower bound, the associated forward guidance, and substantial ongoing asset purchases—there is not an immediate need to adjust the stance of policy. At this time, their assessment may be that the priority is to ensure that these accommodative policies continue to be transmitted to broader financial conditions, as well as to the economy more generally. They may conclude that the recent easing in monetary policy, together with other policy measures, is helping to sustain the flow of credit and support financial market conditions and that, as the contours of the economic downturn and recovery come into sharper focus, the Committee can adapt and refine its monetary policy actions and communications as necessary. Until then, the Committee may want to maintain the current stance of policy, while signaling its readiness to adjust policy in the future.

With regard to the economic outlook, policymakers may broadly share the staff's assessment of the unprecedented magnitude of the economic disruptions caused by the coronavirus. The staff projects real GDP to decline at an annual rate of over 40 percent this quarter and estimates that the unemployment rate will peak at 18 percent in May. The Committee may also concur with the staff that a notable rebound in economic activity (albeit from a very low level) is likely in the third quarter. Policymakers may point to some tentative signs that a partial recovery is already underway in some categories of spending—for example, on nonfood retail goods and motor vehicles—as social distancing decreases in intensity; however, disentangling the effects of temporary fiscal support on these spending items from those of an easing in social distancing is difficult.

On inflation, policymakers might point to weak demand and low oil prices as driving the fall in core and headline PCE prices over March and April. Policymakers might share the staff's expectation that these downward pressures on inflation are unlikely to abate anytime soon—and that they will outweigh any upward pressure arising from supply constraints—holding down the path of inflation over the next few years. Under the staff modal projection, core PCE inflation only reaches 1.7 percent by 2022. At the same time, recent survey-based measures of longer-term inflation expectations are little changed from readings in April. And although market-based measures of inflation compensation have fallen since the beginning of the year, this decline may reflect strained liquidity conditions more than a deterioration in expected inflation.

There is extraordinary uncertainty about the path of the coronavirus pandemic and the economic outlook at this time, and policymakers may judge that the nature and scale of additional monetary policy actions to support the Committee's objectives will be more clearly visible after some of the uncertainties regarding the evolution of public health and social-distancing restrictions are resolved. In particular, they may note that the staff's economic outlook reflects the fact that mandatory social-distancing measures have already been relaxed considerably since late April, and that economic activity should bounce back in the second half of this year. By contrast, in the "Second Waves" scenario described in the Risks and Uncertainty section of Tealbook A, the staff assumes that significant further outbreaks occur later this year, requiring a second round of strict social-distancing measures into next year. Under this scenario—which the staff views as about as plausible as the baseline—the unemployment rate jumps back up to near 14 percent by the beginning of next year, inflation drops below 1.5 percent for several years, and the pandemic has longer-lasting adverse effects on U.S. economic performance. Overall, the unprecedented depth, speed, and breadth of the recent economic downturn, along with the uncertain outlook, make it especially hard to judge the timing and trajectory of the eventual recovery.

Amid the dramatic deterioration in the economic outlook, the Federal Reserve has taken numerous actions to support economic activity and financial market functioning and to facilitate the flow of credit to households and businesses. Policymakers may judge that, with the federal funds rate at its effective lower bound, the stance of policy is currently very accommodative. They may also judge that their forward guidance has given market participants confidence that this accommodative stance will be maintained for the next few years, as suggested by responses to the latest Desk surveys and readings in financial markets. Policymakers may further believe that the ongoing asset purchases to sustain smooth financial market functioning and secure effective policy transmission are also putting downward pressure on longer-term interest rates (as described in the Balance Sheet Projections section of Tealbook B); despite substantial Treasury debt issuance, the 10-year nominal Treasury yield remains low. In light of the improvement in financial market functioning, policymakers may also want to provide more clarity about the pace of securities purchases in the near term by noting that the Committee will increase its holdings of securities at least at the current pace over the coming months. Overall, policymakers may see these actions as supporting market functioning and providing policy accommodation that is consistent with achieving the Committee's goals.

Policymakers may also judge that in the coming weeks, greater clarity regarding the efficacy of the Federal Reserve's various lending programs, as well as the extent of fiscal stimulus and arrangements for the reopening of the economy, will be at hand. Against this background, policymakers might prefer to keep the stance of monetary policy unchanged at this meeting by maintaining the target range for the federal funds rate at 0 to ¼ percent and retaining the existing forward guidance. In the meantime, policymakers may want to signal their readiness to adjust policy and to make further refinements to communications about the Committee's policy intentions. This idea is captured by the opening statement that the "Federal Reserve is committed to using its full range of tools to support the U.S. economy," as well as by the statement in the fourth paragraph that the Committee will “use its tools and act as appropriate to support the economy.”

Financial market quotes and responses to the Desk’s latest surveys suggest that market participants expect the FOMC to keep the target range for the federal funds rate at its current level for at least the next 2 years (see the “Monetary Policy Expectations and Uncertainty” box, presented on the following page). Most Desk survey respondents who provided expectations about forward guidance indicated that they do not expect a change at this meeting to the forward guidance provided in the April FOMC statement. Furthermore, the modest updates to the statement language, including the description of economic and financial conditions in the second paragraph and the additional information about asset purchases in the fifth paragraph are not at odds with recent communications. Consequently, the effect of an announcement like the draft policy statement on the expected path of short-term interest rates and on the prices of financial assets could be modest. However, market reactions are particularly difficult to gauge in the current environment, and so it is hard to anticipate with great confidence how market participants would react to an FOMC announcement along the lines of the draft policy statement.

Alternatives

Monetary Policy Expectations and Uncertainty

Market-based measures of federal funds rate expectations edged down over the intermeeting period while investor sentiment broadly improved. Market- and model-based measures now suggest that the federal funds rate will remain at the effective lower bound (ELB) until at least the second half of 2022, about a year later than implied at the time of the April meeting. Similarly, the median of responses in the Desk's June surveys of primary dealers and market participants continues to view the most likely path of the federal funds rate as remaining in its current range of 0 to 0.25 percent until at least the end of 2022.

The probability distribution of the federal funds rate at the end of 2020, based on option quotes unadjusted for risk premiums, assigns the highest probability, 40 percent, to the current target range (figure 1). The same distribution assigns 32 and 12 percent odds on the 0 to −0.25 percent range and outcomes below −0.25 percent, respectively. Moreover, the expected level of the federal funds rate at the end of 2021, as implied by OIS quotes unadjusted for term premiums (the black line in figure 2), turned slightly negative in early May, although it ended the period closer to zero. Meanwhile, the expected level for end-2023 (the blue line) also edged down, on net, but has stabilized around 20 basis points in recent weeks.

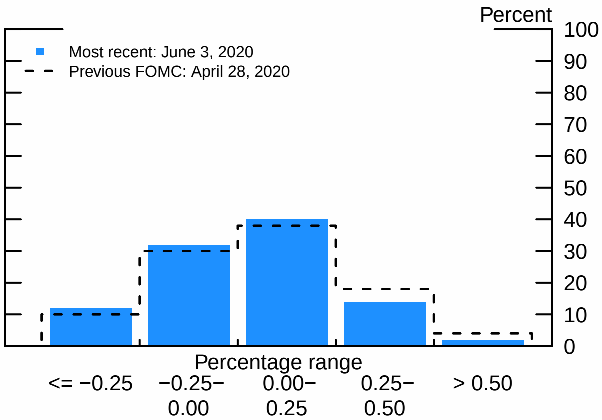
Respondents to the Desk's surveys continue to assign very low probabilities to federal funds rate outcomes below zero. In the June surveys, the average across respondents' probability distributions for the federal funds rate at the end of 2020 places odds of around 92 percent on the 0 to 0.25 percent range and assigns negligible probability to the federal funds rate being negative (figure 3). Beyond 2020, the average probabilities assigned by survey respondents to the federal funds rate being negative are similarly low (not shown). Responding to a separate question, most survey participants continued to estimate the level of the ELB on the federal funds rate to be at or above zero, in line with recent market commentary. Thus, while market pricing suggests some probability of federal funds rate outcomes below zero, a sizeable portion of the option-implied probabilities of negative rates is likely due to risk premiums to insure against particularly adverse economic outcomes.[1]

As shown in figure 4, the expected path of the federal funds rate over the next several years, as implied by OIS quotes unadjusted for term premiums, has edged down since the April FOMC meeting (the blue lines in the figure). This path now remains within the current target range until around the end of 2023. The expected path implied by a staff term structure model that adjusts for term premiums (the purple lines) has shifted notably lower over the intermeeting period. The expected path implied by this model and a staff macro-finance model (the green line) both put the expected federal funds rate at the ELB until the second half of 2022. Similarly, the median across Desk survey respondents' modal paths for the federal funds rate (the black crosses) is flat

[1] In addition to risk premiums, option quotes may also be affected by low liquidity.

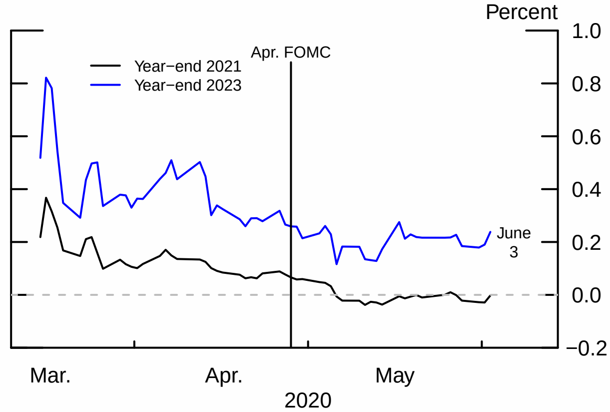
Alternatives

Figure 1: Market−Implied Probability Distribution of the Federal Funds Rate, Year−End 2020



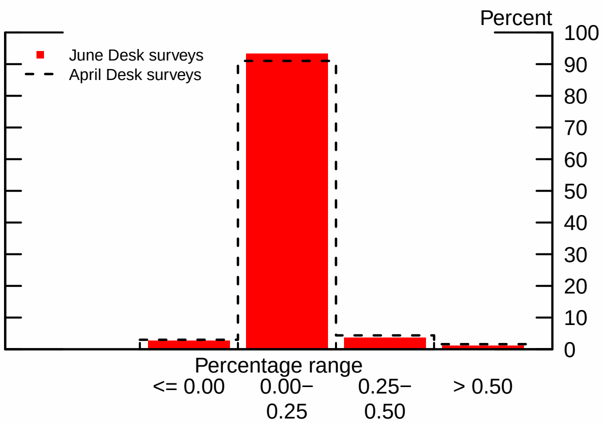
Note: Estimated from federal funds futures options, not adjusted for risk premiums. The distribution for January 2021 is used to provide a read on the distribution at the end of 2020.
Source: CME Group; Board staff calculations.

Figure 2: Estimated Federal Funds Rate



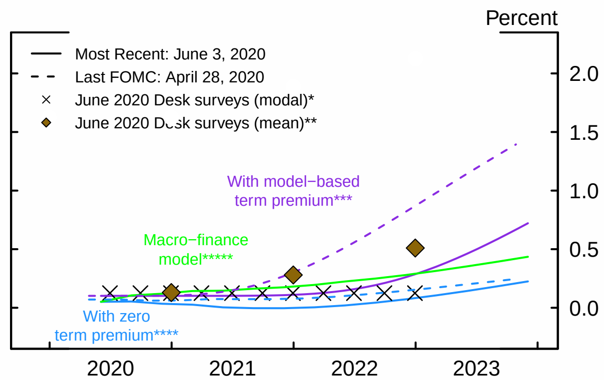
Note: Estimated using overnight index swap quotes with a spline approach and a term premium of zero basis points.
Source: Bloomberg; Board staff calculations.

Figure 3: Desk Surveys Probability Distribution of the Federal Funds Rate, Year−End 2020



Note: Probabilities are the averages of the probabilities assigned by respondents to the Survey of Market Participants and Survey of Primary Dealers to different ranges of the federal funds rate at the end of 2020.
Source: FRBNY.

Figure 4: Federal Funds Rate Projections



* Median of respondents' modal paths for the federal funds rate.
** Estimated from respondents' unconditional year−end probability distributions.
*** Adjusting for premiums using a term structure model maintained by Board staff.
**** Estimated using overnight index swap quotes with a spline approach and a term premium of zero basis points.
***** Macro−finance model path is estimated by averaging over regressions of survey−OIS gaps on the covariances between real and nominal variables based on Diercks and Carl (2019).
Source: Bloomberg; Board staff calculations; FRBNY.

at the lower bound through the end of 2022 (the end of the survey forecast horizon). The average of respondents' mean expectations in the Desk surveys (the gold diamonds) increases gradually after the end of 2020, consistent with uncertainty about the federal funds rate that is tilted to the upside at the lower bound.

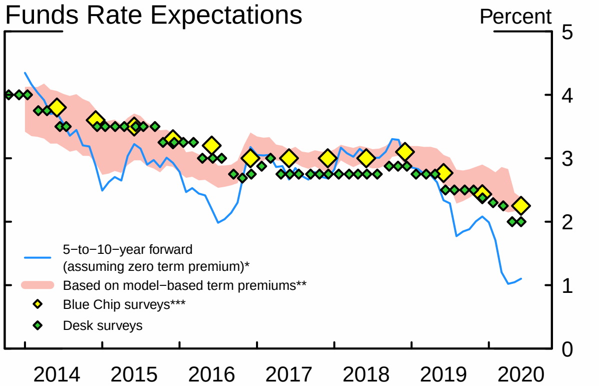
Figure 5 shows measures of the longer-run expected federal funds rate. A straight read of forward rates at longer horizons implied by Treasury securities (the blue line) suggests that investors' current expectation for the average federal funds rate 5 to 10 years ahead is about 1.1 percent. Although this measure is slightly above its level at the time of the April FOMC meeting, it remains near the lowest level since the beginning of the series in 1971. Adjusting for term premiums using various staff term structure models (with the light-red-shaded region showing a range of four such model estimates) suggests that 5-to-10-year-ahead expectations are significantly above the unadjusted forward rates, at between 2.2 and 2.4 percent. The average longer-run forecast from the June Blue Chip survey (the yellow diamonds) and the median forecast from the latest Desk surveys (the green diamonds) were 2.25 and 2.0 percent, respectively, close to the lower end of the model-implied range.

The Desk surveys also asked respondents to report their expectations for the Desk's purchases of U.S. Treasury and agency mortgage-backed securities (MBS), net of reinvestment, for each month from June 2020 to the end of the year, and over 2021 and 2022. Figures 6 and 7 show the medians and interquartile ranges of the individual responses. The median survey response was for net U.S. Treasury securities purchases of $90 billion in June (notably lower than the median forecast from the April surveys, but closer to the monthly pace implied by recent purchase amounts) and a gradual decline to $75 billion per month by the end of the year. The median survey response was for net agency MBS purchases of $75 billion in June and a decline to $30 billion per month by the end of 2020. Respondents generally expected purchases of both U.S. Treasury securities and agency MBS to continue at a slower pace in 2021 and to decline further in 2022.

Finally, the Desk surveys also asked respondents for expectations for additional actions or monetary policy measures by the Federal Reserve through year-end. Roughly a third of respondents reported that they expect the FOMC to adopt some form of yield curve control. Additionally, many respondents reported expecting the Federal Reserve to adopt additional measures; possibilities cited included forward guidance conditioned on macroeconomic outcomes, sustained large-scale asset purchases with the intent of making financial conditions more accommodative, and moving to an average inflation targeting framework.

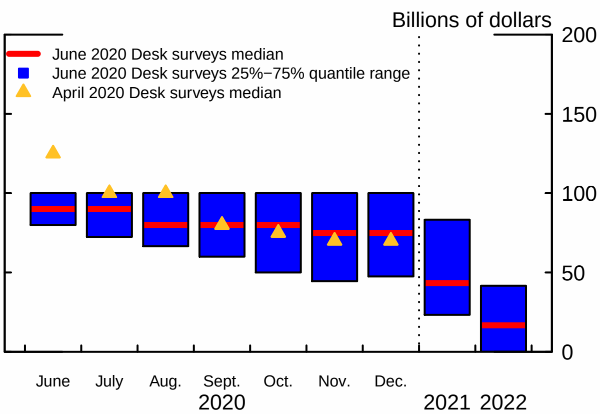
Alternatives

Figure 5: Measures of Longer−Run Federal Funds Rate Expectations



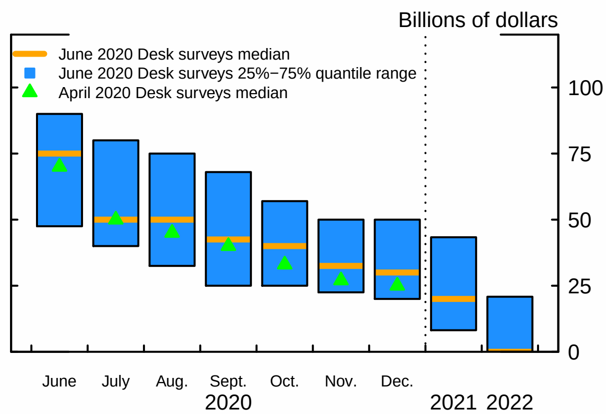
* Monthly average 5−to−10−year forward rate derived from prices of Treasury securities.
** Monthly average 5−to−10−year forward rate adjusted for four alternative model−based term premium estimates using Kim and Wright (2005), D'Amico, Kim, and Wei (2018), Kim and Priebsch (2019), and Meldrum (2019).
*** Most recent long−run survey value is from the June 2020 Blue Chip survey.
Note: Forward rates and term structure model estimates for June 2020 are based on values through June 3.
Source: Blue Chip; FRBNY; Federal Reserve Board staff estimates.

Figure 6: Expected Purchases of Treasury Securities Net of Reinvestments



Note: Values for 2021 and 2022 are monthly averages calculated from respondents' expectations for total purchases each year.
Source: FRBNY.

Figure 7: Expected Purchases of Agency MBS Net of Reinvestments



Note: Values for 2021 and 2022 are monthly averages calculated from respondents' expectations for total purchases each year.
Source: FRBNY.

Alternatives

APRIL 2020 FOMC STATEMENT

1. The Federal Reserve is committed to using its full range of tools to support the U.S. economy in this challenging time, thereby promoting its maximum employment and price stability goals.

2. The coronavirus outbreak is causing tremendous human and economic hardship across the United States and around the world. The virus and the measures taken to protect public health are inducing sharp declines in economic activity and a surge in job losses. Weaker demand and significantly lower oil prices are holding down consumer price inflation. The disruptions to economic activity here and abroad have significantly affected financial conditions and have impaired the flow of credit to U.S. households and businesses.

3. The ongoing public health crisis will weigh heavily on economic activity, employment, and inflation in the near term, and poses considerable risks to the economic outlook over the medium term. In light of these developments, the Committee decided to maintain the target range for the federal funds rate at 0 to 1/4 percent. The Committee expects to maintain this target range until it is confident that the economy has weathered recent events and is on track to achieve its maximum employment and price stability goals.

4. The Committee will continue to monitor the implications of incoming information for the economic outlook, including information related to public health, as well as global developments and muted inflation pressures, and will use its tools and act as appropriate to support the economy. In determining the timing and size of future adjustments to the stance of monetary policy, 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.

5. To support the flow of credit to households and businesses, the Federal Reserve will continue to purchase Treasury securities and agency residential and commercial mortgage-backed securities in the amounts needed to support smooth market functioning, thereby fostering effective transmission of monetary policy to broader financial conditions. In addition, the Open Market Desk will continue to offer large-scale overnight and term repurchase agreement operations. The Committee will closely monitor market conditions and is prepared to adjust its plans as appropriate.

DRAFT OF THE JUNE 2020 FOMC STATEMENT

1. The Federal Reserve is committed to using its full range of tools to support the U.S. economy in this challenging time, thereby promoting its maximum employment and price stability goals.

2. The coronavirus outbreak is causing tremendous human and economic hardship across the United States and around the world. The virus and the measures taken to protect public health ~~are inducing~~ **have induced** sharp declines in economic activity and a surge in job losses. Weaker demand and significantly lower oil prices are holding down consumer price inflation. ~~The disruptions to economic activity here and abroad have significantly affected~~ Financial conditions ~~and~~ have ~~impaired~~ **improved, in part reflecting policy measures to support the economy and** the flow of credit to U.S. households and businesses.

3. The ongoing public health crisis will weigh heavily on economic activity, employment, and inflation in the near term, and poses considerable risks to the economic outlook over the medium term. In light of these developments, the Committee decided to maintain the target range for the federal funds rate at 0 to 1/4 percent. The Committee expects to maintain this target range until it is confident that the economy has weathered recent events and is on track to achieve its maximum employment and price stability goals.

4. The Committee will continue to monitor the implications of incoming information for the economic outlook, including information related to public health, as well as global developments and muted inflation pressures, and will use its tools and act as appropriate to support the economy. In determining the timing and size of future adjustments to the stance of monetary policy, 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.

5. To support the flow of credit to households and businesses, **over coming months** the Federal Reserve will ~~continue to purchase~~ **increase its holdings of** Treasury securities and agency residential and commercial mortgage-backed securities ~~in the amounts needed~~ **at least at the current pace** to ~~support~~ **sustain** smooth market functioning, thereby fostering effective transmission of monetary policy to broader financial conditions. In addition, the Open Market Desk will continue to offer large-scale overnight and term repurchase agreement operations. The Committee will closely monitor ~~market conditions~~ **developments** and is prepared to adjust its plans as appropriate.

IMPLEMENTATION NOTE

A draft implementation note appears on the following pages. Struck-out text indicates language deleted from, and bold red underlined text indicates language added to, the previously issued note. Blue underlined text indicates text that links to websites.

Alternatives

Implementation Note for June 2020

Release Date: June 10, 2020

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 ~~April 29~~ **June 10**, 2020:

- The Board of Governors of the Federal Reserve System voted **[** unanimously **]** to maintain the interest rate paid on required and excess reserve balances at 0.10 percent, effective ~~April 30~~ **June 11**, 2020.
- 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 ~~April 30~~ **June 11**, 2020, 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 0 to 1/4 percent.
  - Increase the System Open Market Account holdings of Treasury securities, agency mortgage-backed securities (MBS), and agency commercial mortgage-backed securities (CMBS) ~~in the amounts needed~~ **at least at the current pace** to ~~support the~~ **sustain** smooth functioning of markets for these securities**, thereby fostering effective transmission of monetary policy to broader financial conditions**.
  - Conduct term and overnight repurchase agreement operations to support effective policy implementation and the smooth functioning of short-term U.S. dollar funding markets.
  - Conduct overnight reverse repurchase agreement operations at an offering rate of 0.00 percent and with a per-counterparty limit of $30 billion per day; the per-counterparty limit can be temporarily increased at the discretion of the Chair.
  - Roll over at auction all principal payments from the Federal Reserve's holdings of Treasury securities and reinvest all principal payments from the Federal Reserve's holdings of agency debt and agency MBS in agency MBS and all principal payments from holdings of agency CMBS in agency CMBS.
  - **Allow modest deviations from stated amounts for purchases and reinvestments, if needed for operational reasons.**
  - Engage in dollar roll and coupon swap transactions as necessary to facilitate settlement of the Federal Reserve's agency MBS 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 0.25 percent.

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

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

Balance Sheet and Income Projections

The staff has prepared projections of the Federal Reserve's balance sheet and the associated income statement taking as given the economic and interest rate projections in Tealbook A. The steps taken by the Federal Reserve to alleviate strains in financial markets triggered by the COVID-19 pandemic have expanded the Federal Reserve's balance sheet substantially and are expected to continue to do so for a number of months. The size of the balance sheet is projected to remain elevated for a number of years, reflecting the lasting effects of the recent policy actions.

Evolution of Total Assets. Total assets as a percent of nominal GDP were about 36 percent at the end of May and are projected to increase to about 40 percent of nominal GDP later this year, an all-time high (see the bottom-left figure in the exhibit titled "Total Assets and Selected Balance Sheet Items").[1] The projected peak level of total assets as a share of nominal GDP is lower by about 5 percentage points compared with the April Tealbook peak as a result of a significant downward revision to projected facilities take-up, reflecting low actual take-up amid improving market conditions. Subsequently, total assets, as shown by the solid line in the upper left panel of the exhibit, are projected to decline over the next several years as take-up at the facilities and repo operations decline and Treasury securities and agency MBS roll off the balance sheet. Assets are projected to level off at about 23 percent of nominal GDP by late 2025.

Evolution of the SOMA Portfolio. At the end of April 2020, $5.59 trillion of securities were held outright in the SOMA portfolio, consisting of $3.98 trillion of Treasury securities and $1.61 trillion of agency securities (see the exhibit titled "Federal Reserve Balance Sheet Month-end Projections—June Tealbook").[2,3] We assume that purchases of Treasury securities and agency MBS continue through December 2020 to sustain the smooth functioning of these markets and effective monetary policy transmission to broader financial conditions and the economy. Specifically, we assume

[1] For reference, the previous peak of about 25 percent was reached in 2014.

[2] By the end of May 2020, which in the model is the first projection month, the amount of securities held outright in the SOMA portfolio had increased to $5.95 trillion, consisting of $4.12 trillion of Treasury securities and $1.84 trillion of agency securities.

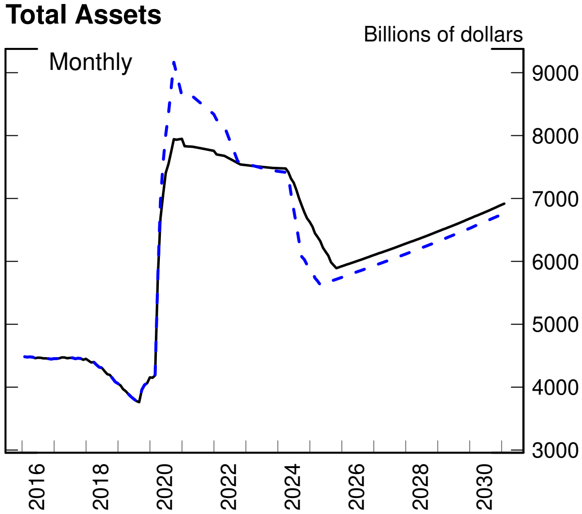
[3] SOMA securities held outright exclude securities held temporarily through the Desk's overnight and term repo operations.

Balance Sheet & Income

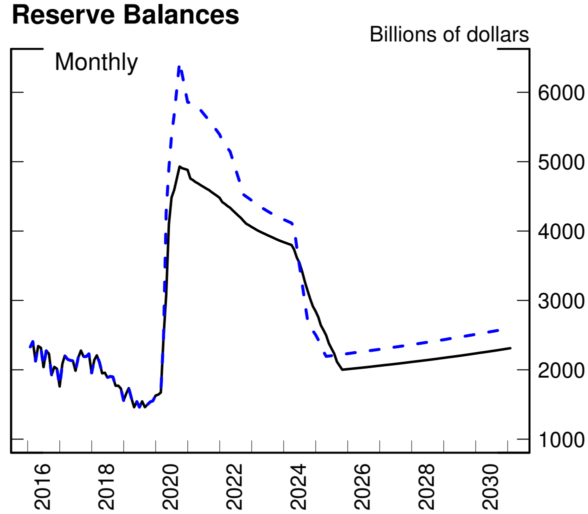
Total Assets and Selected Balance Sheet Items

June Tealbook baseline   April Tealbook baseline

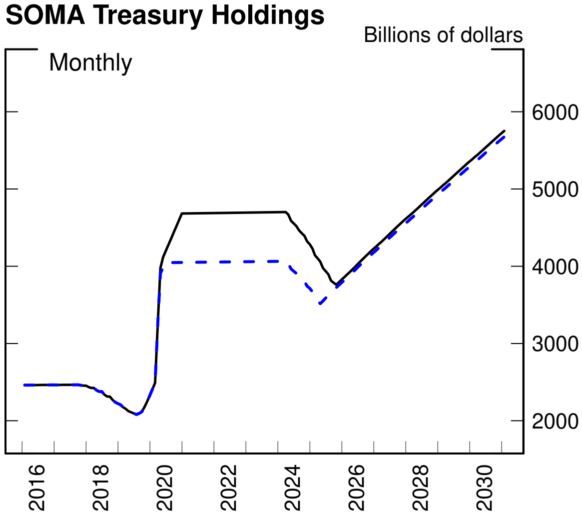
Total Assets



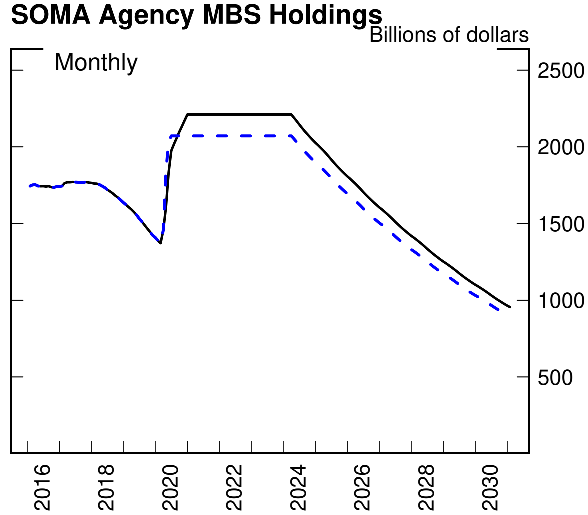
Reserve Balances



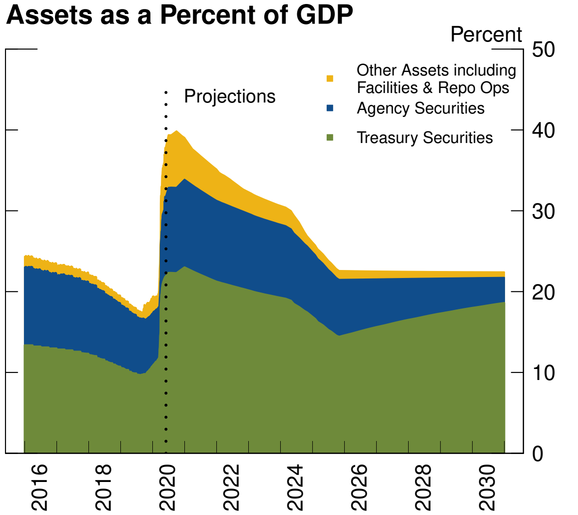
SOMA Treasury Holdings



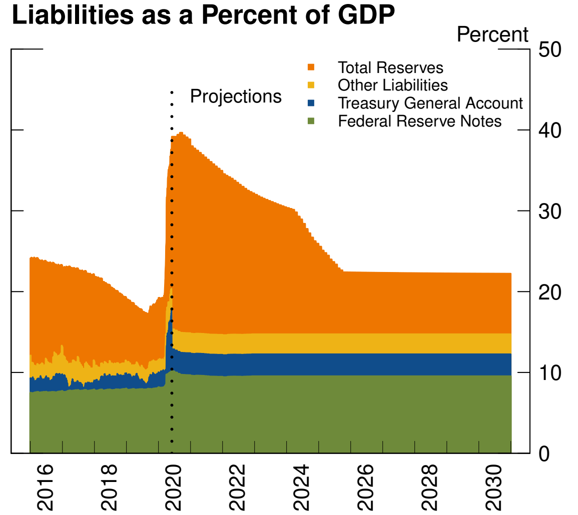
SOMA Agency MBS Holdings



Assets as a Percent of GDP



Liabilities as a Percent of GDP



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

	Historical*			Projections				
	Sep 2017	Feb 2020	Apr 2020	Dec 2020	Dec 2021	Dec 2023	Dec 2025	Dec 2030
Total assets	4,460	4,158	6,678	7,948	7,758	7,482	5,922	6,899
Selected assets								
Loans and other credit extensions	6	0	571	598	435	239	0	0
Facilities	2	0	93	486	435	239	0	0
Discount Window	0	0	32	0	0	0	0	0
Central bank liquidity swaps	4	0	446	112	0	0	0	0
Repurchase Agreements	0	126	168	50	50	0	0	0
Securities held outright	4,240	3,863	5,586	6,896	6,902	6,913	5,638	6,690
U.S. Treasury securities	2,465	2,489	3,978	4,683	4,688	4,700	3,828	5,723
Agency securities	1,775	1,374	1,607	2,213	2,213	2,213	1,810	967
Unamortized premiums	162	123	284	323	290	247	203	134
Unamortized discounts	-14	-13	-6	-3	-3	-2	-3	-8
Total liabilities	4,419	4,119	6,639	7,909	7,718	7,439	5,875	6,840
Selected liabilities								
Federal Reserve notes in circulation	1,532	1,753	1,863	1,965	2,086	2,323	2,495	2,927
Reverse repurchase agreements	557	229	280	310	336	372	400	469
Deposits with Federal Reserve Banks	2,323	2,131	4,470	5,611	5,270	4,716	2,950	3,409
Reserve balances held by depository institutions	2,073	1,691	3,070	4,881	4,479	3,840	2,009	2,305
U.S. Treasury, General Account	159	357	1,180	560	607	671	721	846
Other deposits	91	83	220	170	185	204	220	258
Total Federal Reserve Bank capital**	41	39	39	39	39	43	47	59

Source: Federal Reserve H.4.1 daily data and staff calculations.
Note: Components may not sum to totals due to rounding.
*September 2017 corresponds to the last month-end before the initiation of the normalization program; February 2020 corresponds to the last month-end before the initiation of Federal Reserve actions and plans designed to improve market functioning.
**Total capital includes capital paid-in and capital surplus accounts.

monthly purchases of $80 billion in Treasury securities and $40 billion in agency MBS, net of reinvestments, from June through December, and no purchases thereafter.[4,5,6]

We assume that maturing Treasury securities are reinvested at auction and principal received on agency MBS will be fully reinvested into agency MBS until the federal funds rate reaches 1.25 percent, which is projected to take place around 2024:Q2 according to the Tealbook baseline. Subsequently, Treasury securities and agency MBS roll off the balance sheet as they mature. The roll-off period is assumed to conclude in late 2025, when reserve balances reach about $2 trillion.[7] Thereafter, maturing Treasury securities will continue to be reinvested at auction while principal received on agency MBS will be reinvested into Treasury securities.[8] In addition, reserve management purchases of Treasuries are assumed to expand SOMA in line with trend increases in the demand for reserves and in other Federal Reserve liabilities. With these liabilities assumed to grow roughly at the pace of nominal GDP, the size of the balance sheet as a share of nominal GDP remains near 23 percent for the remainder of the projection horizon, about 1 percentage point higher than in the previous Tealbook.

Facilities and Repo Operations. The staff has also updated projections for take-up at the facilities and other Federal Reserve operations that have been expanded or

[4] We assume that the maturity distribution of these purchases will be broadly the same as that of the purchases that have occurred since March 15, which excluded bills.

[5] The MBS purchase amounts are for committed purchases. MBS purchases are generally done in the to-be-announced market and settle one or two months later. Therefore, actual changes in MBS holdings may be different from the committed amounts. Unless otherwise noted, all numerical figures here and henceforth referring to “MBS” entail agency (residential) MBS, excluding CMBS. Agency CMBS purchases have been small to date, and we assume that until September the holdings of these securities remain fixed at their end of April level of $8 billion, before gradually rolling off the balance sheet completely by December 2020.

[6] The median respondent to the June 2020 Survey of Primary Dealers and Survey of Market Participants (combined) forecasted net purchases of $90 billion of Treasury securities per month in June and July 2020; $80 billion per month in August, September, and October; and $75 billion per month in November and December. The median respondent also forecasted net purchases of agency (residential) MBS of $75 billion in June; $50 billion per month in July and August; and between $30 and $43 billion per month for the remainder of the year. Moreover, the median respondent forecasted that purchases of Treasury securities continue until at least 2022, while forecasting that purchases of agency (residential) MBS continue until 2021.

[7] The level of $2 trillion was chosen because it corresponds to a level at which reserves were projected to be consistent with an ample reserve regime in the March 2020 Tealbook and thus before the Federal Reserve had taken any policy actions in response to the COVID-19 pandemic.

[8] We assume that reinvestments of maturing Treasury securities will continue to be directed toward newly issued securities at Treasury auctions in proportion to the maturity distribution of Treasury debt issued at the time of reinvestment.

initiated in response to the COVID-19 crisis. These facilities are expected to see take-up peak a few months after they become operational, and to taper off over time at a pace consistent with the specific terms of the facilities (see the exhibit titled "Staff Assumptions on Facilities and Operations"). Projected peak levels of take-up have been revised down significantly since the April Tealbook given the relatively low take-up seen in the facilities thus far amid improvement in market conditions. Specifically, we assume that the discount window, central bank liquidity swaps, the Primary Dealer Credit Facility (PDCF), the Money Market Mutual Fund Liquidity Facility (MMLF), and the Commercial Paper Funding Facility (CPFF) do not increase above their end of May values, and gradually taper off as soon as July 2020. For the Paycheck Protection Program Liquidity Facility (PPPLF) and the Secondary Market Corporate Credit Facility (SMCCF) that became operational more recently, we assume that take-up peaks in September 2020 and remains constant at that level for some time before gradually tapering off. We assume that forthcoming facilities start in June 2020 and follow a similar path to the PPPLF and the SMCCF.[9] The staff also assumes that take-up at repo operations will decline from a May month-end level of $168 billion to $50 billion in July, and stay at that level through December 2021, before declining to zero. Under these assumptions, we project total take-up across all facilities and operations to peak at about $1 trillion in September 2020.[10,11]

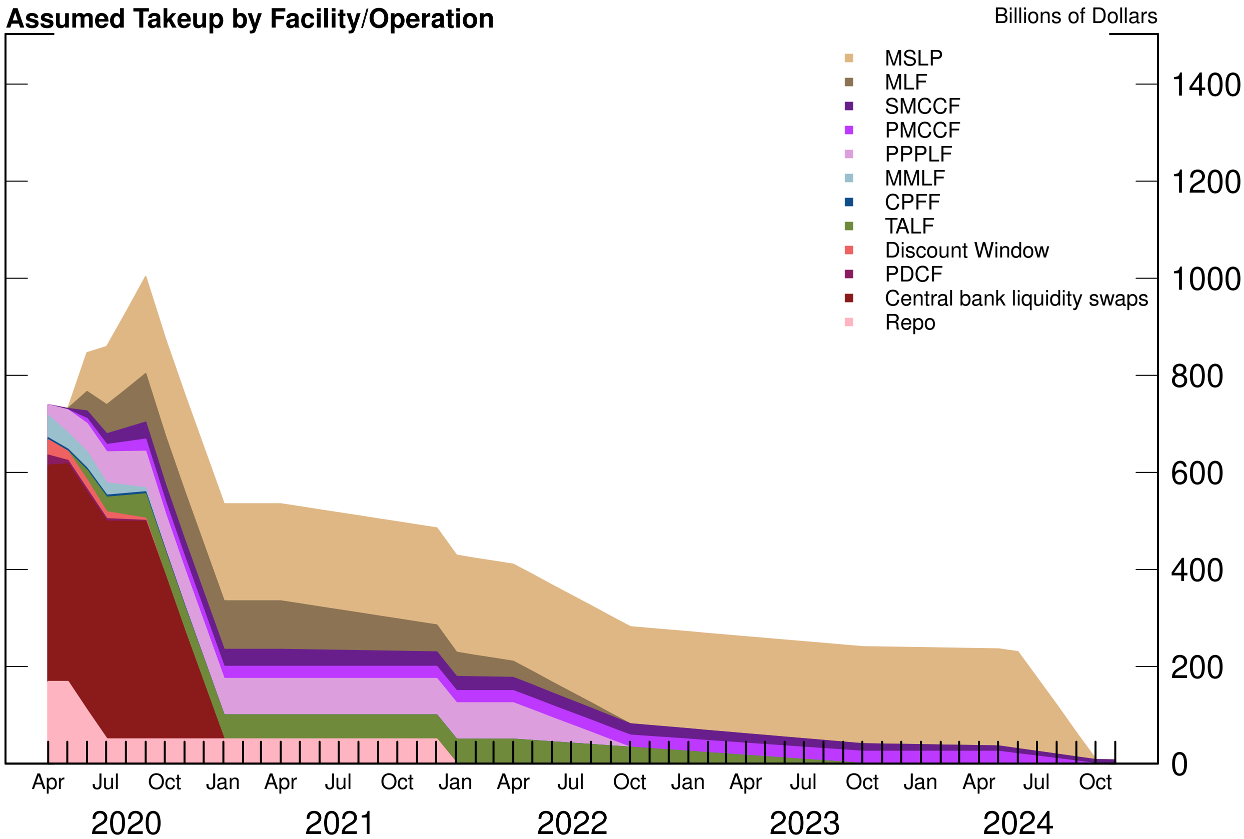
Reserve Balances. At the end of May 2020, the level of reserve balances stood at about $3.2 trillion. The staff projects reserve balances to reach nearly $5 trillion in late 2020, reflecting the assumptions of further asset purchases, repo operations, and take-up at Federal Reserve lending facilities discussed above (see the upper-right panel in the exhibit titled "Total Assets and Selected Balance Sheet Items"). Over the next five years or so, reserve balances are projected to fall gradually as the usage of facilities and operations declines in line with an improving economic outlook and non-reserve

[9] The forthcoming facilities include the Main Street New Loan Facility (MSNLF) and Main Street Expanded Loan Facility (MSELF) that jointly constitute the Main Street Lending Program (MSLP), the Municipal Liquidity Facility (MLF), the Primary Market Corporate Credit Facility (PMCCF), and the Term Asset-Backed Securities Loan Facility (TALF).

[10] There is considerable uncertainty about the take-up in the facilities and operations, and our assumptions influence both the peak size of the balance sheet and potentially the subsequent timing of normalization. If the economy were to deteriorate, take-up at these facilities could be materially larger than our current assumptions, with peak total take-up possibly rising to levels of just under $3 trillion.

[11] The median respondent to the June 2020 Survey of Primary Dealers and Survey of Market Participants (combined) forecasted total take-up across all facilities and operations of just under $1.7 trillion on September 30, 2020.

Staff Assumptions on Facilities and Operations



*The following facilities are abbreviated above: Primary Dealer Credit Facility (PDCF), Term Asset−Backed Securities Loan Facility (TALF), Commercial Paper Funding Facility (CPFF), Money Market Mutual Fund Liquidity Facility (MMLF), Paycheck Protection Program Liquidity Facility (PPPLF), Primary Market Corporate Credit Facility (PMCCF), Secondary Market Corporate Credit Facility (SMCCF), Municipal Liquidity Facility (MLF), Main Street Lending Program (MSLP)

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liabilities increase.[12] In late 2025, reserves reach their assumed minimum level of about $2 trillion. Thereafter, reserves are projected to grow in line with nominal GDP.

Duration. As shown in the exhibit titled "Projections for the Characteristics of SOMA Treasury Securities Holdings," the path for the weighted-average duration of the SOMA Treasury portfolio is little changed from the April Tealbook. The weighted average duration is projected to increase to a maximum of 6.6 years in August 2025. Subsequently, duration declines to about 5 years by 2030, as the share of bills increases to 27 percent of the SOMA Treasury portfolio from 8 percent at the end of May. The projected decline in duration slows thereafter (not shown), reflecting the slower pace of bill purchases.[13] All told, the SOMA Treasury portfolio attains its assumed longer-run composition, consisting of one-third Treasury bills, in 2033:Q2, one year later than in the previous Tealbook.

Total Term Premium Effect. As shown in the table "Projections for the 10-Year Treasury Total Term Premium Effect (TTPE)," the securities held in the SOMA portfolio are estimated to be reducing the term premium embedded in the 10-year Treasury yield by 238 basis points in the current quarter, 24 basis points more than in the previous Tealbook given the path for assumed asset purchases.[14] Over the projection horizon, the magnitude of the downward pressure exerted on the term premium in longer-term Treasury yields is estimated to diminish gradually, beginning at an average pace of about 14 basis points per year. The gradual reduction in downward pressure reflects the decrease in the size of the Federal Reserve's securities holdings relative to GDP over the projection horizon. At the end of the projection horizon in 2030, the total term premium effect of the SOMA portfolio on the 10-year Treasury yield is estimated to be about 136 basis points.

[12] The staff assumes that liability items other than reserves and currency—such as TGA, the foreign repo pool, overnight reverse repo operations, and DFMU balances—grow in line with nominal GDP from the start of the projection period. Currency grows in line with the staff's near-term forecasts through December 2021 and with nominal GDP thereafter.

[13] We continue to assume that purchases aimed at accommodating trend growth in Federal Reserve liabilities will be directed entirely toward Treasury bills until bills constitute approximately one-third of the Federal Reserve's portfolio of Treasury securities, close to the pre-2008 composition. Once that composition is reached, further purchases aimed at accommodating growth in Federal Reserve liabilities are assumed to reflect the projected maturity distribution of Treasury securities outstanding at that time.

[14] The TTPE is about 1 percentage point more negative in the current quarter than projected under the staff's balance sheet assumptions on the eve of the pandemic in the March Tealbook.

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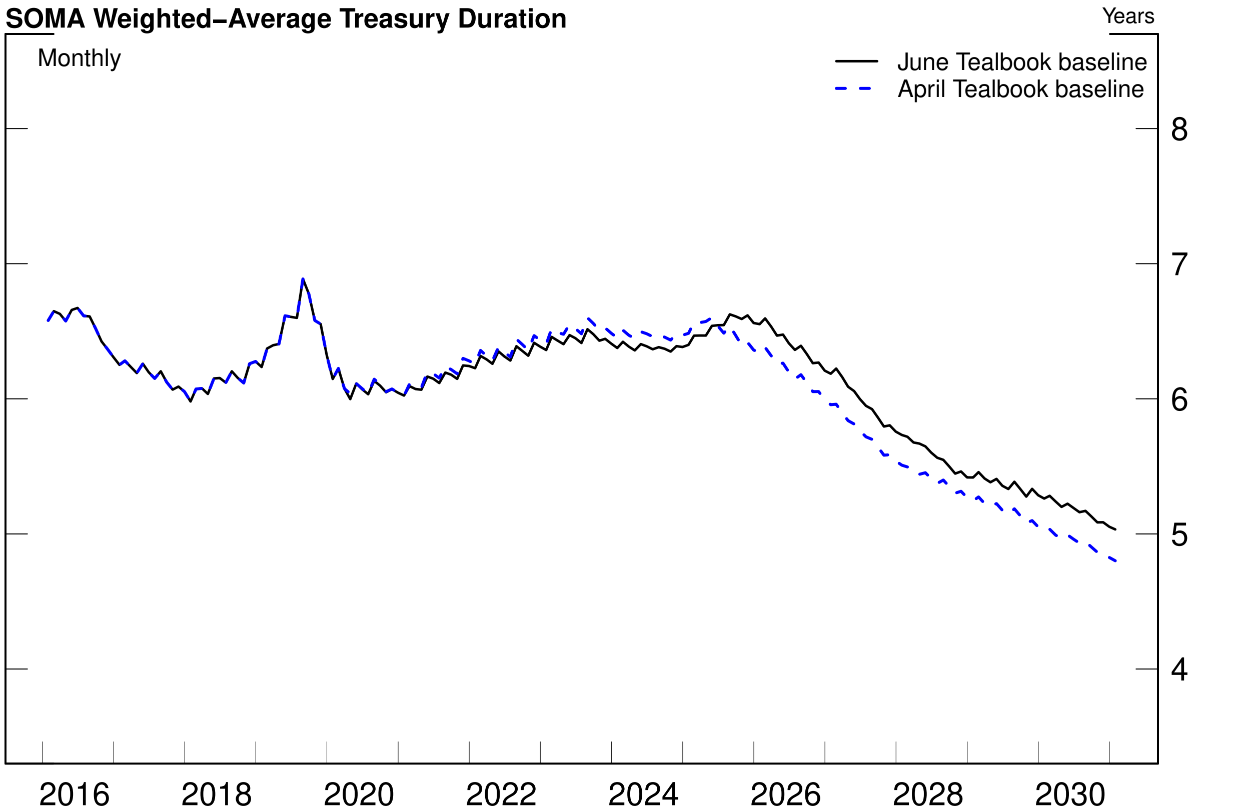
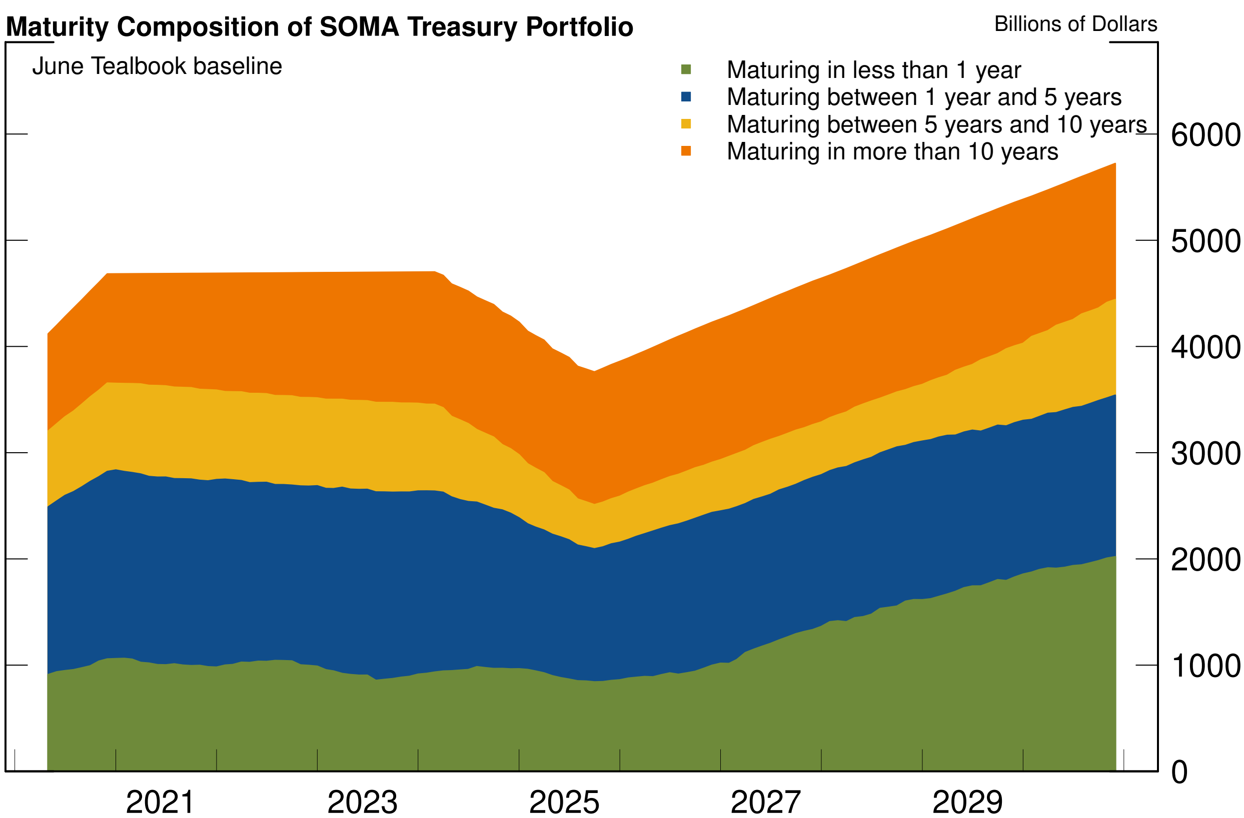
Projections for the Characteristics of SOMA Treasury Securities Holdings





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

Date	June Tealbook	April Tealbook	March Tealbook
	Quarterly Averages		
2020:Q2	-238	-214	-134
Q3	-235	-211	-133
Q4	-232	-208	-133
2021:Q4	-218	-198	-130
2022:Q4	-204	-187	-127
2023:Q4	-189	-175	-124
2024:Q4	-176	-164	-121
2025:Q4	-167	-157	-119
2026:Q4	-160	-150	-117
2027:Q4	-153	-144	-115
2028:Q4	-147	-138	-113
2029:Q4	-142	-133	-111
2030:Q4	-136	-129	-110

It is important to keep in mind that the TTPE is defined as the effect on term premiums of only the Treasury securities and agency (residential) MBS held in the SOMA portfolio; other factors, notably Treasury issuance, can also have important effects on the term premium as estimated using term structure models or survey expectations.[15,16]

Unrealized Gains or Losses. The path for the unrealized gain position of the SOMA portfolio is about unchanged compared with the April Tealbook (see the top charts in the exhibit titled "Income Projections"). The SOMA portfolio was in a net unrealized gain position of about $412 billion at the end of May. With longer-term interest rates projected to rise, the unrealized gain position is expected to decline over the next few years and become an unrealized loss position around 2022:Q3. The unrealized loss position of the SOMA portfolio bottoms out at around $267 billion in late 2025.[17]

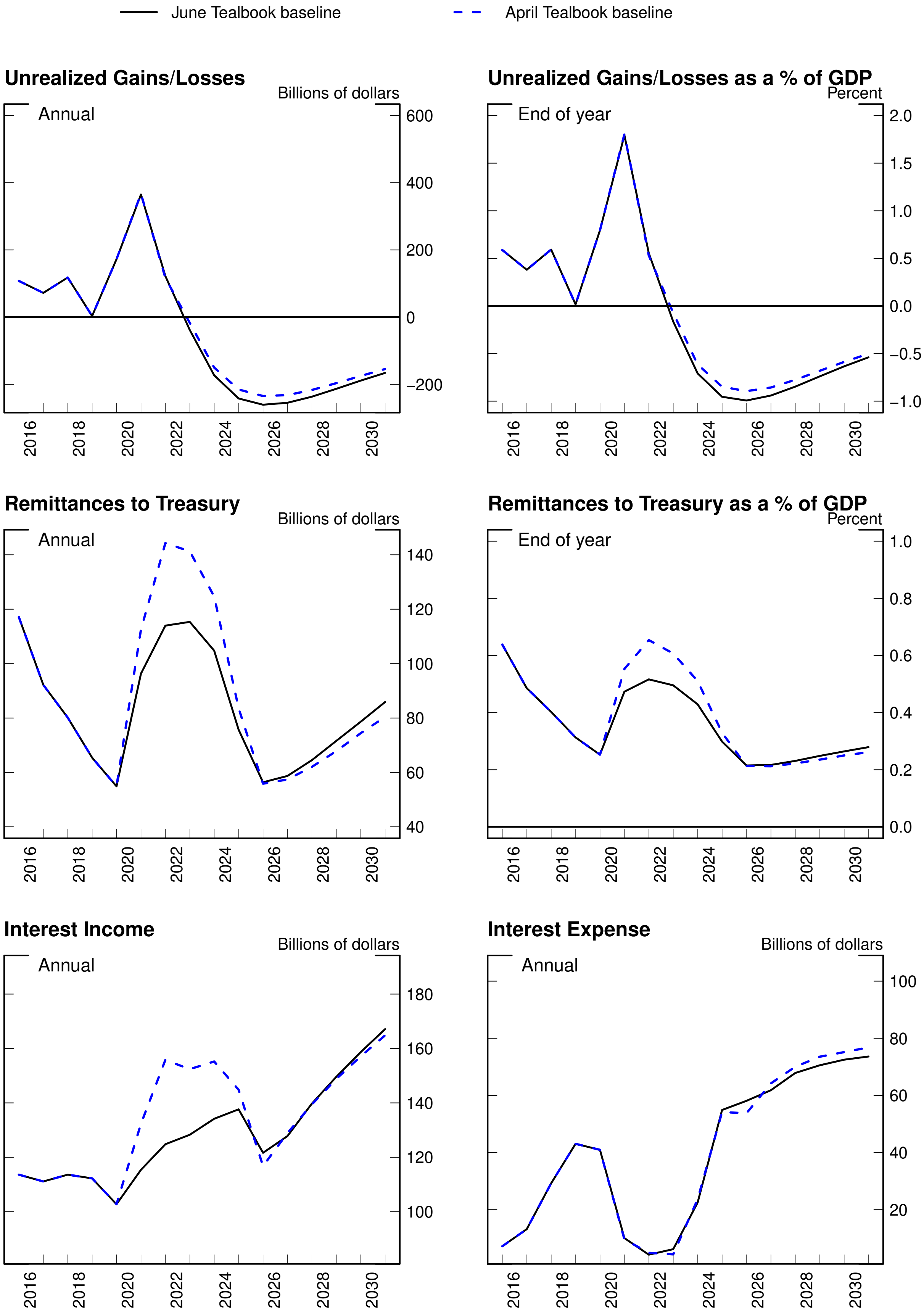
Remittances. Remittances are projected to be considerably lower over the next few years compared with the previous Tealbook (see the middle charts in the exhibit titled "Income Projections"). With interest expense being about unchanged, this downward adjustment is primarily a result of a decrease in interest income given the lower projected paths for take-up in the facilities (see the bottom charts in the exhibit).

[15] While other assets, including agency CMBS and facilities, are not incorporated into the TTPE model, the effect of these policy actions on credit spreads are embedded in the financial projections presented in Tealbook A.

[16] See the September 2019 Tealbook B box titled "Measuring the Combined Effects of the Federal Reserve's Asset Purchase Programs and Treasury's Debt Management."

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

Income Projections



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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
CARES Act	Coronavirus Aid, Relief, and Economic Security Act
CDS	credit default swaps
CFTC	Commodity Futures Trading Commission
C&I	commercial and industrial
CLO	collateralized loan obligation
CMBS	commercial mortgage-backed securities
CPFF	Commercial Paper Funding Facility
CPI	consumer price index
CRE	commercial real estate
DEDO	section in Tealbook A: "Domestic Economic Developments and Outlook"
Desk	Open Market Desk
DFMU	Designated Financial Market Utilities
ECB	European Central Bank
EFFR	effective federal funds rate
ELB	effective lower bound
EME	emerging market economy
EU	European Union
FAST Act	Fixing America's Surface Transportation Act
FDIC	Federal Deposit Insurance Corporation
FOMC	Federal Open Market Committee; also, the Committee
GCF	general collateral finance
GDI	gross domestic income
GDP	gross domestic product
GSIBs	globally systemically important banking organizations

HQLA	high-quality liquid assets
IOER	interest on excess reserves
ISM	Institute for Supply Management
LIBOR	London interbank offered rate
LSAPs	large-scale asset purchases
MBS	mortgage-backed securities
MEP	Maturity Extension Program
MLF	Municipal Liquidity Facility
MMFs	money market funds
MMLF	Money Market Mutual Fund Liquidity Facility
MSELF	Main Street Expanded Loan Facility
MSNLF	Main Street New Loan Facility
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
PDCF	Primary Dealer Credit Facility
PMCCF	Primary Market Corporate Credit Facility
PPP	Paycheck Protection Program
PPPLF	Paycheck Protection Program Liquidity Facility
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

SMCCF	Secondary Market Corporate Credit Facility
SOMA	System Open Market Account
TALF	Term Asset-backed Securities Loan Facility
TBA	to be announced (for example, TBA market)
TCJA	Tax Cuts and Jobs Act of 2017
TGA	U.S. Treasury's General Account
TIPS	Treasury inflation-protected securities
TTPE	Total Term Premium Effect
WAD	Weighted Average Duration
WAM	Weighted Average Maturity
ZLB	zero lower bound

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