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Improving Fed communications: A proposal

Ben S. Bernanke

Hutchins Center on Fiscal & Monetary Policy

The Brookings Institution

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The Federal Reserve is currently conducting its quinquennial review of its monetary policy framework, with the results to be announced later this year. Along with the tactics and tools of policy, the Fed will also review its communications—how policymakers talk (and listen) to the public, legislators, and financial market participants. Effective communication—about what the Fed sees in the economy and how it plans to respond—helps households and businesses better understand the economic outlook, clarifies and explains the Fed's policy strategy, and builds trust and democratic accountability.

Over time and in response to changes in economic conditions and policy challenges, the Fed has constructed a sizable communications toolbox. This note reviews the Fed's current communications practices, drawing comparisons with other major central banks and offering a brief assessment of the strengths and weaknesses of the Fed's approach. Although the Fed's communications strategy has some important strengths, I identify two closely related shortcomings that deserve attention.

First, the Fed's announcements of its monetary policy decisions are accompanied by relatively little economic context or explanation, other than what emerges from the chair's comments and answers to reporters' questions in the press conference. In contrast, almost all other major central banks, in a *Monetary Policy Report* or similar document, provide timely, detailed background information bearing on the policy decision, including reviews of recent developments in the economy and financial markets, discussions of monetary policy strategy, deep dives into substantive issues bearing on the decision, analyses of risks to the outlook, and the like. This additional information helps the public better understand the rationale for the policy decision and the factors that will determine policy in the future. This omission would not be particularly difficult to fix, if the Federal Open Market Committee (FOMC, or Committee) chose to do so.

Second, also unlike almost all other major central banks, the Fed does not issue a baseline economic forecast in conjunction with its policy decisions. For practical reasons, as I will discuss, this omission is *not* easy to fix. Indeed, the FOMC tried and failed to develop a process for producing a collective forecast in 2012, eventually opting instead to stick with its *Summary of*

Economic Projections (the *Summary*), which reports projections of key economic variables submitted individually by the nineteen FOMC participants.[1]

Participants' projections contain useful information, including about the range of views on the Committee. However, taken on their own, the projections are not an adequate substitute for a transparent, internally consistent macroeconomic forecast. Because of the lack of transparency about the assumptions that underlie the individual projections—together with the fact that, collectively, they do not necessarily reflect the post-meeting consensus of the Committee—the projections provide at best limited insight into why the implied outlook takes the shape it does, about the sources of changes in that outlook over time, or about the rationale for the policy strategy.

A particularly important drawback of the projections is that, by construction, they focus the public's attention on what each participant sees as the *most likely* future path for the economy and policy, unhelpfully downplaying the large role of forecast uncertainty in policymaking. As I will discuss, excessive emphasis on the baseline (modal) outlook impedes the ability of policymakers to discuss risk management considerations, to offer contingent forward guidance (or no forward guidance at all), or to shed light on the Committee's reaction function—that is, how policy would respond if the economy were to take an unexpected turn.

This note suggests a way forward. Specifically, I propose that, along with the post-meeting policy announcement and participants' projections, the Fed release once each quarter a relatively brief *Economic Review* (the title is provisional of course). Board staff would prepare the *Review*, possibly with contributions from the staffs of the Reserve Banks, drawing heavily from the briefing materials prepared for the FOMC meeting. In analogy to the *Monetary Policy Reports* issued by other major central banks, the *Review* would include discussions of current economic and financial conditions, as well as in-depth analyses (e.g., of inflation trends) and special features as appropriate. Besides providing useful background information, this material would increase transparency by sharing with the public some of the factors that the Committee considered when making its policy decision.

[1] In Fedspeak, "participants" refers to the seven members of the Board of Governors and twelve Reserve Bank presidents who attend and participate in policy meetings, while "members" refers to a subset of this group, the twelve people who vote on the action and statement at a given meeting.

The centerpiece of the proposed *Review*, however, would be forecasts of key economic and policy variables at varying horizons, drawn from a comprehensive macroeconomic forecast led and "owned" by the Board staff (possibly with some input and commentary from policymakers, as discussed below). Because the underlying forecast would be internally consistent and based on explicit economic assumptions, it would provide greater insight than the projections of individual FOMC participants into the factors affecting the outlook for the economy and policy. Critically, a fully articulated baseline forecast would also facilitate the public discussion of economic scenarios that differ from that baseline. Besides highlighting the inherent uncertainty of economic forecasts, the publication of selected alternative scenarios and their implications could facilitate a subtle but important shift in the Fed's communications strategy. Specifically, it would allow the FOMC to provide policy guidance that is more explicitly contingent on how the economy evolves, underscoring for the public that the future path of policy is not unconditional ("on a preset course") but depends sensitively on economic developments and risk management considerations.

In the remainder of this note I briefly discuss and evaluate the Fed's existing communications tools, drawing some comparisons with other central banks. I then turn to my proposal, including the important issues of how to maximize the perceived policy relevance of the proposed *Review* and how to integrate it with other Fed communications, including the *Summary*. I also discuss possible approaches to making the *Summary* itself more informative. For illustration, an Appendix to the paper includes a mock-up of a hypothetical *Economic Review* based on recently released materials from the June 2019 Tealbook, the pre-meeting briefing book circulated to the FOMC by Board staff.

Fed communications today

Before 1994, consistent with the idea that central banks should cultivate their "mystique," the FOMC did not even make a public announcement when it changed the stance of monetary policy, leaving it to reporters and other Fed-watchers to detect the resulting changes in money markets. However, in the spirit of the transparency revolution in central banking (Powell, 2018), over the past few decades the Fed has greatly expanded its efforts to communicate with the public. I was involved in that process during my time as chair (2006-2014), a period that saw increased use of forward guidance, including state-contingent guidance, as well as the

introductions of the *Summary of Economic Projections* in 2007, the post-meeting press conference in 2011, and the Statement on Longer-Run Goals and Monetary Policy Strategy, which inaugurated the 2 percent inflation target, in 2012. These tools complemented earlier communications vehicles, including the FOMC's post-meeting statement, minutes of policy meetings, the semi-annual *Monetary Policy Report to Congress*, testimonies and speeches by the chair and other FOMC participants, and an expanding suite of regular publications (e.g., the *Beige Book* and the *Senior Loan Officer Opinion Survey*). More recent moves toward greater transparency include Chair Powell's decision to hold a press conference after every meeting, rather than only quarterly, and, consistent with a global trend among central banks, greater outreach to the broader public. Notably, the Fed's review of its policy framework in 2019-20 included a series of "Fed Listens" conferences which directly engaged a cross-section of average citizens around the country. Recent chairs have also worked to improve communications with Congress, including in more frequent one-on-one meetings with legislators.

Overall, the Fed's communications toolbox today has much in common with those of its peer central banks.[2] As just noted, the Fed, like virtually all central banks, releases a post-meeting statement on the outlook, the policy decision, and its rationale, followed by a press conference by the chair. The Fed's post-meeting statement is of similar length to those of most other central banks but tends to be more qualitative and stylized. Other than policy targets and formulaic references to the 2 percent inflation target, it generally includes no numbers, even in its description of recent economic conditions; and it describes the policy strategy and rationale only in very broad and often coded terms. The statement also tends to change relatively little between meetings, which focuses attention on the changes in language that do occur. The Fed's press conference, like those of its peers, gives the chair the opportunity to add color and detail about the outlook, the policy debate, and the decision, and to elaborate on the forward guidance, if any, provided by the statement.[3]

[2] My comparison set for most of this discussion is the European Central Bank and the central banks of Australia, Canada, Japan, New Zealand, Norway, Sweden, Switzerland, and the United Kingdom. I recently conducted a review of forecasting and communication at the Bank of England (Bernanke, 2024), which gave me the opportunity to do some in-depth comparisons of practices at several of these institutions.

[3] As at many other central banks, the chair begins the press conference with a short, scripted introduction, which provides an additional opportunity to review economic developments and the policy decision.

The Fed, like most central banks, publishes minutes of its policy meetings.[4] The minutes, formally approved by the Committee and released three weeks after the meeting, describe, mostly in qualitative language, participants' views about the economy and monetary policy. Differences in opinion are reported without attribution to individuals but with some indication of the number of participants supporting particular views. The minutes also provide short summaries of the staff's assessments (as of the time of the meeting) of current developments and economic prospects. The staff's economic outlook is described in mostly qualitative terms, although in recent years that description has included some limited quantitative information, e.g., regarding the expected course of inflation in the next year. All major central banks, including the Fed, regularly issue various supplementary reports, such as financial stability reports, and individual policymakers at all central banks speak in public about their own views on the economic outlook and policy.

As noted in the introduction, the Fed differs from essentially all its peers in that it provides, at the time of the policy announcement, relatively limited context for its decision, releasing neither background materials that could help explain its monetary policy strategy—e.g., reviews of recent economic and financial developments or analyses of key issues—nor a single, internally consistent economic forecast usable as a basis for quantitative analysis, including the analysis of alternative scenarios. In lieu of a baseline forecast, once each quarter following a policy meeting the Fed issues the *Summary of Economic Projections*, which features projections of the economic growth, the unemployment rate, headline inflation, core inflation, and the policy rate submitted by each of the nineteen FOMC participants. Participants are told to project what they see as "the most likely [modal] outcomes" of those variables. The projections cover the current year, the next two years and, usefully, the longer run.[5] The assumptions underlying the individual projections are neither standardized nor public; instead, projections are conditional on each participant's independent view of "appropriate monetary policy" and, implicitly, on their individual assessments of other factors affecting the economy, including the likely course of

[4] Remarkably, the Bank of England publishes minutes on the day of the meeting. Minutes are distinct from verbatim transcripts of meetings, which most central banks publish, if at all, after a delay of some years (five years in the case of the Fed).

[5] Beginning at the September meeting, the projections cover the current year and the next three years. The "longer run" is informally defined as five to six years, but in practice the relevant time frame can vary depending on current economic conditions. Long-run projections provide insight into participants' views about key quantities such as the sustainable rate of unemployment and the long-run neutral interest rate.

exogenous variables (such as energy prices or economic developments abroad) and the structure of the economy itself.

The *Summary* reports projections for each variable separately, so it cannot be directly inferred how each participant's projections interrelate, including how their projected policy rates depend on their individual projections for growth, unemployment, and inflation. The *Summary* also includes the number of FOMC participants who see the risks to growth, unemployment, and inflation as tending to the upside or to the downside and the number of participants who assess the overall degree of uncertainty surrounding the outlook as greater than usual or less than usual. The published projections are anonymous, although policymakers sometimes reveal their personal outlooks in public remarks. Committee participants submit their projections a few days in advance of the policy meeting, with the benefit of having seen the Board staff forecast and other briefing materials prepared by the staffs of the Board and the Reserve Banks. Participants can change their projections at the meeting but rarely do so.

For growth, unemployment, and inflation, the *Summary* reports the median projection, the central tendency of the projections (which excludes the three highest and three lowest projections), and the full range (lowest to highest) of projections. In contrast, the *Summary* shows the projections of the policy rate (the year-end federal funds rate) of all nineteen participants (again, anonymously) for each year of the forecast and for the long run, graphed in a distinctive figure known to Fed watchers as the "dot plot" (Figure 1). The dot plot and the other projections are scrutinized by market participants for clues about how monetary policy is likely to evolve in the future and are often a central topic in the press conference and in media coverage.

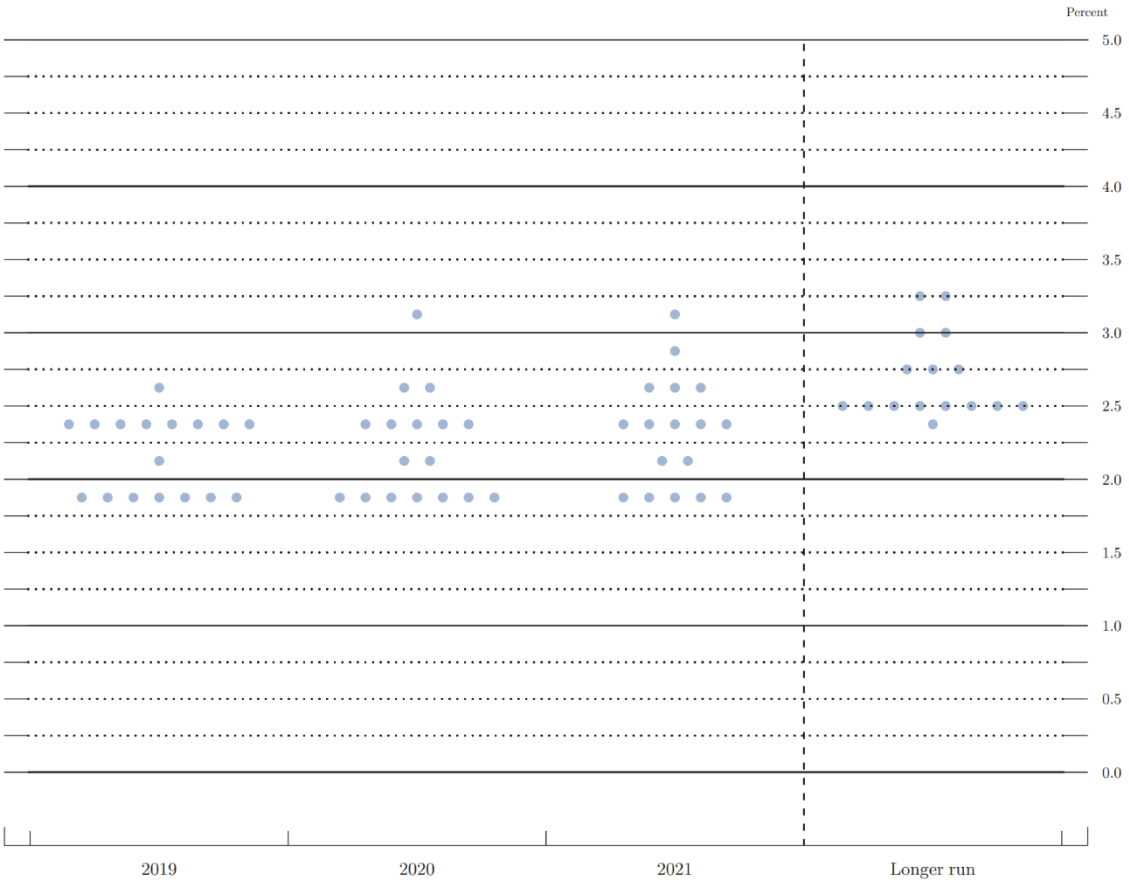

Figure 1. The June 2019 dot plot. The dots show individual projections for the midpoint of what each participant sees as the appropriate target range for the federal funds rate (the policy rate) at the end of the current year, the subsequent two years, and in the longer run. June 2019 projections were chosen to correspond with the mockup of the *Economic Review* in the Appendix.

In contrast to the individual projections that underlie the numbers reported by the Fed, most advanced-economy central banks publish a single, usually quite detailed economic forecast each quarter, supplemented by extensive discussions of the underlying forces shaping the outlook. Although relative contributions vary, the forecast is usually a joint product of the staff and the policy committee and is formally approved by the policy committee. The principal exception to this pattern is the European Central Bank, where the quarterly forecast is produced by the staff, with limited oversight by policymakers in Frankfurt, and is not formally approved by

the Governing Council.[6] The Bank of Japan's forecast, called the Outlook for Economic Activity and Prices, is the closest in structure to the Fed's approach, in that the published forecasts for output and inflation (but not policy rates) reflect median projections by policymakers. However, unlike the Fed, the Bank of Japan's forecasts are made as part of the discussion at the policy meeting and are released together with supporting staff analysis, including a more detailed background document made available to the public the day after the policy announcement. Policymaker projections at the Bank of Japan are also conditioned on some key common assumptions, including a market-based projection of future policy interest rates.

Why doesn't the Fed follow most of its peers in producing a fully developed, policymaker-approved baseline forecast? The principal reasons are logistical. As the FOMC found out painfully in its experiments in 2012, because of the large size of the Committee and the geographical dispersion of its participants—which limit regular, informal discussion and opportunities for meetings with Board staff—as well as normal differences of views and conceptual frameworks within a large group, agreement on a process for approving a consensus forecast within the time constraints of the two-day policy meeting could not be reached. In contrast, in central banks with smaller and (typically) fully resident policy committees, policymakers and staff can debate and tweak the forecast over several weeks leading up to the policy meeting.

The Fed does provide a detailed discussion of recent economic, financial, and policy developments in its semi-annual *Monetary Policy Report to the Congress*, as required by a 1978 law, as well as in semi-annual congressional testimonies by the chair, as mandated by law in 2000. However, by statute, the *Report* is produced and approved by the seven-member Federal Reserve Board, not the full FOMC, even though the latter body is responsible for monetary policy. Moreover, the release of this report is tied to the chair's testimony schedule, set in consultation with Congress, not to the dates of policy decisions. This timing limits the value of the *Report* to observers interested in the FOMC's near-term policy intentions. And in its current form, the *Report* is almost entirely backward-looking, focused on past economic and policy

[6] Two of the ECB's quarterly forecasts are led by the ECB staff in Frankfurt, and two are the joint product of ECB staff and the staffs of the national central banks that make up the Eurosystem. In addition, two weeks after each meeting the ECB releases an Economic Bulletin that provides additional information about economic developments and the outlook.

developments. The only forward-looking material currently included is a reprint of the projections from the most-recent *Summary*—which, in contrast to the Board ownership of the rest of the *Report*, does include input from Federal Reserve Bank presidents. However, the appended projections are not new information and may already be several months out of date at the time the *Report* is issued. For these reasons, the Fed's *Monetary Policy Report to Congress* generally receives little public attention.

Assessing the Fed's current approach

The Fed's current communications approach has several strengths, including by now the advantage of familiarity. As I have noted, the post-meeting FOMC statement, which is typically word-smithed at length in the policy meeting, lacks detail and can be somewhat cryptic. Nevertheless, the statement has generally proven to be a workable tool for conveying the broad outlines of the Committee's baseline outlook and for issuing forward guidance, especially when its messages are effectively amplified by the chair in the press conference. Testimonies and the public remarks and writings of individual policymakers provide opportunities to reinforce and clarify the message of the statement and press conference while allowing policymakers to share their own perspectives. The minutes, although sometimes a bit stale by the time of release, provide additional insight into the discussion at the meeting, including an indication of the range of participants' views about the appropriate strategy for monetary policy going forward. (Except for noting dissenting votes, the policy statement provides little or no information about debates within the Committee.) A recent survey conducted by the Hutchins Center at Brookings found that most academics and market participants give Fed communications good grades, with the academics being a bit more generous. The survey also found that respondents think the central bank's communications have improved over time and that the press conference is the most valuable communications tool today. The *Summary of Economic Projections* received mixed reviews.

The *Summary*, especially the dot plot, is the most distinctive, and doubtless the most controversial, component of the Fed's communications toolbox. The Fed had published the Board's projections for GDP, inflation, and unemployment, but not the policy rate, for the current and subsequent year in the *Monetary Policy Report to Congress* since at least the 1990s, but, as in current iterations of the *Report*, these projections were not closely linked to policy decisions

and received little attention. The *Summary of Economic Projections*—first issued in October 2007, in the early months of the financial crisis—built on the older document, with some changes, including an increase in the number of projection rounds from two to four each year, the addition of a projection of headline inflation, and a lengthening of the projection horizon.[7] Long-run projections for each variable were added in February 2009. Initially, the Committee released the *Summary* with the minutes; the practice of releasing the projections with the policy statement and decision began in 2011, in conjunction with the introduction of the press conference.

Projections of the policy rate, which participants previously did not report, were included in the *Summary* starting in January 2012. This addition reflected the fact that, in response to the slow pace of recovery from the Great Recession, the FOMC had kept the policy rate close to zero for some time. In this unusual situation, market participants found it difficult to forecast the near-term path of policy. Perhaps drawing inferences from earlier periods of very low rates, which had typically been brief, they had consistently anticipated a relatively quick liftoff from zero, an expectation that had the undesirable effect of tightening financial conditions. Qualitative guidance in the policy statement, such as the phrase introduced in March 2009, that the Committee anticipated low rates "for an extended period," had helped somewhat but not solved the problem. By publishing the dot plot, which further clarified FOMC participants' views on the policy outlook, the Committee hoped to strengthen its guidance that it would not tighten monetary policy prematurely.[8] Interest rates are now at historically more normal levels, of course, but the public and market participants continue to look to the projections, especially the dot plot, as the best available quantitative summary of the baseline economic and policy outlook of FOMC participants. Importantly, early concerns that the public would not understand that the projections were forecasts, not promises or an official FOMC plan, did not materialize. In addition, the dispersion of rate projections provides information about the extent of disagreement within the Committee, information that is sometimes difficult to infer from the communications of other central banks.

[7] Projections of nominal GDP growth were dropped.
[8] To reinforce the lower-for-longer message, beginning in 2012 the Summary also published participants' views of "the appropriate timing of policy firming."

Its strong points notwithstanding, the Fed's communications framework has significant gaps and inconsistencies, especially when compared to the best practices of other major central banks. I have mentioned now several times the relative lack of background detail or context for the FOMC's policy decision, which contrasts with the extensive materials published by most central banks in their regular *Monetary Policy Reports* or similar documents.[9] Peer central banks have generally found that this background information, which tends to be much more analytical, quantitative, and detailed than the FOMC's policy statements or the chair's answers in the press conference, provides observers with useful insights about the current economy, developing trends, and the issues driving policy discussions. As already noted, the Fed's *Monetary Policy Report to Congress* includes this type of material but for various reasons, including the timing of its release, the public does not consider this report particularly relevant.

Other notable weaknesses of current FOMC communication, relative to the best international practices, are associated with the use of the *Summary of Economic Projections* as an alternative to an internally consistent, transparent baseline forecast. There are several issues:

First, because the projections reflect individual views and are submitted in advance of the meeting, and because of other factors—including the FOMC's annual changes in the subset of participants who vote on policy, possible modifications in views based on the discussion at the meeting, and the role of the chair in setting the meeting agenda and forging consensus—the economic and policy outlook implied by the projections may not correspond to the post-meeting consensus of the Committee as a whole. That potential inconsistency sometimes muddies communication—for example, the projections do not always appear fully consistent with the current policy decision or the outlook for policy set out by the chair in the press conference.[10]

Second, the rate projections in the *Summary* can be especially problematic when the FOMC wishes to issue collective forward guidance about policy. Based on market reactions to

[9] Several of the publications now known as *Monetary Policy Reports* were originally called *Inflation Reports*. The changes in title presumably reflect the reality that, while low and stable inflation is the primary objective of many central banks, in practice most central banks practice "flexible inflation targeting," considering the effects of their policy decisions on growth and employment as well as on inflation.

[10] A recent example occurred in December 2024, when the FOMC cut the policy rate despite projections of both higher growth and higher inflation than in the previous round. The decision and the change in outlook were not necessarily inconsistent—e.g., inertial policy adjustment and the view that policy remained restrictive could rationalize the decision—but that explanation was a subtle one and would have been difficult to infer from the projections alone.

unexpected changes in the rate projections, we know that the "dots" are themselves a powerful form of forward guidance, often helping to shape public expectations of the likely course of rates for the next year or more. That effect may be benign, even helpful, when the Committee's desired guidance and the guidance implied by the dots are broadly similar. However, the dots can be a headache for policymakers (1) if, for reasons just described, the guidance implied by the dots is different from that intended by the FOMC as a whole; (2) if the Committee wants to issue guidance that is explicitly contingent on economic developments, an option that the dots cannot easily accommodate;[11] or (3) if the FOMC prefers to issue limited or no guidance at all, perhaps because current conditions are especially uncertain. Regarding the last point, note the evident contradiction in situations in which policymakers insist that they will make decisions "meeting by meeting" or in a "data-dependent" way, while the dots are perceived by the public as giving multi-year forward guidance.

Third, even putting aside obvious conceptual problems in aggregating individual modal projections into a single, internally consistent forecast,[12] the concern remains that the forecast based on the projections is almost entirely non-transparent, providing little or no information about what is being assumed by each participant about economic behavior or external factors affecting the economy. The lack of transparency complicates using the projections to draw inferences about policymakers' views and intentions.

As an illustration, suppose that the median projection of inflation rises relative to the previous quarter. There could be many reasons for participants projecting higher inflation, including (but certainly not limited to) changing views on the persistence of inflation shocks; a re-assessment of the tightness of the labor market; changing expectations regarding fiscal or other policies; global economic developments; easier financial conditions; or just an

[11] Because the projections are of modal outcomes, by construction they ignore economic and policy outcomes associated with scenarios that are possible but less likely than the baseline. So, for example, contingent forward guidance that reduces the likelihood of an adverse tail outcome may have little effect on projected modal outcomes and thus on the projections. More generally, the mode of a distribution may not be very informative about the overall shape of the distribution.

[12] For example, median values of the projections are calculated variable by variable, which may obscure relationships implied by the underlying projections. Also, participants base their projections on their views of "appropriate" monetary policy, which may differ from their individual forecasts of the policy the Committee will ultimately adopt. Given the relatively small number of participants submitting projections, the outlook implied by the median projections (which appears to have disproportionate weight in market and media perceptions) may also be excessively sensitive to changes in the views of one or two people.

extrapolation from recent upward surprises in the inflation data. Moreover, those participants projecting higher inflation may differ from each other in the weights they place on potential causes. In short, taken alone, the projections provide limited help to anyone seeking to understand (1) the specific factors shaping the outlook; (2) the reasons for changes in the outlook over time; or (3) how, given the outlook, the current policy strategy advances the central bank's objectives. A transparent and internally consistent forecast, in contrast, could be used to shed light on each of these questions. Peer central banks that publish forecasts typically provide detailed discussions of these issues.

Fourth, importantly, the *Summary*'s emphasis on median projections has the effect of putting excessive weight on a single, central forecast, implicitly downplaying the extensive uncertainty surrounding all economic forecasts and the consequent conditionality of future policies.[13] In fairness, the *Summary* does not ignore risk and uncertainty, although again the lack of transparency about the reasons for its reported risk assessments is a shortcoming.[14] In practice, however, perhaps in part because of the absence of an explicit alternative narrative, the media, the public—and sometimes policymakers themselves—tend to underweight forecast uncertainty, treating the baseline outlook as the dominant, quasi-official view. When events differ from what was forecast, as they usually do, the credibility of the central bank can be damaged. The excessive focus on a single baseline forecast also inhibits public discussions of risk management considerations in policymaking or of how policy might change when the economy evolves in unanticipated ways.

This last point raises the question of how the Fed might better communicate its policy intentions in an environment of pervasive uncertainty. I have come to believe that policy strategies may often be best communicated in terms of policymakers' *reaction function*—if this happens, we will do this; if that happens, we will do that—rather than in terms of modal expectations for the economy and policy, as reflected in the quarterly projections or other

[13] This overemphasis on the baseline outlook is, in my view, a problem at some other central banks as well; see Bernanke (2024).

[14] For example, as noted earlier, participants are asked about whether risks to the goal variables are to the upside or the downside and whether uncertainty is higher or lower than normal. The extent of uncertainty is also conveyed by the dispersion of projections of each variable around the median. No economic rationales are presented in either case, however. A further complication is that the dispersions of projections conflate differences in participants' implicit economic models, in their conditioning assumptions, and in their views of the distribution of future economic shocks.

baseline forecasts. Equivalently, in many situations it may be more informative to discuss the economic and policy outlook in terms of *alternative scenarios* rather than focusing on a single modal forecast. Indeed, many of the Fed's peer central banks regularly release quantitative analyses of alternative scenarios as supplements to their baseline forecasts.[15]

To illustrate the use of alternative scenarios in communication, suppose—with a large dose of hindsight—that in mid-2021 the Fed had not, figuratively speaking, put all its chips on its central forecast that inflation would prove "transitory" but instead had said the equivalent of: "For the following reasons we think that the most likely scenario is that the increases in inflation will be transitory. However, should inflation prove to be higher and more persistent, perhaps for these reasons, our response would be to do this [where "this" could be a projected path for rates and the balance sheet, perhaps described only qualitatively]. Similarly, if inflation sinks lower than in the modal forecast, we expect to do that." Even if lacking in quantitative details, a more explicitly conditional approach would have better conveyed to the public the intrinsic uncertainty of the outlook, and discussion of the reaction function would have provided the public some advance notice about how the Committee would likely respond in less probable but still plausible scenarios.[16] Similarly, looking back to my own tenure at the Fed, in September 2012 the FOMC might have used alternative scenarios to provide greater clarity about the conditions under which the asset purchase program known as QE3 would be continued or terminated, possibly mitigating the 2013 "taper tantrum."[17] An internally consistent forecast based on explicit economic

[15] Peer central banks that published alternative scenarios in their *Monetary Policy Reports* in the past year include the European Central Bank and the central banks of Australia, New Zealand, and Sweden. The Bank of England publishes a "constant-interest-rate" scenario as an alternative to their baseline forecast; my review of the Bank (Bernanke, 2024) recommended increased use of alternative scenarios. In a striking development, in support of its April 2025 policy decision, the Bank of Canada released two scenarios conditioned on alternative assumptions about U.S. tariffs but did not release a baseline forecast.

[16] FOMC policy statements in 2021 used conditional language in noting that the Committee would be "prepared to adjust the stance of monetary policy as appropriate if risks emerge that could impede" progress toward its goals. However, this language, repeated verbatim in every statement that year, provided no details and came to be perceived as boilerplate.

[17] The September 2012 statement said that large-scale asset purchases (QE3) would continue if the labor market did not "improve substantially," a vague criterion. For FOMC participants concerned that the labor market would remain weak indefinitely or that asset purchases would pose risks to financial stability, the statement also included the escape clause that the Committee would take account of the "likely efficacy and costs of such purchases," again without details. Scenario analysis could have clarified these statements, for example, by indicating what the Committee might do if no labor market improvement was forthcoming, or, alternatively, if improvement were more rapid than expected. Granted, given disagreements on the Committee at the time, greater specificity in the guidance, through alternative scenarios or other means, might not have been easy to achieve. However, that difficulty would also have made clearer the possible risks of the communication strategy and the need to provide supplementary information if the program were to be introduced.

assumptions provides a sound basis for the quantitative analysis of alternative scenarios and the associated reaction function. Median projections, even if supplemented by qualitative risk assessments (e.g., a balance of risks), do not.

Recent Fed communications have shown signs of greater reliance on alternative scenarios, at least qualitatively. For example, in his March 29 press conference, Chair Powell stated: "Policy is not on a preset course…If the economy remains strong and inflation does not continue to move sustainably toward 2 percent, we can maintain policy restraint for longer. If the labor market were to weaken unexpectedly or inflation were to fall more quickly than anticipated, we can ease policy accordingly." Reference to alternative scenarios at the Fed has also increased in response to the uncertainties surrounding the administration's trade policy. For example, in an April 4 speech, Powell said, "The size and duration of [the effects of tariffs] remain uncertain. While tariffs are highly likely to generate at least a temporary rise in inflation, it is also possible that the effects could be more persistent. Avoiding that outcome would depend on keeping longer-term inflation expectations well anchored, on the size of the effects, and on how long it takes for them to pass through fully to prices" (Powell, 2025). He repeated this point in the Q and A and mentioned that, internally, the Committee is thinking of the staff forecast as a "placeholder." In an April 14 speech, Governor Waller (2025) was even more explicit in using alternative scenarios to discuss the possible economic consequences of tariff policies. This tentative shift in the Fed's approach is constructive but might be made even more informative if supplemented by quantitative modelling.[18]

In addition to providing insight into the policy committee's reaction function, the development and public discussion of alternative scenarios can have other communications benefits. When devising or communicating risk management strategies, for example, policymakers can use alternative scenarios to obtain quantitative estimates of the economic effects of various possible shocks, possibly rationalizing a "lean" of policy to mitigate risk.[19] The construction and analysis of alternative scenarios can also help pinpoint the sources of past forecasting errors; quantify the effects of new information on the outlook, thereby giving

[18] In its April 2025 *World Economic Outlook*, the International Monetary Fund downplayed its baseline forecast and discussed possible outcomes for the global economy under alternative scenarios regarding U.S. tariff policies.
[19] The joint analysis of the empirical distribution of outcomes around the baseline forecast and prominent alternative scenarios can, at least in principle, help identify whether there are important sources of risk to the forecast that are not being fully accounted for; see Adrian et al. (2025).

substance to the term "data-dependency;" assess the sensitivity of the forecast to specific assumptions about the structure of the economy; and evaluate alternative policy strategies (Bernanke, 2024). Indeed, as can be seen in older Tealbooks now in the public domain, staff briefings in FOMC meetings have long made regular use of alternative scenarios to illustrate risks and to evaluate the robustness of policy choices, exercises which are possible only because the staff's baseline economic forecast serves as the starting point against which alternatives can be compared. Since the baseline forecast is not released, however, under current arrangements those alternative scenarios cannot be shared with the public.

Improving the Fed's communications: A proposal

With these issues in mind, how might the Fed improve its communications? My proposal is that the FOMC release, along with the post-meeting statement and prior to the press conference, a publication I'll call here the *Economic Review*, which would be roughly analogous to the *Monetary Policy Reports* issued by other major central banks. Like the reports of other central banks, the Fed's *Economic Review* would include diverse information, including a review of recent economic and financial developments, informative features (e.g., a summary of outside forecasts or the rate implications of alternative monetary policy rules), and short discussions of topical issues. The Appendix to this paper provides a mockup of the proposed *Review* that includes some illustrative examples of the types of material that might be included, on either a regular or occasional basis.

The central element of the *Review* would be a forecast of key macroeconomic variables (including those now projected in the *Summary*) at multiple horizons, including the longer run. With sufficient transparency about its underlying assumptions, the forecast and the associated discussion would help the public understand better the factors driving the economic outlook and policy, including any recent changes. The release of a transparent baseline forecast would also make possible, when appropriate, the publication of selected alternative scenarios, which in turn would facilitate quantitative analyses of uncertainty and risks to the outlook and help re-focus communication on the Committee's reaction function.

The Committee could also modify the *Summary of Economic Projections* to ameliorate the drawbacks discussed in the previous section and to make it more complementary to the

Review, including its embedded forecast. Here I first discuss the proposed new document, deferring the discussion of possible improvements to the *Summary* to the end of the paper.

Putting aside the forecast for a moment, there is no practical barrier to the proposed *Review* providing policy-relevant background information to the public in a timely way, including reviews of recent developments, in-depth analyses of key issues, and occasional reports on special topics. The Board staff would naturally take the lead in preparing this material, drawing on FOMC briefing materials, with contributions from the staffs of the Reserve Banks as appropriate. The development of the baseline forecast is less straightforward. As we have seen, given the size and geographical dispersion of the FOMC, constructing a fully collaborative and policymaker-approved baseline forecast to be released with the policy announcement would pose significant logistical challenges. In light of those challenges, a better way forward for the Fed would be to follow the European Central Bank—the only other major central bank with a comparably large and geographically dispersed policy committee—in leaving the principal responsibility for the forecast to the staff. As discussed below, there could be opportunities for FOMC input, but formal approval of the forecast by policymakers would not be expected or required.

The proposal to release a staff-led economic forecast and related analytical materials raises some difficult issues, but resources and capacity are not among them. The Board staff have long prepared detailed forecasts for internal use, of course, so there is no shortage of experience or expertise. Internal staff forecasts are based on both road-tested economic models and judgments made by a roster of experienced specialists in various aspects of the economy.[20] Several Reserve Banks, which have significantly fewer staff devoted to monetary issues than the Board, already release staff-prepared forecasts, and all the Reserve Banks regularly publish policy-relevant materials, including staff discussion papers and research summaries, topical blogs, economic indicators developed and maintained in-house (e.g., of inflation expectations or financial conditions), and the results of surveys of consumers and businesses. And virtually all the Fed's peer central banks abroad, many of which have far more limited resources than the

[20] If the forecast is released, at some point it would be useful for the Board staff to publish a document describing its forecasting procedures, including the models and methods used. To give a full picture of the forecasting process, including the development of conditioning assumptions, this document would have to go beyond the description of the staff's main macro model, known as FRBUS, which is already in the public domain.

Board, release materials that are as extensive (usually more extensive) as what I am proposing here. In any case, the staff would presumably prepare the *Review*, including the forecast, in tandem with briefing materials for the policy meeting, limiting the extra burden. The *Review* could be completed and distributed to participants in advance of the meeting, along with the Tealbook, ensuring that putting the final touches on the *Review* would not interfere with the staff's responsibilities at the meeting itself. That timing would also facilitate contributions from Reserve Bank staff to the *Review*.

Some staff have raised the concern that the publication of the staff forecast and other materials would inhibit their ability to be frank with the policy committee in its closed-door meeting. For example, suppose the staff wanted FOMC participants to see the economic implications of a possible but not yet confirmed large change in fiscal policy. Would the staff hesitate to provide a forecast conditional on the hypothetical fiscal policy change, out of concern that its release would mislead the public or put the Fed in the uncomfortable position of implicitly evaluating a policy proposal outside its jurisdiction? In circumstances where this issue is a concern, alternative scenarios could solve the problem in a straightforward way. For its baseline forecast, which would be released, the staff would follow its standard practice of making assumptions about government policy and other external factors that best reflect currently available information. Typically, this would involve sticking relatively close to current policy, unless a change has been clearly indicated by Congress or the administration. If the FOMC wants to see the implications of more dramatic changes in non-monetary policies, that could be handled through simulations of alternative scenarios discussed internally only. It bears noting that worries about the consequences of implicit evaluations of nonmonetary policies have not prevented the release of forecasts in other central banks, including in times of radical and controversial policy change, such as the runup to the 2016 Brexit vote in the United Kingdom.

More difficult than issues of staff capacity or incentives is the question of whether observers would view the staff-led report, including the forecast, as providing relevant information about policy, given that it would not have the formal imprimatur of the policy committee. Even if its policy relevance were doubted, however, the release of the *Review* would still enhance transparency, in that it would allow the public to see some of the materials the Committee considered in making its decision. Moreover, the background information and

analyses provided in the *Review* would be a public good, useful to at least some outside observers. However, although the concern about the public's response to a staff-led document is an important one, there are reasons to believe the *Review* would in fact be perceived as policy-relevant, and there are steps the Committee could take to make that outcome more likely.

First, we have again the example of the European Central Bank, which issues a quarterly staff forecast and other descriptive materials with limited policymaker oversight. Although the staff forecast is not formally approved by the policy committee, outsiders perceive it to be highly salient. *The reason is that policymakers talk about it.* The ECB president and other members of the policy committee make frequent reference to the forecast, treating it either as the base case or as a point of departure for discussing their own views. And, while the staff forecast is only one of many inputs to the ultimate policy decision, ECB watchers understand that it informs policy discussions and policy choices. Indeed, the ECB has been known to delay policy decisions until the next forecast release.

The same salience of a staff-led forecast and the other components of the *Review* would likely be observed at the Fed. Seasoned Fed observers know that the staff's briefing materials, including of course the forecast and related exercises like the analysis of alternative scenarios, are influential in the Committee's policy debates and worthy of attention for that reason alone. Market participants will also infer the relevance of the staff forecast from cues in the statement, the chair's press conference, and policymakers' testimonies and speeches. For example, to highlight the new publication, the FOMC's post-meeting statement could be modified to include more detail on current conditions, the outlook, and the balance of risks, with reference as appropriate to the *Economic Review.* In the press conference, the chair might find the staff forecast to be a useful starting point from which to amplify the Committee's views on the outlook and policy. The forecast would also be a natural baseline for individual Committee members presenting their own views in public remarks. In short, if the staff forecast and related materials are publicly discussed by policymakers, individually and collectively, as at the ECB, observers will likely view that material as influential.

Moreover, there are channels through which FOMC participants could provide input to the staff's forecast, further increasing its perceived relevance. To some extent this would happen naturally. For example, the staff as a matter of course already present and discuss their forecasts

and related materials in policy meetings. Although the forecast would have been put to bed by the time of the meeting, the ongoing exchanges between staff and Committee participants would tend, over time, to better align the staff forecast and policymakers' views. Indeed, as the (quarterly) staff forecast would be released only after alternate policy meetings, each forecast would have the benefit of policymaker input at two previous meetings.

Beyond routine discussions at FOMC meetings, however, there are measures that could increase further the perceived salience of the staff forecast, if the Committee agreed. For example, the staff could develop procedures to obtain timelier (i.e., before the meeting) policymaker input. As an illustration, the process of forecast development might include two pre-meeting calls. In the first call, the staff committee responsible for overseeing the forecast process would meet online with the research directors of the Reserve Banks to discuss the general shape of the forecast and any significant unresolved issues. In the second call, the staff steering committee would brief the Reserve Bank presidents (who themselves would presumably have been briefed by their research directors), giving an opportunity for policymaker questions and comments. Similar briefings would be provided to the governors in regular Board meetings. To avoid the difficulties involved in obtaining formal FOMC approval, the staff would have to retain final signoff on the forecast, reflecting their best independent judgments; but both the staff and policymakers would have benefited from the additional opportunities to discuss the outlook.

Also, although the FOMC would not formally approve the staff forecast, participants' after-the-fact evaluations of the forecast, if publicly released, could serve much the same purpose. Such evaluations could be obtained by building on the existing practice of soliciting written answers from participants about their quarterly projections. Along with their numerical projections, participants have for some time submitted short written answers to questions about, among other issues, the factors shaping their outlooks, the thinking underlying their rate projections, and, importantly for present purposes, whether they agree with the Tealbook's (i.e., the staff's) forecasts and projected paths of policy. These questions and answers are currently not released until the publication of confidential materials that occurs with a five-year delay. Continuing to ask such questions—perhaps with some thoughtful redesign of the question list—and providing a summary of the responses to the public, along with the usual projections, would significantly increase the transparency of the projections in general, while providing real-time

information about the extent to which policymakers agree or disagree with the staff-led forecast, and why.[21]

The FOMC could also have some input into decisions about what elements, other than the baseline forecast, to include in the *Review*. The choice of alternative scenarios to include, if any, is particularly important. Although I am a fan of alternative scenarios, I believe they are most useful when they serve a specific communications objective, e.g., during times of high uncertainty when significantly different trajectories for the economy and policy seem possible.[22] Since both the choice of scenarios to present to the public and the hypothetical policy responses in the alternative scenarios (the reaction function) are clearly policy-relevant, the FOMC should have some say on both issues if possible. One way to do this would be for the Committee leadership, in a process closely analogous to the development of alternative post-meeting statements, to work with staff and FOMC members to specify in advance three or four alternative scenarios (say) to present to the Committee on the first day of the meeting. For logistical reasons, the staff analyses could not be changed or scenarios added at that point, but the FOMC could be asked to choose which (if any) of the available scenarios should be included in the document to be released the next day, thereby providing a signal about the issues that most concern the Committee.[23]

In summary, to increase the perceived policy relevance of the staff forecast and other analyses, 1) policymakers could regularly refer to this material in both individual public remarks and in Committee releases, as at the ECB; 2) the staff, although ultimately responsible for the forecast, could have discussions with FOMC participants about the shape of the forecast both at policy meetings and, conceivably, in calls in advance of those meetings; 3) summaries of policymaker views of the staff forecast and policy projections, which indeed might be more substantive than the up or down vote taken at most other central banks, could be released to the public; and 4) choices about which alternative scenarios and possibly other materials to release (other than the forecast) could ultimately lie in the hands of policymakers.

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[21] Inevitably, at some point, the summarization of answers will be delegated to an AI program.
[22] In particular, there need be no presumption that simulations of alternative scenarios will appear in every *Review*, or that a fixed list of scenarios will be presented each quarter.
[23] Because scenario choices would have been discussed at previous meetings and in the intermeeting call, this procedure is less constraining than it may seem.

The rates assumption

There is a somewhat technical issue that needs attention here. To make forecasts, staff must make assumptions about the future path of the policy rate, including how that path would change in various contingencies. How the staff would derive that path, and how it would be communicated under the present proposal, are important questions.

There are several possible approaches to deriving the rates assumption, none of which is perfect. Staff at several central banks, including among others the Bank of England and the European Central Bank, use market futures prices in constructing their baseline rate forecast. This approach is transparent and takes the rates assumption out of the control of the staff forecasters, reducing the risk that the public will take an unintended policy signal from the assumed rate path. Drawbacks of this approach are that market futures prices include risk and liquidity premiums that cloud their signal, and their volatility may result in the implied rate paths being stale by the time the forecast is finalized. In my review of the Bank of England's practices (Bernanke, 2024), I discussed several occasions in which the futures-based rate assumption led to Bank forecasts that did not fairly reflect the views of the policy committee and consequently confused the public. There are some partial remedies to these problems: Econometric methods could be used to extract clearer signals from futures prices, for example, and the discussion of the forecast could note significant changes in those prices between the closing of the forecast and its public release. Comments on the staff forecast from FOMC participants (collected with the projections) could also help identify situations in which that forecast was not close to the Committee consensus.

A second possibility is to use the median projections of the funds rate submitted by FOMC participants in the *Summary* for the rates assumption. This method also avoids the risk of sending an unintended policy signal, beyond the signal already provided by the projections. Its shortcoming is the lack of transparency and coherence of the projections discussed earlier. The staff, like the public, do not know what assumptions participants are making when they develop their rate projections, and those unknown assumptions could well be inconsistent with those made by the staff in the baseline forecast. Timing presents a further problem: On current practice, participants do not submit their projections until after they see the staff forecast.

The third option, used by several central banks including the Bank of Canada, is for the staff to model the path of future rates using policy rules estimated from past policymaker behavior, possibly modified to reflect existing forward guidance, financial market pricing, and other information. This is essentially the approach currently used by Board staff, which is a point in its favor. Other advantages of this approach are that it is more consistent with the practice of private forecasters and is more transparent, in that (unlike market forecasts, for example) changes in the projected rate path can be tied (through the estimated policy rule) directly to their economic determinants. Its principal disadvantage is that publication or even a qualitative description of the assumed rate path in the *Review* risks sending an unwanted policy signal. Clear explanations and disclaimers, including comments from the chair, could minimize that risk; see the Appendix for some suggested language. Again, comments on the staff forecast by FOMC participants based on the supplementary questions they answer could help clarify any differences between staff and policymaker views.

In thinking about the method of deriving the rates assumption, an additional consideration is the need to estimate hypothetical policy responses in alternative scenarios. An estimated policy rule that explicitly relates policy choices to the outlook can be used to do that in a straightforward way. There is no obvious way to derive policy reaction functions if rate paths are based on futures prices, except possibly by the mixed method of using an estimated policy rule to approximate the implied change in rates from the market-based baseline. If the *Summary* rate projections were used in the baseline, it is conceivable that alternative scenarios could be constructed by asking FOMC participants to consider how they would expect policy to react to various changes in the environment, but this approach inherits the lack of transparency and internal consistency of the baseline projections. It is also very demanding of the resources available to individual participants in the period before the policy meeting. Although further discussion is warranted, the staff's current practice of using an estimated policy rule plus other information to paths for the policy rate seems the best approach. For comparison, alternative estimated rate paths, including the market-implied path and the paths implied by various standard policy rules, could be presented and discussed as a regular feature in the *Review*.

In any case, as any good forecaster would, the staff should ensure that its assumed rates path is qualitatively similar to the paths implied by the participants' projections and by futures

prices. Besides increasing the credibility of the policy assumption, ensuring that the rates assumption is "reasonable" and in the range of most observers' expectations would likely imply a macro forecast that is not particularly sensitive to how the rates assumption was derived.

The role of the *Summary of Economic Projections*

So, what about the *Summary of Economic Projections*? This paper has noted significant conceptual weaknesses of the *Summary*, which could justify its elimination. As we have seen, the ECB relies on a staff forecast only; and to my knowledge, no other major central bank uses projections of the sort put out by the Fed (the Bank of Japan being a partial exception). On the other hand, even if the proposal advocated here were adopted, the *Summary* would remain one of the few available sources of quantitative insight into the thinking of policymakers themselves. Rather than dropping the projections, then, the better approach, at least initially, might be to see if the *Summary* can be made more informative and complementary to the staff-produced materials.

My assessment of Fed communications identified four issues with the *Summary* as currently structured: 1) the possible inconsistency of the median projections with the Committee consensus; 2) possible interference of the dot plot with the Committee's collective forward guidance; 3) lack of transparency about the assumptions and implicit economic models underlying the projections; and 4) the implied emphasis on the forecast based on the median projections, with insufficient attention to alternative scenarios and forecast uncertainty.

The first two problems are difficult to eliminate but likely could be mitigated through the chair's leadership. On the first issue, the chair might emphasize to colleagues the importance of updating their projections to reflect the briefings and discussion at the policy meeting. To underscore the point, fifteen minutes (say) for revision of projections might be included as an agenda item at the end of the first day of the meeting. On the second issue, in public communications the chair (and other Fed leaders) could double down on the point that projections are neither a commitment nor a plan, emphasizing that the FOMC's collective forward guidance always trumps the unconditional (modal) forecasts implied by the projections.

The issues of non-transparency and insufficient attention to uncertainty and alternative scenarios in the *Summary* are more fundamental. Both could be addressed to some extent, as

noted earlier, by making greater use of the written commentary already provided by participants, with questions added as appropriate.[24] Participants' responses, combined into summary statements that would be publicly released (without attribution to individuals), would add transparency by providing insight into the reasoning behind the projections. The issues of forecast uncertainty and the reaction function could be handled by having participants choose among alternative scenarios prepared by the staff, as discussed above. Another possibility would be to ask participants, as part of the projections process, to write an additional paragraph describing in qualitative terms the alternative scenario that is most likely or consequential, in their view, and the (qualitative) implications of that scenario for the economy and policy. A summary of that material could be released or, alternatively, it could serve as an input to the alternative scenario analyses performed by the staff for the *Review*.

A simple change that would require no additional input from participants would be to add to the *Summary* complete dot plots for all the projected variables, not just policy rates. In general, dot plots have the useful feature that they show the range of disagreement on the Committee as well as the median projected path. With the dot plots as references, Fed communication could put greater emphasis on forecast uncertainty and the range of possible outcomes rather than focusing on medians alone.

Some observers have suggested that the projections could be shown participant by participant rather than (or in addition to) reporting them variable by variable. In principle, showing all the projections made by each individual participant together could provide useful information; for example, it might reveal whether participants projecting higher rates are doing so because they expect higher inflation or lower unemployment, or perhaps because they have raised their estimate of the neutral interest rate. This proposal deserves further discussion. One concern is that the matrix of projections that would be released under this plan would be very large and probably non-transparent to all but the most sophisticated observers.[25] Moreover, providing this extra information does not solve other aggregation problems, such as the fact that

[24] In making and explaining projections, participants are aided by the fact that they receive the Tealbook before the projections must be submitted. Reserve Bank presidents also have their own staffs to provide assistance. Traditionally, governors had little or no personal staff, but that has been remedied in recent years, giving members of the Board more support than in the past for preparing projections and providing written answers to questions.
[25] If those matrices are released, they should be made available for download and not included in published materials.

the underlying assumptions about model structure or exogenous variables are not necessarily consistent across participants. Microscopic attention to the projections of individual participants (including trying to guess the participant responsible for each set of projections) might also divert analysts' attention from the big picture of the Committee's collective views and strategy. These points are not dispositive, but they suggest that relying more heavily on participants' written commentary for interpreting the projections could be the better way forward.

Conclusion

This note has argued that, in the spirit of the *Monetary Policy Reports* issued by other major central banks, the Fed should issue a quarterly *Economic Review*, prepared by the staff and with release timed to coincide with the FOMC's policy announcement. This report would include a macroeconomic forecast, with additional material on current economic developments, in-depth reviews of critical issues bearing on the policy choice, special topics, and selected alternative economic scenarios. Although the staff would own the forecast, they would also obtain input from Committee participants at policy meetings and, possibly, in regular pre-meeting calls. The FOMC could also oversee the choices of materials other than the forecast to release, most importantly the alternative scenarios. Summaries of the comments already submitted by participants with their projections, if released, could help the public understand differences between the staff forecast and the projections.

Both to legitimize the *Review* and to reap the associated benefits for communications, it would be important for the FOMC to engage with the new document, both collectively and individually. For example, under current practice, the link between the phrasing of the post-meeting statement and the policy decision is not always clear; indeed, the stated rationale for both action and inaction is often only that the decision is "in support of [the Committee's] goals," which is not very informative. The *Review's* quantitative analysis of recent developments and the outlook would set up a baseline, which—whether Committee members agreed with it or not—could promote more explicit discussion of the policy rationale in the statement, the chair's press conference, and subsequent speeches and testimonies. Releasing a staff baseline forecast combined with selected alternative scenarios would also make possible an important change in the strategy of policy communication, in which policymakers focus more on the uncertainty and contingency that attend the outlook and policy choices and less on the central forecast—a change

that would increase policy flexibility, allow for clearer forward guidance, and illuminate the Committee's reaction function, particularly in periods of high uncertainty.

Adding the *Economic Review* to the Fed's communications toolbox would, of course, be a significant step and should be carefully discussed and vetted by the FOMC. That discussion should consider not only the content, format, and logistics of the new report, but also address specifically how it would be used in post-meeting communications, including how it would relate to the statement, minutes, and other existing releases. A few dry runs would allow the staff to ensure that the logistics are workable and to fine-tune the role played by the *Review* in FOMC communication. Public remarks, especially by the chair, explaining the proposed changes and their rationales in advance of introduction would also be essential.

References

Adrian, Tobias, Domenico Giannone, Matteo Luciani, and Mike West. 2025. "Scenario Synthesis and Macroeconomic Risk." Unpublished.

Bernanke, Ben. 2024. "Forecasting for Monetary Policy Making and Communication at the Bank of England; a Review." The Bank of England. https://www.bankofengland.co.uk/independent-evaluation-office/forecasting-for-monetary-policy-making-and-communication-at-the-bank-of-england-a-review.

Powell, Jerome. 2018. "Financial Stability and Central Bank Transparency." Conference remarks at the Sveriges Riksbank. https://www.federalreserve.gov/newsevents/speech/powell20180525a.htm.

_____. 2025. "Economic Outlook." Remarks to the Society for Advancing Business Editing and Writing Annual Conference, Arlington VA. https://www.federalreserve.gov/newsevents/speech/powell20250404a.htm.

Waller, Christopher. 2025. "A Tale of Two Outlooks." Remarks at the Certified Analysts Society of St. Louis. https://www.federalreserve.gov/newsevents/speech/waller20250414a.htm.

Appendix: Mock-up of an Economic Review

Author's note: This mock-up draws on briefing materials for the June 2019 FOMC meeting, released to the public in January 2025. (Of course, forecasts made in June 2019 included no foreknowledge of the pandemic or the September 2019 market disruption.) The content of the mock-up is intended to be illustrative: Texts are sometimes left incomplete and should not be read for their content. The specific topics discussed, especially in boxes and special features, would change from release to release. Comments by this author are occasionally inserted in italics.

Economic Review

In conjunction with the Federal Open Market Committee (FOMC) meeting held on June 18-19, 2019, staff from across the Federal Reserve System prepared this review of current economic and financial conditions, together with staff forecasts of key economic indicators and other material bearing on the policy choices facing the FOMC. Much of the content of this review is drawn from the briefing materials presented to the FOMC at today's meeting. However, **this document has not been formally endorsed by the FOMC and does not necessarily represent the views of the Committee as a whole or of its individual members.**

In particular, the staff are responsible for the assumptions underlying the forecast, which are discussed below. These assumptions are based on judgments of relevant staff members, financial market indicators, currently available data, and economic and statistical models. **Projections of the federal funds rate used to construct the forecasts in this document are based on statistical models of past FOMC behavior together with staff judgments and do not necessarily represent the views of policymakers.** Assumptions about fiscal and other policies are based on staff judgments about measures that have been or are likely to be approved in the relatively near term. **The staff are not equipped and do not try to evaluate government policies other than those under the authority of the Federal Reserve.** Such evaluations are appropriately left to other agencies.

All economic forecasts are subject to considerable uncertainty. The staff regularly review their forecasting procedures and will occasionally include in this review an analysis of past forecast errors. The staff also consider how the economy might evolve in scenarios deemed plausible but less likely than the baseline forecast. Some simulations of alternative scenarios, which are hypothetical and studied in the spirit of contingency planning, are included in this document. The staff generally do not attempt to forecast large but infrequent shocks, such as financial crises or pandemics.

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1. Domestic Economic Developments and Outlook

The tenor of the incoming information on economic activity, on balance, has become somewhat more downbeat of late. In particular, business fixed investment appears to have stalled in the second quarter, residential investment and manufacturing output have posted outright declines so far this year, and the May reading on job growth was weak. Moreover, amid heightened concerns about trade tensions and slowing global growth, the dollar is stronger, and interest rates, equity prices, and longer-term profit expectations have moved lower. To be sure, not all of the news has been negative: GDP growth in the first quarter surprised us to the upside, the unemployment rate has moved lower, and consumer spending growth appears to be on track to post a solid gain following a weak first quarter. Even so, we now project that GDP growth will slow from a pace of 2.5 percent at an annual rate in the first half of this year to 1.75 percent in the second half. We now expect GDP to rise 2.1 percent next year and 1.7 percent the year after. We project the unemployment rate to be 3.7 percent over the medium term; previously, we expected it to edge down to 3.6 percent.

Incoming price data are consistent with our view that the weak readings on core price inflation earlier this year are likely to prove transitory, and, thus, we still expect the 12-month change in core PCE prices to edge up from 1.6 percent in April to 1.8 percent by the end of this year. For the medium term, we continue to project core PCE inflation to edge up to 1.9 percent in 2020 and 2021, the same as in the March Review. Total PCE price inflation is forecast to run below core inflation this year and to move in line with core inflation in the next couple of years.

The staff's projection is conditioned on a substantially lower projected path for the federal funds rate than in March, a reflection of the new policy rule that we incorporated in the March Review. In isolation, that lower funds rate path would have led us to strengthen our economic projection materially. However, notwithstanding the upward surprise to published first quarter GDP growth, the incoming data on spending, income, and wealth have all been below our expectations on balance; the recent movements in equity prices, the dollar, and foreign economic growth point to a somewhat weaker outlook as well. On net, our projection for real GDP growth is just a little stronger than in March. The staff forecasts are comparable to those of outside professional forecasters (Table 2).

Table 1: Staff Economic Projections Compared with March

Variable	2018	2019	2020	2021	Longer run
Real GDP (1)	3.0	2.0	2.1	1.7	1.7
March	3.1	1.8	2.0	1.5	1.7
Unemployment rate (2)	3.8	3.7	3.7	3.7	4.6
March	3.8	3.6	3.6	3.7	4.6
PCE inflation (1)	1.9	1.5	1.9	1.9	2.0
March	1.9	1.8	1.9	1.9	2.0
Core PCE inflation (1)	1.9	1.8	1.9	1.9	-
March	1.9	2.0	2.0	2.0	-
Federal funds rate (2)	2.22	2.40	2.56	2.62	2.50
March	2.22	3.20	3.84	4.12	2.50

(1) Percent change from final quarter of preceding period to final quarter of indicated period.

(2) Percent, final quarter of indicated period.

Note: These projections reflect the views and judgments of the staff only. Projections of the federal funds rate are based on statistical models of past FOMC behavior together with staff judgments. Other assumptions underlying the forecast are described further below. Although these projections are presented to the FOMC as an input to its deliberations, they have not been formally endorsed by the Committee and do not necessarily represent the views of the Committee as a whole or of individual policymakers.

Figure 1: Staff Economic Projections

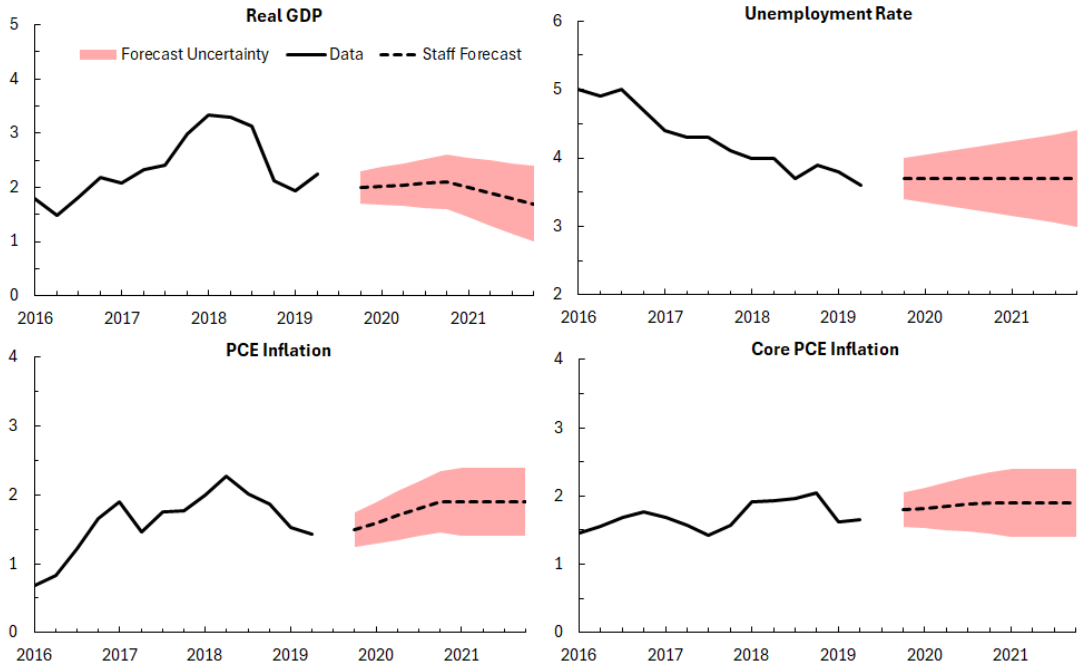


Table 2: Comparison of Review and Outside Forecasts

	2019	2020
Real GDP (Q4/Q4 percent change)		
June Review	2.0	2.1
Blue Chip (June 10, 2019)	2.2	1.7
SPF Median (May 20, 2019)	2.3	-
Unemployment rate (Q4 level)		
June Review	3.7	3.7
Blue Chip (June 10, 2019)	3.6	3.7
SPF Median (May 20, 2019)	3.7	-
PCE inflation (Q4/Q4 percent change)		
June Review	1.5	1.9
SPF Median (May 20, 2019)	1.7	1.9
Core PCE inflation (Q4/Q4 percent change)		
June Review	1.8	1.9
SPF Median (May 20, 2019)	1.7	2.00

Note: Blue Chip does not provide results for overall and core PCE inflation. The Blue Chip consensus forecast includes input from about 50 panelists, and the SPF about 40. Roughly 20 panelists contribute to both.

Author's note: *Forecast comparisons like those in Table 2 must respect embargo dates for outside forecasts.*

Key Factors Underlying the Staff Projections

Monetary policy: The staff's baseline policy rule calls for the federal funds rate to remain at 2.4 percent before edging up to 2.6 percent by the end of 2021. See Section 4.

Other interest rates and equity prices: After declining markedly in recent weeks, the 10-year Treasury yield is projected to rise gradually from the currently prevailing level of 2.1 percent to 3.1 percent by the end of 2021, reflecting in part a rise in the term premium toward its long-run value. Spreads to Treasury yields of corporate bond yields and mortgage yields are expected to fall slightly over the next two quarters; thereafter, both rates are assumed to move with the Treasury yield. See Section 4. Stock prices, which declined 2.1 percent since the April FOMC meeting, are expected to rise at a 2 percent annual rate after the current quarter.

Trade policy: The United States increased tariffs on $180 billion of imports from China, from a rate of 10 percent to 25 percent, and China raised tariffs in

retaliation as well. We have assumed that tariff rates will remain at their current levels through the medium term.

Foreign economic activity and the dollar: We now estimate that foreign GDP grew at an annual rate of 1.6 percent in the first quarter. We see it rising gradually over the remainder of the year and reaching a near-potential pace of 2.5 percent by the middle of next year. The broad nominal dollar has appreciated 1.4 percent since the April FOMC meeting. We anticipate continued appreciation at an annual rate of 1.0 percent through 2021.

Fiscal policy: We assume the expansionary fiscal policies enacted in 2017 and 2018 will continue through the medium term. Our policy assumptions imply a direct fiscal impetus from all levels of government to growth in aggregate demand of about 0.7 percentage points this year, about the same as in 2018.

Oil and other commodity prices: Oil prices have fallen sharply recently. As farther-dated futures prices have also fallen—by about $7 per barrel—we project a nearly flat medium-term path for oil prices. Nonfuel commodities prices have decreased 3 percent since the April FOMC meeting. We base assumptions about future changes in prices on information drawn from commodity futures markets.

The Long-Term Outlook

Over the longer term, we continue to assume that the natural rate of unemployment will remain at 4.6 percent. We also still assume that potential output growth will slow after 2021 to 1.7 percent per year in the longer run, as the boost to potential growth from the 2017 tax cuts wanes. We have maintained our assumption that the real long-run equilibrium federal funds rate will be 0.5 percent, implying a long-run nominal funds rate of 2.5 percent when inflation is at target. The nominal yield on 10-year Treasury securities is assumed to be 3.4 percent in the longer run.

In the staff projection, GDP growth slows from 1.7 percent in 2021 to 1.4 percent in 2024, as the contribution to aggregate demand from fiscal policy fades. The unemployment rate moves up gradually from 3.7 percent at the end of 2021 toward its assumed natural rate in subsequent years. PCE price inflation moves up from 1.9 percent in 2021 to 2.0 percent at the end of 2024. Given the outlook for inflation and resource utilization, the nominal federal funds rate remains a little below 2.7 percent from the end of the medium term to the end of 2024, and it declines slowly to its long-run value of 2.5 percent thereafter.

2. The Outlook for the Labor Market

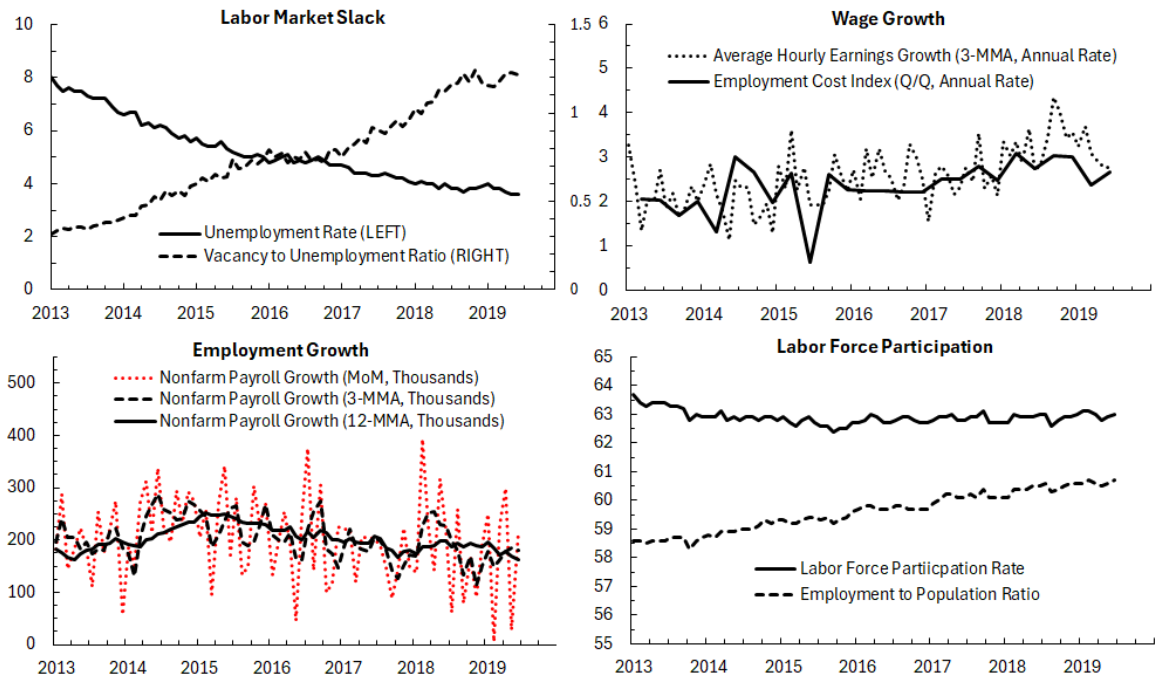
The labor market has continued to tighten so far this year but at a slower pace than last year. Job gains have been solid, on average, the unemployment rate has moved lower, and the employment-to-population ratio has been unchanged, on net, from late last year. Total nonfarm payrolls rose 308,000 in April and 38,000 last month. On average, these readings are a little lower than what we expected in the March Review, but still well above the gains that we estimate are needed to keep labor utilization steady. Over the first quarter, payroll gains averaged 164,000 per month, down substantially from the pace in 2018. Given the projected slowing in aggregate demand growth, we expect monthly employment gains of around 155,000 in the second half of the year.

The unemployment rate moved down to 3.6 percent in May from 3.9 percent in the first quarter. The labor force participation rate also declined, from 63.1 percent in the first quarter to 62.9 percent in May. Combining the signal from these measures, the employment-to-population ratio ticked down to 60.6 percent, and we expect it to hold steady in the near term. We project that the unemployment rate for 2019 and 2020 will be 3.7 percent—nearly 1 percentage point below its neutral rate and 0.1 percentage point above our projection in the March Review.

Table 3: Labor Market Indicators

	2017	2018	Q1	April	May
Unemployment Rate	4.4%	3.9%	3.9%	3.7%	3.6%
Average Monthly Nonfarm Payroll Growth	190	190	164	308	38
Vacancy-to-Unemployment Ratio	0.88	1.13	1.16	1.22	1.23
ECI Growth from a Year Ago, Total, Civilian	3.1%	3.7%	3.7%	-	-
Annualized Average Hourly Earnings Growth	2.55%	3.03%	3.64%	-0.86%	3.51%
Labor Force Participation Rate	62.9%	62.9%	63.1%	62.8%	62.9%
Employment-to-Population Ratio	60.1%	60.4%	60.6%	60.5%	60.6%

Figure 2: Labor Market Indicators

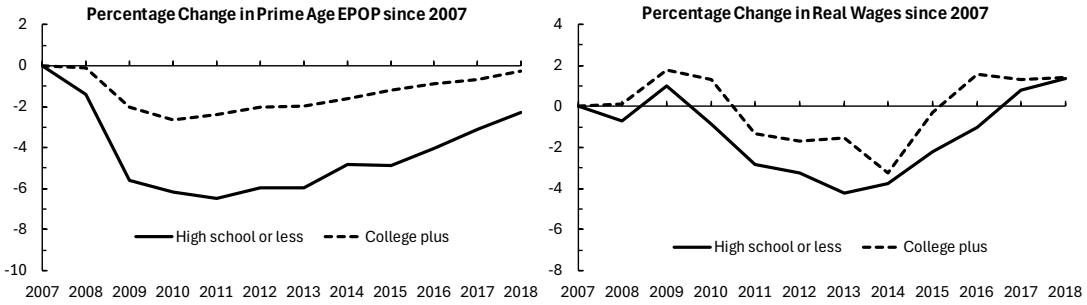


Author's note: *Boxes cover special topics of interest, which will typically change from Review to Review. Boxes can be prepared several weeks in advance of the release of the Review and thus would be a good venue for contributions by Reserve Bank staff.*

Box 1: Labor Market Conditions by Education

Labor market outcomes have diverged between workers with a college degree and those with a high school diploma or less since the 2008 financial crisis. Employment among college graduates rebounded more quickly, with their prime-age employment-to-population ratio returning to pre-crisis levels this year. In contrast, less-educated workers faced a prolonged recovery, as job losses in mid-skill occupations—particularly in manufacturing and construction—were slow to reverse. Many displaced workers with lower educational attainment reentered the workforce in lower-wage jobs, often with less stability and fewer benefits. The employment-to-population for prime-age workers without a college education is about three percentage points lower than before the crisis.

Earnings growth has also favored college graduates, although the difference is less stark. Real wages for both groups lagged behind pre-crisis levels from 2010 to 2015—less educated workers tended to be one to two percentage points worse off than workers with a college degree. Real wages recovered to pre-crisis levels for college-educated workers in 2015 and for less-educated workers about 18 months later.



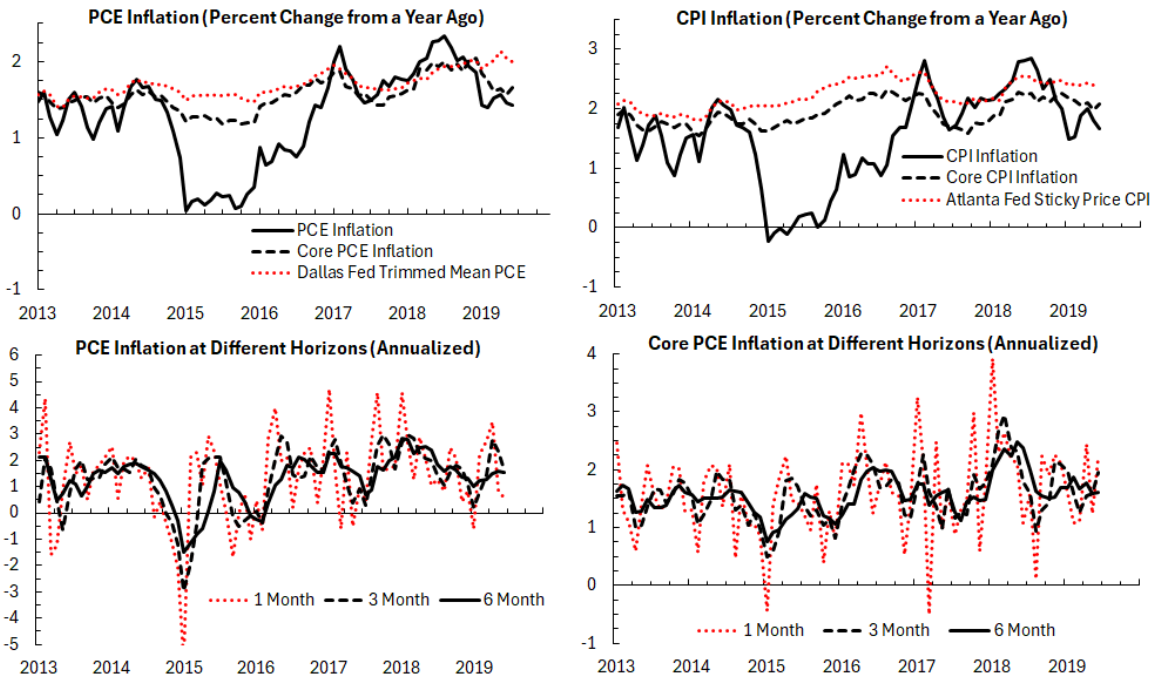
Source: Staff Calculations

3. The Outlook for Inflation

Since the beginning of the year, core PCE inflation has been held down by unusually weak readings for a few categories. However, the pace of monthly increases picked up in April to 0.2 percent (from an average pace of less than 0.1 percent in the first quarter), and we expect this higher pace to continue through the near term. In addition, the imprint from last year's exceptionally low August reading will soon drop out of the 12-month window. Total PCE prices rose 1.5 percent over the 12 months ending in April, and we expect this measure of inflation to remain close to this pace through September as recent declines in crude oil prices feed through to lower consumer energy prices.

We expect that the tariffs on imports from China implemented in May will boost effective import prices this year, but the upward revision to the path of the dollar and lower commodity prices should provide a partial offset.

Figure 3: Inflation Developments



Box 2: Short and Long Run Inflation Expectations

Inflation expectations play a key role in shaping inflation dynamics by influencing wage-setting behavior, pricing decisions, and monetary policy transmission. While inflation expectations are not directly observable, they can be inferred from surveys of households, businesses, and professional forecasters, as well as from financial market indicators such as breakeven inflation rates derived from Treasury Inflation-Protected Securities (TIPS). Historically, stable longer-term expectations have helped anchor inflation.

Survey-based measures of longer-run inflation expectations, such as those from the University of Michigan and the Survey of Professional Forecasters, have been relatively stable, though some measures have edged lower in recent years. In contrast, market-based measures have been more volatile, reflecting changing risk premiums and liquidity conditions. Although current inflation readings have been running below the Committee's 2 percent objective, most measures of expectations remain within historical ranges, suggesting that expectations remain reasonably well anchored. However, a prolonged period of below-target inflation could put further downward pressure on expectations, increasing the risk of an extended shortfall in inflation and reducing policymakers' flexibility to respond to future downturns.

Inflation Expectations

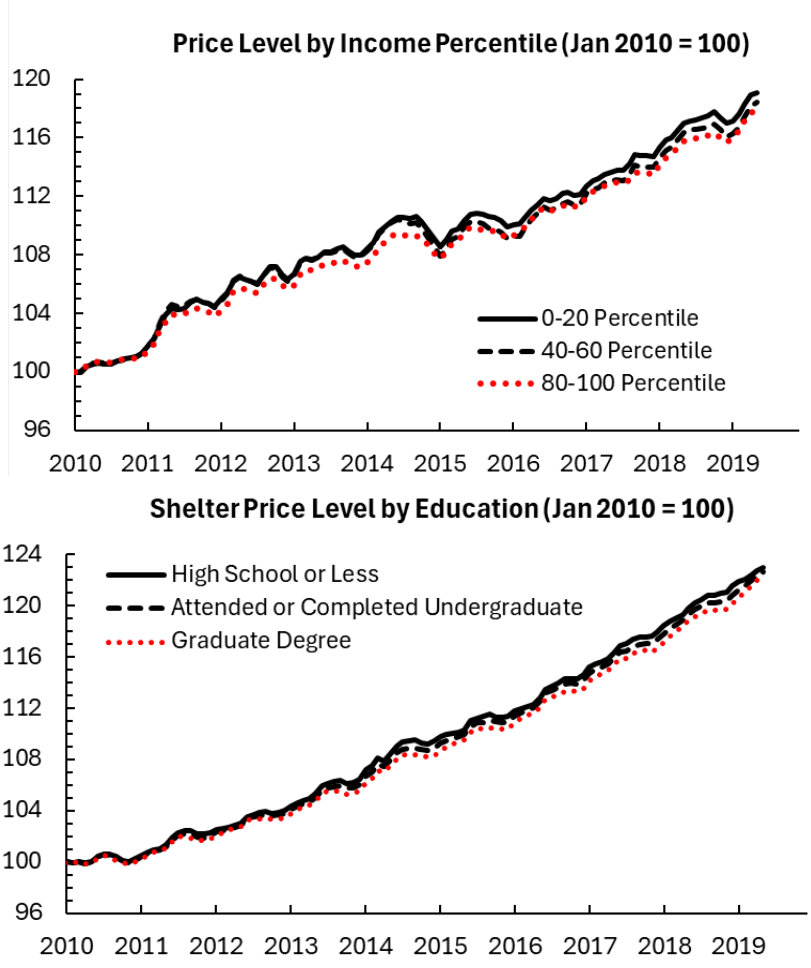
Source	1-Year	5-Year	10-Year
Michigan Survey	2.9	2.7	-
Survey of Professional Forecasters	2.1	-	2.2
TIPS Breakevens	-	1.6	1.7
Cleveland Fed Model	2.2	1.8	1.8

Source: University of Michigan, Federal Reserve Banks of Cleveland and Philadelphia, and U.S. Treasury

Box 3: Inflation Across the Income Distribution

Inflation does not affect all households equally, as differences in consumption patterns and shopping behavior lead to varying exposure to price changes across the income distribution. Lower-income households tend to spend a larger share of their income on necessities such as food and energy—categories that have historically exhibited more volatile price movements. In contrast, higher-income households spend relatively more on discretionary items, which tend to see slower price increases.

Even so, price pressures have been muted over the last decade and divergence across the income distribution is relatively small. Comparing to the beginning of 2010, the price level for the bottom quintile grew 1.1 percentage points more than the price level for the highest quintile. This is equivalent to a roughly 0.1 percentage point difference in the annual inflation rate. Comparing shelter inflation by education shows similar, although even slower, divergence.



Source: BLS and Staff Calculations

4. Financial Developments and the Outlook for Monetary Policy

News about international trade tensions and, to a lesser extent, soft U.S. and foreign economic data increased investors' concerns about downside risks to the economic outlook and weighed on financial markets over the last quarter. Nominal Treasury yields posted very large declines. Equity prices increased, on net, despite current declines from their recent peaks, and corporate bond spreads rebounded from their drop. Stock prices declined notably through the end of May but subsequently rose somewhat, reflecting in part FOMC communications that were perceived to increase the likelihood of a near-term policy easing. Option-implied volatility on the S&P 500 index—the VIX—increased, though it remained well below levels reached in December. Foreign equity prices and sovereign yields in the advanced foreign economies (AFEs) decreased markedly over the same period. The broad dollar index rose, with notable appreciation of the dollar against the Chinese renminbi and Mexican peso.

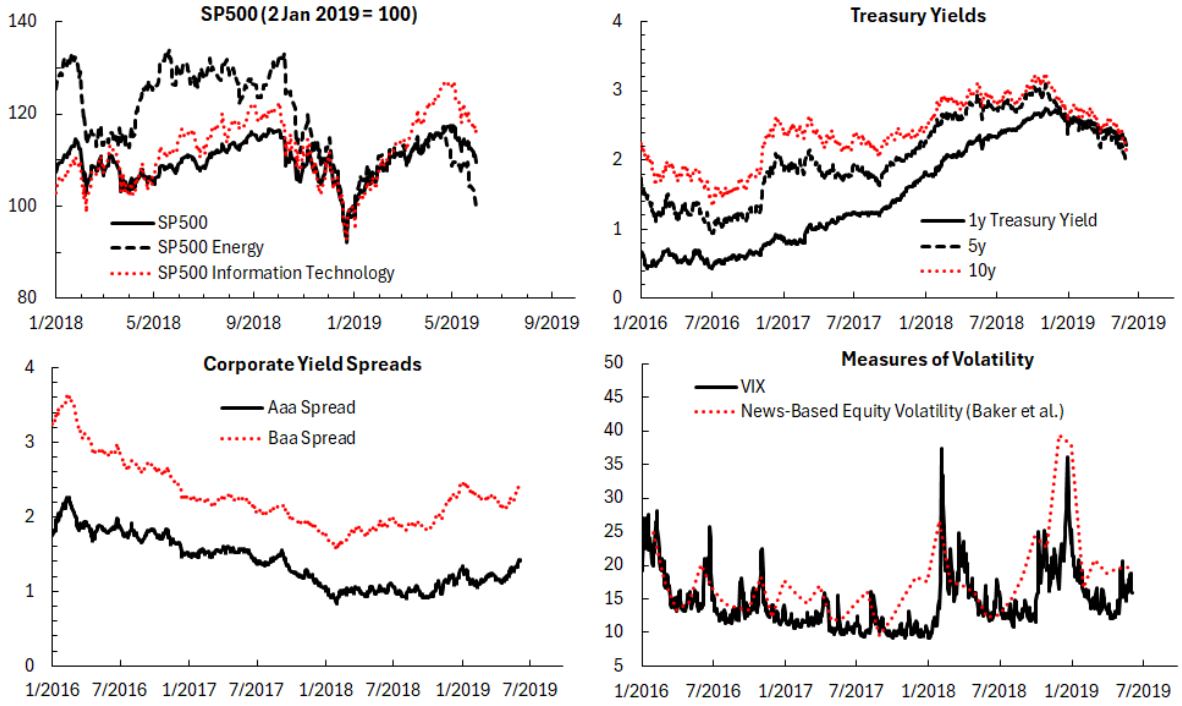
Financing conditions for businesses and households were little changed over the last quarter and, to date, do not appear to have been significantly affected by the heightened concern in financial markets about the outlook for the economy. As such, financing conditions remain generally supportive of spending, except perhaps for ongoing tight conditions for households with low credit scores. Corporate bond issuance was strong in May, and the calendar for upcoming deals appears robust. However, a few corporations reportedly chose not to issue as spreads and market volatility increased. Business lending overall appeared to decelerate somewhat in the second quarter, with the slowdown beginning before the recent market volatility. Strong issuance of corporate bonds was counterbalanced by subdued C&I loan growth and muted issuance of new-money institutional leveraged loans.

Mortgage rates decreased notably and now stand at levels last seen in 2017, facilitating a solid pace of home-purchase originations. Refinance originations show signs of picking up but remain muted relative to their historical levels. Consumer credit expanded at a moderate pace in the first quarter. Interest rates on consumer debt remained above their levels in late 2015 and appeared to weigh somewhat on the demand for consumer credit. Similarly, consumers are more pessimistic about the favorability of auto purchases than they have been since 2009, though recent polling suggests a growing reversal of this trend.

A staff index that provides a measure of financing conditions for nonfinancial corporations indicates that financing conditions have tightened slightly on net over

the last quarter but remained accommodative relative to historical standards. The tightening in the financing conditions index is consistent with the recent decline in equity prices and widening of corporate spreads. Financial conditions indexes that aggregate large sets of financial variables into summary series—such as those produced by the Reserve Banks of Chicago, Kansas City, and St. Louis, as well as one by Goldman Sachs—also generally pointed to tighter but broadly accommodative financial conditions.

Figure 4: Financial Developments and Conditions



Box 4: Financial Stability

Investor appetite for risk appears elevated by several measures, and the debt loads of businesses are historically high. However, the financial sector appears resilient, with low leverage and limited funding risk. Despite volatility in financial markets late last year, our assessment of each of the four vulnerability categories is little changed since the March Review.

Asset valuations: Valuation pressures are mostly neutral, with investors continuing to exhibit high appetite for risk, although some pressures have eased a bit since the March Review.

Borrowing by businesses and households: Borrowing by businesses is historically high relative to gross domestic product (GDP), with the most rapid increases in debt concentrated among the riskiest firms amid signs of deteriorating credit standards. In contrast, household borrowing remains at a modest level relative to incomes.

Leverage in the financial sector: The largest U.S. banks remain strongly capitalized, and the leverage of broker-dealers is substantially below pre-crisis levels. Insurance companies appear to be in relatively strong financial positions. Hedge fund leverage appears to have declined over the past six months.

Funding risk: Funding risks in the financial system are low. Estimates of the outstanding total amount of financial system liabilities that are most vulnerable to runs, including those issued by nonbanks, remain modest relative to levels leading up to the financial crisis. Short-term wholesale funding continues to be low compared with other liabilities, and the ratio of high-quality liquid assets to total assets remains high at large banks.

Monetary Policy

In light of the staff's revisions to the outlook, including a softer outlook for inflation, the prescribed paths of monetary policy rules over the medium run are generally lower. The traditional Taylor rule and the balanced approach rule, shown in Table 4, prescribe notably higher policy rates than the staff baseline because they respond more strongly than the staff model to the positive unemployment gap. Box 5 describes the policy rules in more detail. On the other hand, the price level targeting rule holds rates much lower than the Review baseline because of chronic below-target inflation since the financial crisis. In staff simulations, most simple rules prescribe lower paths for the policy rate than given in the prior Review. By 2021, the average path of the policy rules is about 30 basis points lower than the corresponding prescriptions in the March Review. The market-inferred path of monetary policy has also shifted down considerably. Investors now appear to be putting substantial weight on a policy easing as early as the July meeting.

Figure 5: Implied Rates and Policy Rules

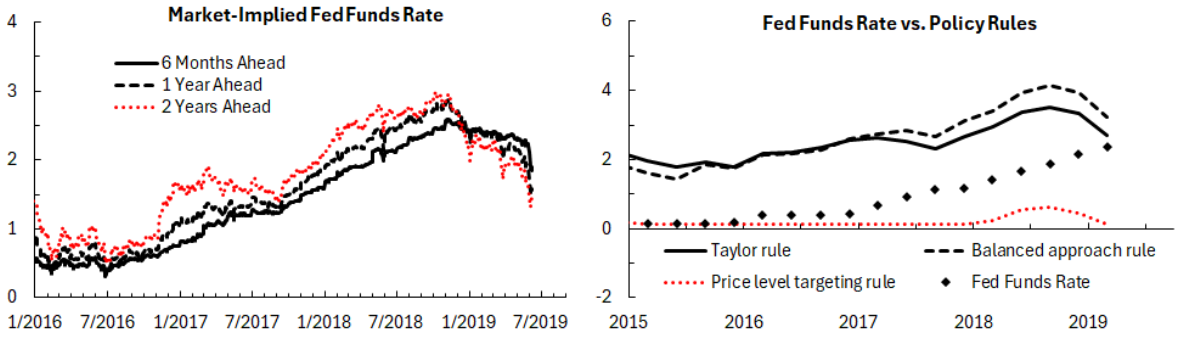


Table 4: Outcomes of Simple Policy Rule Simulations (Q4 Average, Nominal Rate)

Rule	2019	2020	2021
Taylor rule	3.1	3.2	3.0
Balanced approach rule	2.8	3.4	3.4
Price level targeting rule	1.9	1.6	1.6
Review baseline	2.4	2.6	2.6

Box 5: Description of the Policy Rules

Policy rules are algebraic relations that provide recommended settings for the federal funds rate, given conditions in the economy.

Taylor rules relate the setting of the funds rate to the excess of inflation over the target (the inflation gap) and to the shortfall of unemployment from the natural rate of unemployment (the unemployment gap). The traditional Taylor rule prescribes a real policy rate that equals the long-run neutral interest rate (see Box 7) plus half the current inflation gap plus the current unemployment gap. The balanced approach rule has the same form as the traditional Taylor rule, except that it puts double weight on the unemployment gap.

The price level targeting rule is also similar to the Taylor rule, except it replaces the inflation gap with the difference between the price level and the price level consistent with 2 percent inflation since a baseline date. The staff aim to choose a baseline date for the price level target when the economy was close to equilibrium.

All three policy rules are inertial, meaning that they assume that the policy rate adjusts only slowly toward the recommended rate. For more on policy rules, see page 36 of the February 2019 Monetary Policy Report to Congress.

Note: See Taylor, John B. 1993. "Discretion Versus Policy Rules in Practice." Carnegie-Rochester Conference Series on Public Policy 39 (December):195–214. Also see Taylor, John B., and John C. Williams. 2010. "Simple and Robust Rules for Monetary Policy." In Handbook of Monetary Economics, 1st ed., 3B:829–59. North Holland.

Box 6: Balance Sheet Projections

The staff have prepared projections of the Federal Reserve's balance sheet and the associated income statement that are consistent with the baseline forecast above and in the Balance Sheet Normalization Principles and Plans that the Committee released after the March FOMC meeting.

Relative to the March Review, the paths for longer-term interest rates in the staff's financial projections have been revised down notably. These revisions primarily affect the balance sheet by implying a faster pace of prepayments from agency mortgage-backed securities (MBS) than projected in May, which, at this stage in the normalization process, has implications mostly for the composition rather than the size of the balance sheet.

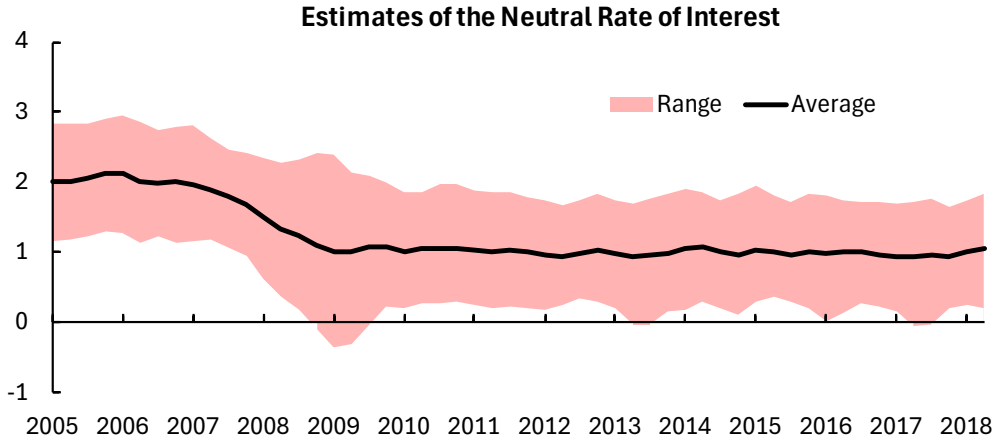
Balance Sheet Projections (Billions of Dollars)

		Projections	
	May 2019	Dec 2019	Dec 2020
Total assets	3,847	3,673	3,669
Securities held outright	3,667	3,514	3,522
U.S. Treasuries	2,110	2,088	2,283
Agency securities	1,557	1,426	1,238
Total other assets	179	159	146
Total liabilities	3,808	3,652	3,642
Notes in circulation	1,690	1,745	1,853
Reverse repo agreements	276	271	282
Deposits with Fed banks	1,834	1,631	1,502
Remittances to Treasury	2	0	0

Box 7: Estimating the Neutral Rate of Interest (r*)

The neutral real interest rate, or r*, represents the real federal funds rate that is neither expansionary nor contractionary when the economy is in equilibrium. While r* is not directly observable, it is a crucial input in monetary policy decisions, influencing, among other things, assessments of the stance of policy. Standard estimation methods suggest that r* has declined significantly over the past two decades, reflecting demographic trends, slower productivity growth, and an elevated global demand for safe assets.

Recent estimates, however, remain subject to considerable uncertainty. While productivity growth has been subdued and demographic trends continue to exert downward pressure on r*, expansionary fiscal policy, including recent tax cuts and increased government spending, could lead to a modest upward drift. Financial market indicators, such as long-term Treasury yields and term premiums, remain low, suggesting that investors still expect r* to remain depressed. Given these uncertainties, policymakers continue to monitor a range of indicators—including inflation expectations, wage growth, and global financial conditions—to assess the evolving path of r* and its implications for the stance of monetary policy.



Source: Staff Calculations

5. Risks, Uncertainty, and Alternative Scenarios

We have become more concerned about downside risks to our economic projection since the previous Review and now consider the risks to our baseline projection as tilted to the downside over the next year. Beyond the next year, we continue to see the risks as skewed to the downside.

Beginning with our assessment for the next year, while uncertainties have increased over the quarter, we still view the uncertainty around the staff forecast of economic activity as being broadly in line with the average over the past 20 years, the benchmark used by the FOMC; that period includes a number of episodes with elevated uncertainty and market volatility. However, we now judge the risks around our baseline projection for real GDP growth to be tilted to the downside, with a skew to the upside for the unemployment rate. An important factor in our assessment is that trade policies and foreign economic developments, along with financial market reactions, seem more likely to move further in directions that would have more significant negative effects on U.S. economic activity than to resolve more favorably than assumed. Also, the soft tone of some recent economic indicators, such as business investment and industrial production, could be pointing to a more substantial slowing in economic growth than in the baseline. On the upside, many of the underlying fundamentals for household spending and business investment remain solid—bolstered, in part, by the 2017 tax cuts—with strong labor market conditions, low interest rates, and quite upbeat readings on consumer sentiment. In these circumstances, consumer spending and investment could expand at a pace that is faster than in the staff projection.

With regard to inflation, the staff still see average uncertainty around the projection, but with the risks to the forecast for economic activity tilted to the downside, the risks to the inflation projection would also tend to have a downward skew. To the downside, the soft data on consumer prices earlier this year could be more persistent than assumed in the baseline. In addition, underlying inflation could currently be even lower than assumed in the baseline. Also, the exchange value of the dollar could appreciate more than expected and put downward pressure on inflation. To the upside, an extended period with unusually tight resource utilization could eventually lead to greater upward pressure on wages and prices, consistent with the predictions of models that emphasize nonlinear effects of resource utilization on inflation. In addition, an unexpectedly widespread and sustained increase in trade barriers could lead to higher inflation.

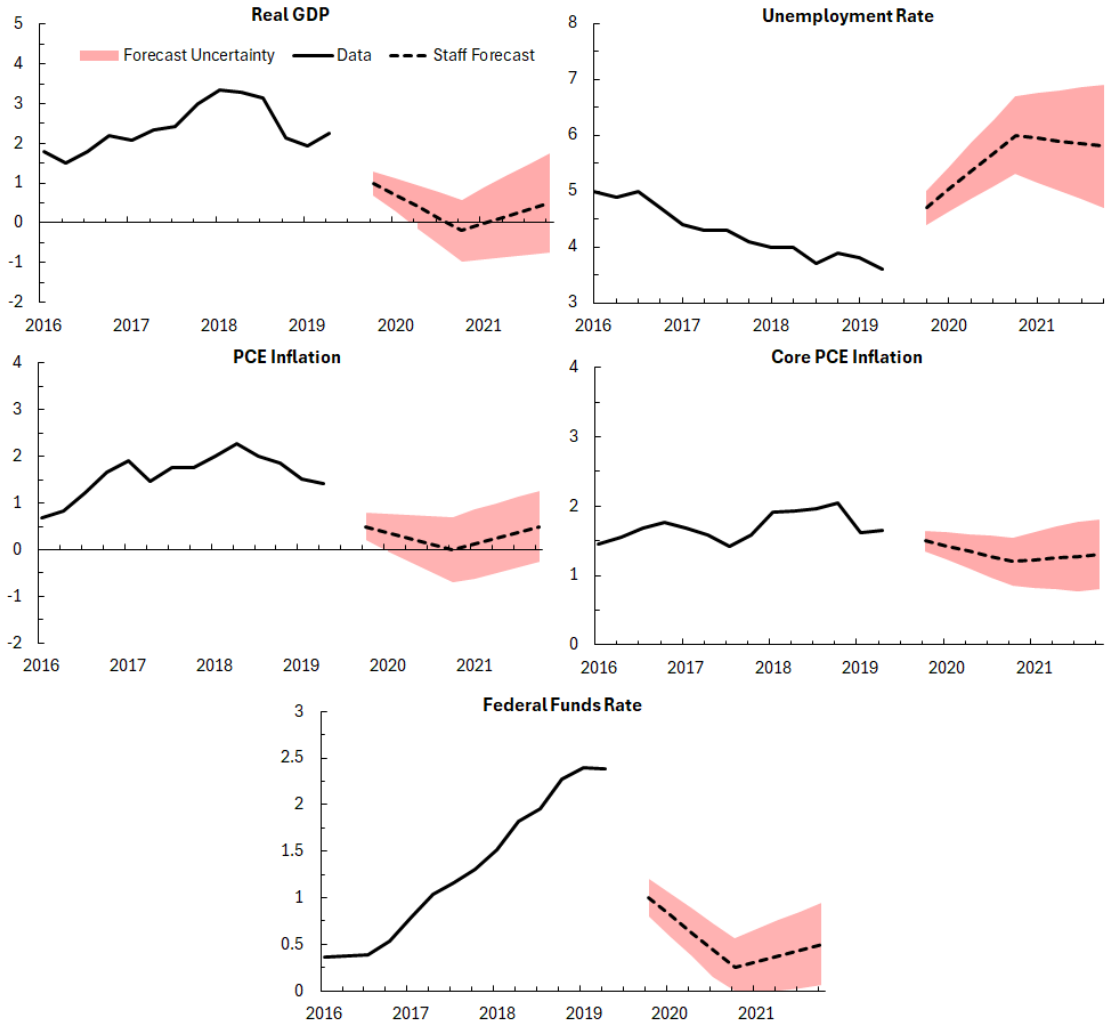
Alternative Scenario 1: Mild Recession

In the first scenario, the U.S. economy enters a mild recession driven by weak consumer demand, soft business investment, and a cooling labor market. In this scenario, we assume that household sentiment deteriorates more sharply than in the baseline, leading to a reduction in discretionary spending, particularly on durable goods. Businesses, facing weaker demand and rising uncertainty, slow hiring, reduce capital expenditures, and cut back on inventory accumulation. In addition, financial conditions tighten modestly despite projected rate cuts, amplifying the slowdown.

This scenario sees real GDP growth over the year slow to 1.0 percent by the end of 2019. The U.S. slips into recession in late 2019 or early 2020 which lasts around two quarters. A slow recovery is unable to make up for the losses earlier in the year, and real growth comes in slightly negative over 2020. Growth remains slow in 2021. The labor market weakens gradually, with the unemployment rate rising to 4.7 percent by the end of 2019 and averaging 6.0 percent over 2020. Inflationary pressures ease in response to rising economic slack, with PCE inflation falling to 0.5 percent over 2019 and 0.0 percent over 2020. Core PCE is more stable but still falls noticeably below baseline.

In response to the downturn, policymakers cut the federal funds rate, bringing it down to 1.0 percent by the end of 2019—about 140 basis points lower than in the baseline. This scenario sees rates at the effective lower bound of zero for four quarters, with liftoff in early 2021. Long-term interest rates also decline as markets price in a prolonged period of accommodative policy. As financial conditions loosen and consumer confidence gradually recovers, the economy begins to regain momentum in 2021, though the recovery remains uneven, with business investment and labor market conditions improving only slowly.

Figure 6: Staff Projections Under Alternative Scenario 1



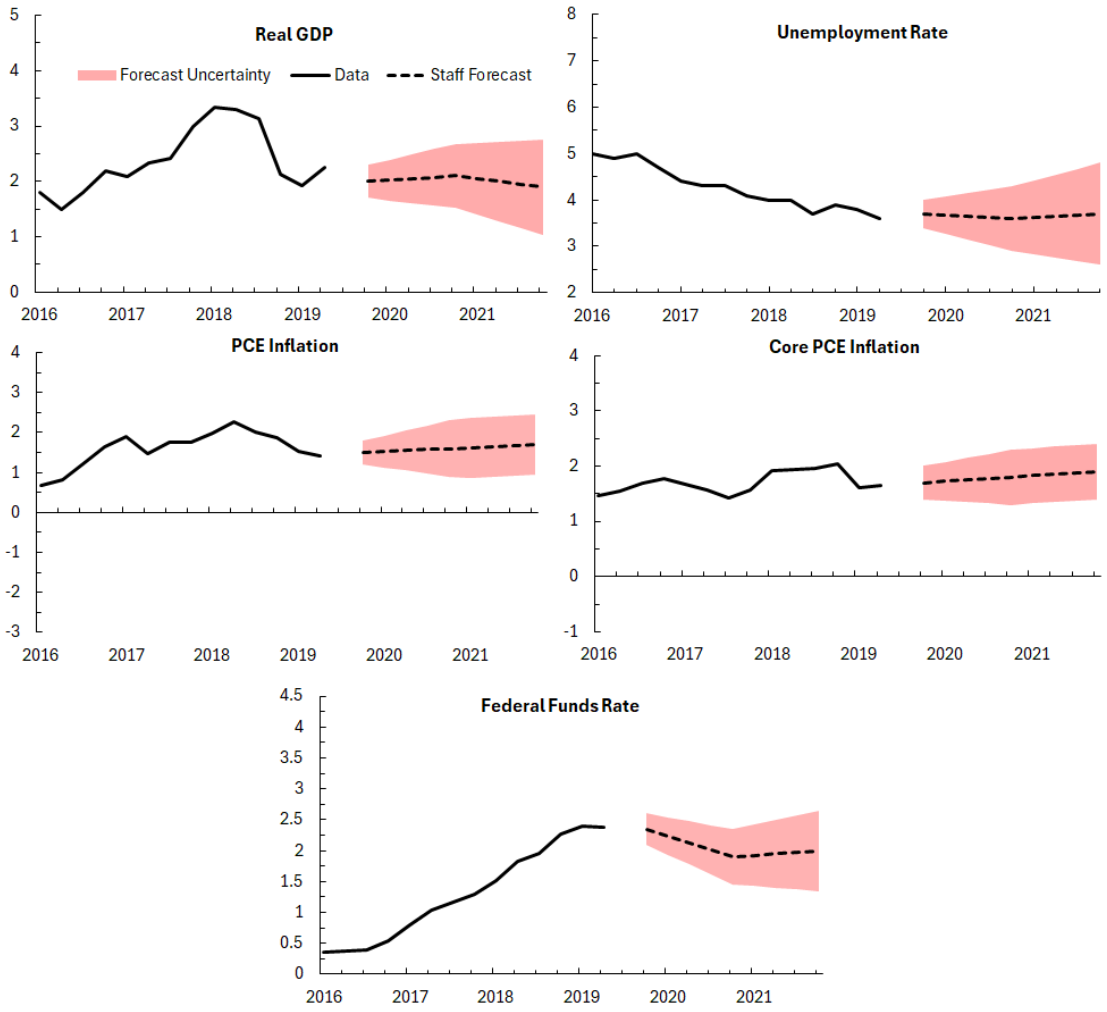
Alternative Scenario 2: A Decline in Inflation Expectations

In this scenario, we assume that inflation expectations decline significantly compared to the baseline, reflecting the extended period of below-target inflation following the financial crisis. Households, businesses, and financial markets become accustomed to inflation averaging 1.5 percent. This expectation begins to affect wage and price setting behavior, further dampening headline inflation. With expectations slipping, realized inflation remains weak, with PCE inflation coming in at 1.5 percent in 2019, consistent with the baseline, but recovering only very slowly. PCE inflation rises to only 1.7% in 2021. Core PCE inflation is somewhat softer in this scenario than the baseline, although unlike headline inflation, core inflation recovers to two percent by the end of the forecasting window.

The lower inflation environment results in a downward shift in the nominal interest rate path, as policymakers respond to persistent undershooting of the inflation target. The federal funds rate follows a shallower trajectory than in the baseline, declining by about 60 basis points in 2020 and 2021. As the fall in the nominal rate is larger than the fall in projected inflation, the real rate falls slightly. This dynamic intentionally increases investment in hopes of buoying inflation pressures but also has the effect of boosting real GDP growth by a tenth in later years. The unemployment rate also falls slightly compared to baseline.

A sustained decline in inflation expectations reduces the Committee's ability to respond effectively to future economic downturns. With inflation expectations anchored at a lower level, nominal interest rates follow a shallower path, bringing the federal funds rate closer to its effective lower bound of zero. As a result, the Committee has less room to cut rates in response to adverse shocks, limiting how much monetary policy can hold down the short-term real rate and provide economic stimulus. This regime increases the likelihood that monetary policymakers rely on policy tools other than the policy rate, notably quantitative easing and "lower-for-longer" forward guidance. Overall, this scenario would leave the economy more vulnerable to prolonged periods of weak growth and below-target inflation.

Figure 7: Staff Projections Under Alternative Scenario 2



Author's note: *In most cases, alternative scenarios will include numerical projections, based on alternative assumptions about one or more exogenous variables or parameters. However, some alternative scenarios may involve too many unknowns to model precisely. In such cases, the alternative scenario could involve a qualitative discussion of the likely changes in the forecast and how the FOMC might weigh the merits of possible policy responses.*

6. The Accuracy of Economic Forecasts

The economic and statistical models and relationships used to help produce economic forecasts are necessarily imperfect descriptions of the real world, and the future path of the economy can be affected by myriad unforeseen developments and events. Thus, in setting the stance of monetary policy, participants consider not only what appears to be the most likely economic outcome as embodied in their projections, but also the range of alternative possibilities, the likelihood of their occurring, and the potential costs to the economy should they occur.

Table 5 summarizes the average historical accuracy of forecasts in Monetary Policy Reports to Congress. The projection error ranges shown in the table illustrate the considerable uncertainty associated with economic forecasts.

Author's note: *The Review should also include periodic in-depth analyses of recent misses in the staff forecast.*

Table 5: Average Historical Projection Error Ranges

	2019	2020	2021
Real GDP Growth	± 1.6	± 2.1	± 2.1
Unemployment Rate	± 0.8	± 1.5	± 1.9
PCE Inflation	± 1.0	± 1.0	± 1.0
Core PCE inflation	± 0.8	± 0.8	± 0.8
Federal Funds Rate	± 1.4	± 2.0	± 2.4

Note: Error ranges shown are measured as plus or minus the root mean squared error of projections for 2000 through 2019. There is about a 70 percent probability that actual outcomes for real GDP, unemployment, consumer prices, and the federal funds rate will be in ranges implied by the average size of projection errors made in the past.

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