Table 1. Economic projections of Federal Reserve Board members and Federal Reserve Bank presidents, under their individual assessments of projected appropriate monetary policy, March 2019

Percent

Variable	Median[1]				Central tendency[2]				Range[3]			
	2019	2020	2021	Longer run	2019	2020	2021	Longer run	2019	2020	2021	Longer run
Change in real GDP	2.1	1.9	1.8	1.9	1.9 – 2.2	1.8 – 2.0	1.7 – 2.0	1.8 – 2.0	1.6 – 2.4	1.7 – 2.2	1.5 – 2.2	1.7 – 2.2
December projection	2.3	2.0	1.8	1.9	2.3 – 2.5	1.8 – 2.0	1.5 – 2.0	1.8 – 2.0	2.0 – 2.7	1.5 – 2.2	1.4 – 2.1	1.7 – 2.2
Unemployment rate	3.7	3.8	3.9	4.3	3.6 – 3.8	3.6 – 3.9	3.7 – 4.1	4.1 – 4.5	3.5 – 4.0	3.4 – 4.1	3.4 – 4.2	4.0 – 4.6
December projection	3.5	3.6	3.8	4.4	3.5 – 3.7	3.5 – 3.8	3.6 – 3.9	4.2 – 4.5	3.4 – 4.0	3.4 – 4.3	3.4 – 4.2	4.0 – 4.6
PCE inflation	1.8	2.0	2.0	2.0	1.8 – 1.9	2.0 – 2.1	2.0 – 2.1	2.0	1.6 – 2.1	1.9 – 2.2	2.0 – 2.2	2.0
December projection	1.9	2.1	2.1	2.0	1.8 – 2.1	2.0 – 2.1	2.0 – 2.1	2.0	1.8 – 2.2	2.0 – 2.2	2.0 – 2.3	2.0
Core PCE inflation[4]	2.0	2.0	2.0		1.9 – 2.0	2.0 – 2.1	2.0 – 2.1		1.8 – 2.2	1.8 – 2.2	1.9 – 2.2	
December projection	2.0	2.0	2.0		2.0 – 2.1	2.0 – 2.1	2.0 – 2.1		1.9 – 2.2	2.0 – 2.2	2.0 – 2.3	
Memo: Projected appropriate policy path												
Federal funds rate	2.4	2.6	2.6	2.8	2.4 – 2.6	2.4 – 2.9	2.4 – 2.9	2.5 – 3.0	2.4 – 2.9	2.4 – 3.4	2.4 – 3.6	2.5 – 3.5
December projection	2.9	3.1	3.1	2.8	2.6 – 3.1	2.9 – 3.4	2.6 – 3.1	2.5 – 3.0	2.4 – 3.1	2.4 – 3.6	2.4 – 3.6	2.5 – 3.5

NOTE: Projections of change in real gross domestic product (GDP) and projections for both measures of inflation are percent changes from the fourth quarter of the previous year to the fourth quarter of the year indicated. PCE inflation and core PCE inflation are the percentage rates of change in, respectively, the price index for personal consumption expenditures (PCE) and the price index for PCE excluding food and energy. Projections for the unemployment rate are for the average civilian unemployment rate in the fourth quarter of the year indicated. Each participant's projections are based on his or her assessment of appropriate monetary policy. Longer-run projections represent each participant's assessment of the rate to which each variable would be expected to converge under appropriate monetary policy and in the absence of further shocks to the economy. The projections for the federal funds rate are the value of the midpoint of the projected appropriate target range for the federal funds rate or the projected appropriate target level for the federal funds rate at the end of the specified calendar year or over the longer run. The December projections were made in conjunction with the meeting of the Federal Open Market Committee on December 18–19, 2018. One participant did not submit longer-run projections for the change in real GDP, the unemployment rate, or the federal funds rate in conjunction with the December 18–19, 2018, meeting, and one participant did not submit such projections in conjunction with the March 19–20, 2019, meeting.

1. For each period, the median is the middle projection when the projections are arranged from lowest to highest. When the number of projections is even, the median is the average of the two middle projections.
2. The central tendency excludes the three highest and three lowest projections for each variable in each year.
3. The range for a variable in a given year includes all participants' projections, from lowest to highest, for that variable in that year.
4. Longer-run projections for core PCE inflation are not collected.

Table 1.A. Economic projections for the first half of 2019*
(in percent)

Medians, central tendencies, and ranges

	Median	Central tendency	Range
Change in real GDP	1.9	1.8 – 2.0	1.5 – 2.3
PCE inflation	1.8	1.6 – 1.8	1.3 – 1.9
Core PCE inflation	2.0	1.8 – 2.0	1.6 – 2.1

Participants' projections

Projection	Change in real GDP	PCE inflation	Core PCE inflation
1	2.0	1.8	1.9
2	1.8	1.6	2.0
3	1.5	1.8	2.0
4	2.0	1.8	2.0
5	2.3	1.3	1.8
6	1.9	1.6	2.1
7	1.8	1.8	1.9
8	1.9	1.6	1.8
9	1.9	1.8	2.0
10	2.0	1.8	2.0
11	1.7	1.8	2.1
12	1.9	1.9	2.0
13	2.0	1.6	1.6
14	1.9	1.8	2.0
15	1.6	1.9	2.0
16	1.8	1.5	1.8
17	1.9	1.8	1.9

* Growth and inflation are reported at annualized rates.

Table 1.B. Economic projections for the second half of 2019*
(in percent)

Medians, central tendencies, and ranges

	Median	Central tendency	Range
Change in real GDP	2.2	2.1 – 2.4	1.6 – 2.8
PCE inflation	2.0	1.8 – 2.0	1.8 – 2.3
Core PCE inflation	2.0	1.9 – 2.0	1.8 – 2.4

Participants' projections

Projection	Change in real GDP	PCE inflation	Core PCE inflation
1	2.4	2.0	1.9
2	2.0	2.0	2.0
3	2.1	1.8	2.0
4	2.8	1.8	2.0
5	2.1	1.9	1.8
6	2.3	2.0	1.9
7	2.2	1.8	1.9
8	1.9	2.0	2.0
9	2.5	2.0	2.0
10	2.2	1.8	2.0
11	2.5	2.0	1.9
12	2.3	2.3	2.4
13	2.4	2.0	2.0
14	2.1	2.0	2.0
15	1.6	1.9	2.2
16	2.2	2.1	1.8
17	2.1	1.8	1.9

* Projections for the second half of 2019 implied by participants' March projections for the first half of 2019 and for 2019 as a whole. Growth and inflation are reported at annualized rates.

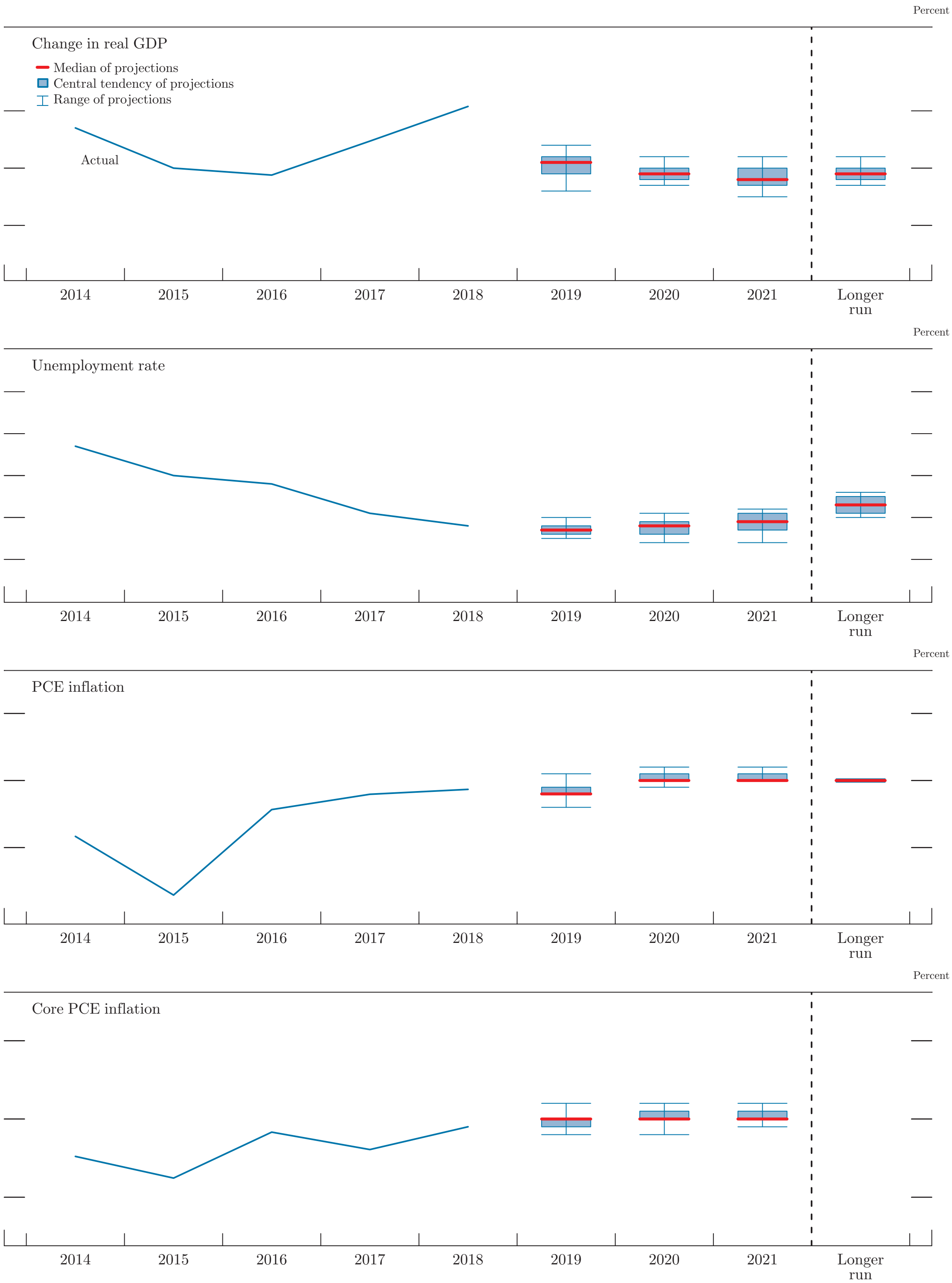
Table 2. March economic projections, 2019–21 and over the longer run (in percent)

Projection	Year	Change in real GDP	Unemployment rate	PCE inflation	Core PCE inflation	Federal funds rate
1	2019	2.2	3.7	1.9	1.9	2.38
2	2019	1.9	3.7	1.8	2.0	2.38
3	2019	1.8	3.8	1.8	2.0	2.38
4	2019	2.4	3.7	1.8	2.0	2.88
5	2019	2.2	3.5	1.6	1.8	2.38
6	2019	2.1	3.6	1.8	2.0	2.88
7	2019	2.0	3.7	1.8	1.9	2.38
8	2019	1.9	3.8	1.8	1.9	2.38
9	2019	2.2	3.7	1.9	2.0	2.63
10	2019	2.1	3.6	1.8	2.0	2.38
11	2019	2.1	3.8	1.9	2.0	2.63
12	2019	2.1	3.6	2.1	2.2	2.63
13	2019	2.2	3.9	1.8	1.8	2.38
14	2019	2.0	3.8	1.9	2.0	2.38
15	2019	1.6	3.8	1.9	2.1	2.63
16	2019	2.0	4.0	1.8	1.8	2.38
17	2019	2.0	3.6	1.8	1.9	2.38
1	2020	2.1	3.9	2.0	2.0	2.63
2	2020	1.8	3.8	2.0	2.0	2.63
3	2020	1.9	3.8	2.1	2.1	2.63
4	2020	2.2	3.7	2.1	2.1	3.38
5	2020	2.0	3.4	2.0	2.0	2.38
6	2020	2.2	3.6	2.0	2.0	3.13
7	2020	1.9	3.8	1.9	2.0	2.38
8	2020	1.8	3.8	2.0	2.0	2.63
9	2020	1.8	3.8	2.0	2.0	2.88
10	2020	1.7	3.6	2.1	2.1	2.38
11	2020	1.8	4.0	2.0	2.0	2.88
12	2020	2.0	3.7	2.1	2.1	2.88
13	2020	2.0	4.0	2.0	2.0	2.38
14	2020	1.8	3.9	2.1	2.0	2.38
15	2020	1.9	3.7	2.2	2.2	3.13
16	2020	2.0	4.1	1.9	1.8	2.38
17	2020	2.0	3.5	1.9	2.0	2.38

Table 2. ***(continued)***

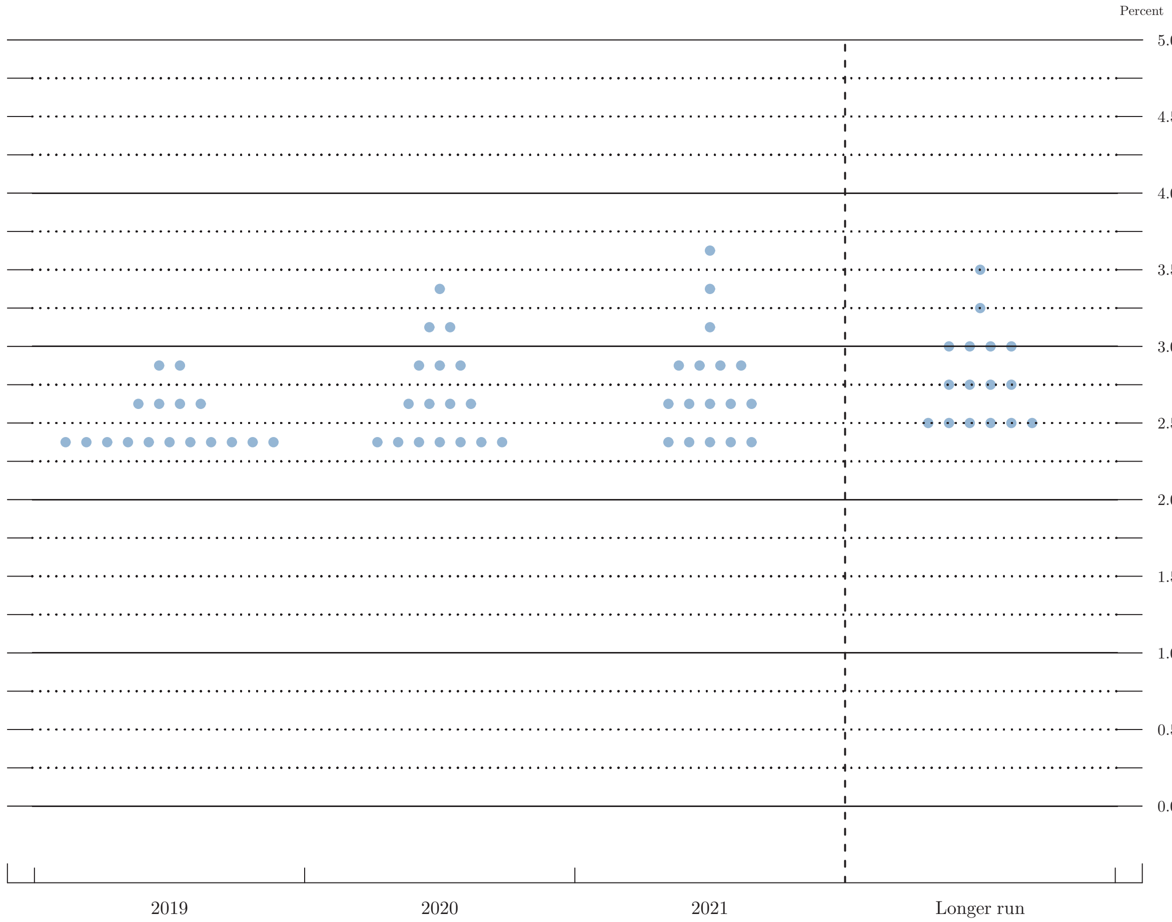
Projection	Year	Change in real GDP	Unemployment rate	PCE inflation	Core PCE inflation	Federal funds rate
1	2021	1.9	4.0	2.0	2.0	2.63
2	2021	1.7	3.9	2.1	2.1	2.63
3	2021	1.8	3.9	2.2	2.2	2.88
4	2021	2.1	3.8	2.1	2.1	3.38
5	2021	1.8	3.4	2.0	2.0	2.38
6	2021	2.0	3.8	2.0	2.0	3.13
7	2021	1.9	3.9	2.0	2.0	2.38
8	2021	1.7	3.9	2.1	2.1	2.63
9	2021	1.8	4.0	2.0	2.0	2.88
10	2021	1.7	3.6	2.1	2.1	2.38
11	2021	1.5	4.2	2.0	2.0	2.88
12	2021	1.9	3.9	2.0	2.0	2.88
13	2021	2.0	4.2	2.0	2.0	2.38
14	2021	1.8	4.1	2.1	2.0	2.63
15	2021	1.5	3.7	2.2	2.2	3.63
16	2021	2.2	4.1	2.0	1.9	2.38
17	2021	1.8	3.5	2.0	2.0	2.63
1	LR	2.1	4.0	2.0		2.50
2	LR	1.7	4.5	2.0		2.75
3	LR	1.8	4.3	2.0		2.75
4	LR	2.1	4.2	2.0		3.25
5	LR	1.8	4.4	2.0		3.00
6	LR	2.0	4.5	2.0		3.00
7	LR	2.0	4.0	2.0		2.50
8	LR	1.8	4.1	2.0		2.50
9	LR	1.8	4.2	2.0		3.00
10	LR	1.9	4.3	2.0		3.00
11	LR	2.0	4.5	2.0		3.50
12	LR	1.9	4.5	2.0		2.75
13	LR			2.0		
14	LR	1.8	4.5	2.0		2.50
15	LR	1.7	4.6	2.0		2.75
16	LR	2.2	4.1	2.0		2.50
17	LR	1.7	4.0	2.0		2.50

Figure 1. Medians, central tendencies, and ranges of economic projections, 2019–21 and over the longer run



Note: Definitions of variables and other explanations are in the notes to table 1. The data for the actual values of the variables are annual.

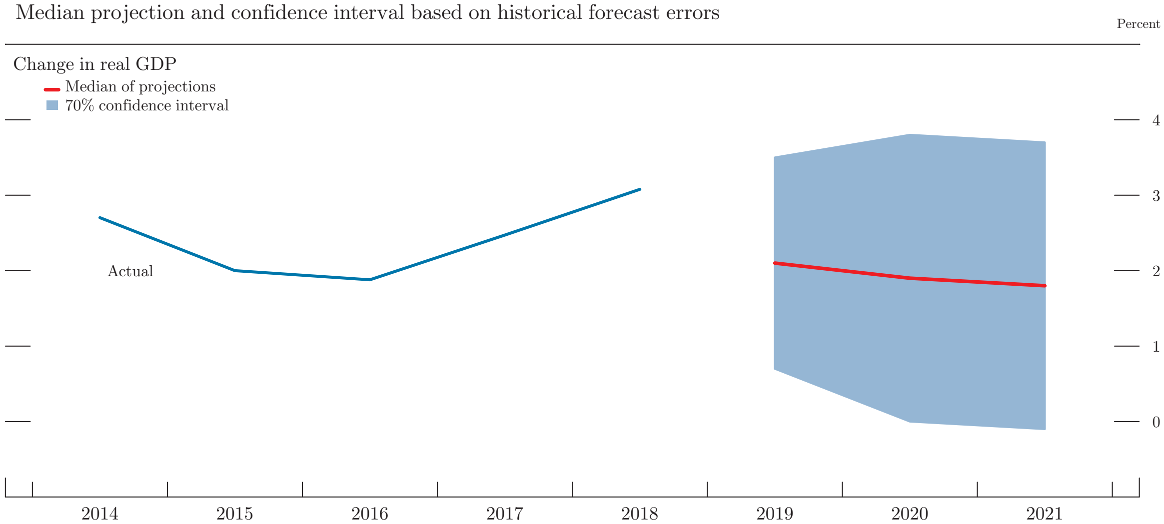
Figure 2. FOMC participants' assessments of appropriate monetary policy: Midpoint of target range or target level for the federal funds rate



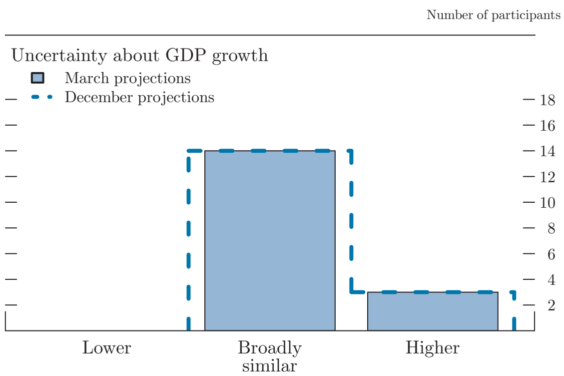
NOTE: Each shaded circle indicates the value (rounded to the nearest 1/8 percentage point) of an individual participant's judgment of the midpoint of the appropriate target range for the federal funds rate or the appropriate target level for the federal funds rate at the end of the specified calendar year or over the longer run. One participant did not submit longer-run projections for the federal funds rate.

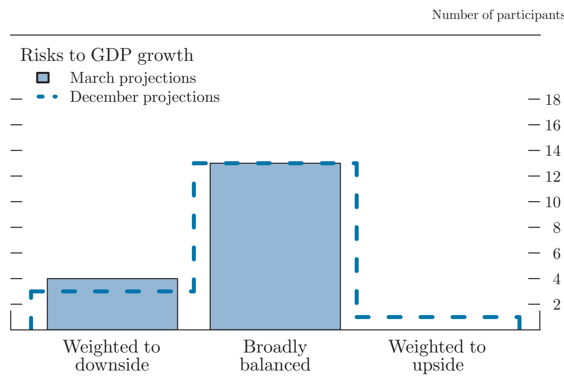
Figure 4.A. Uncertainty and risks in projections of GDP growth

Median projection and confidence interval based on historical forecast errors



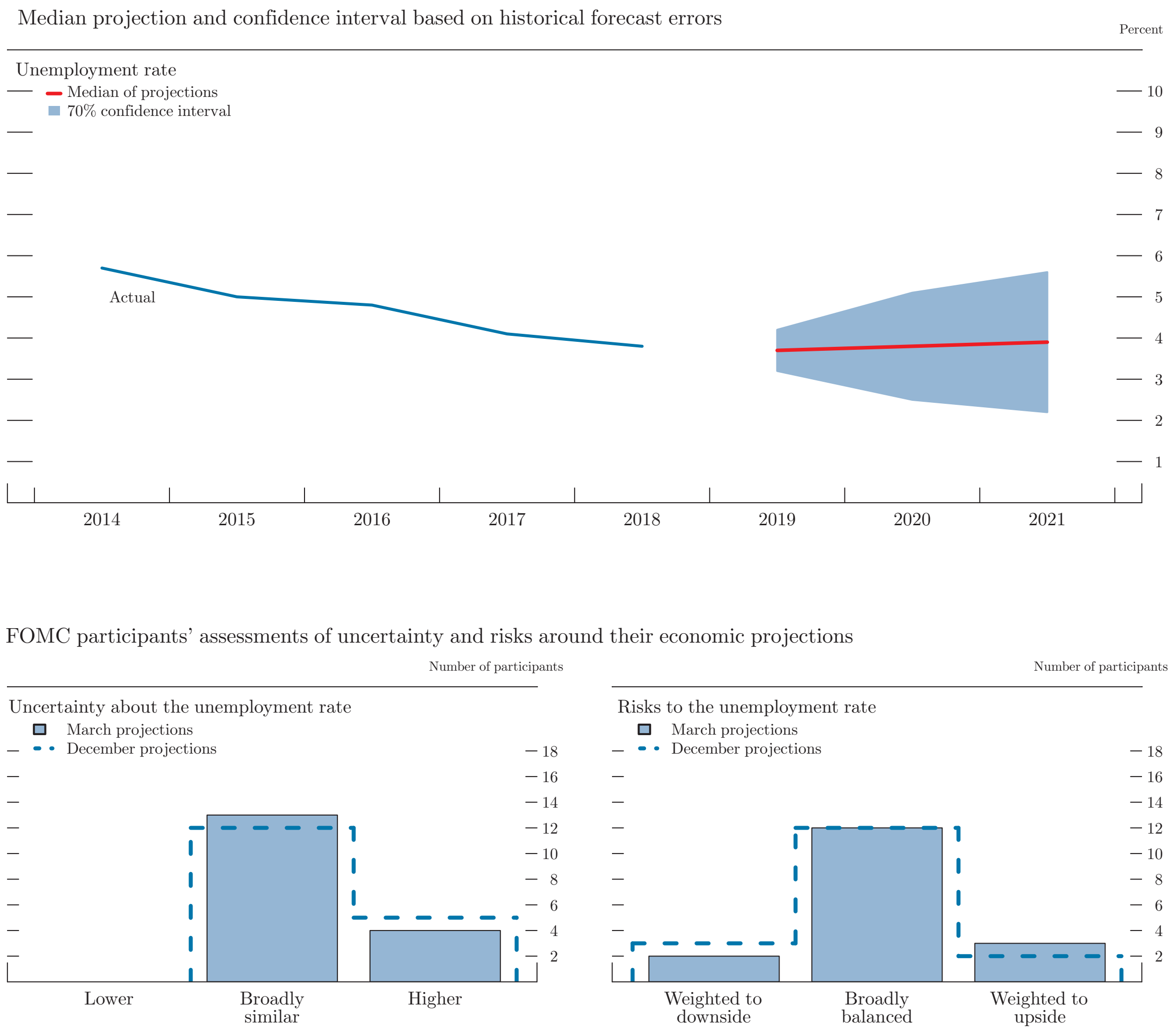
FOMC participants' assessments of uncertainty and risks around their economic projections





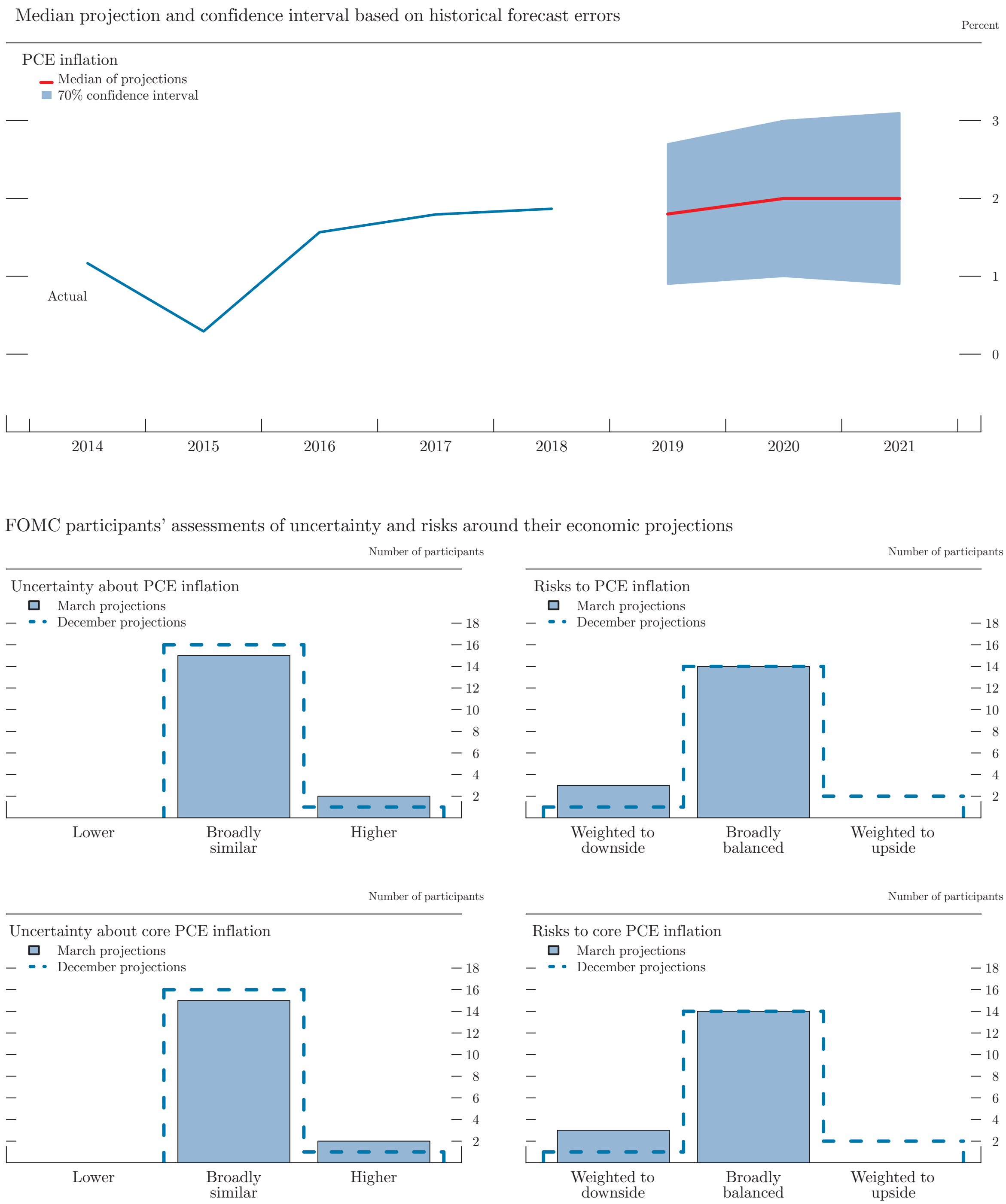
Note: The blue and red lines in the top panel show actual values and median projected values, respectively, of the percent change in real gross domestic product (GDP) from the fourth quarter of the previous year to the fourth quarter of the year indicated. The confidence interval around the median projected values is assumed to be symmetric and is based on root mean squared errors of various private and government forecasts made over the previous 20 years; more information about these data is available in table 2. Because current conditions may differ from those that prevailed, on average, over the previous 20 years, the width and shape of the confidence interval estimated on the basis of the historical forecast errors may not reflect FOMC participants' current assessments of the uncertainty and risks around their projections; these current assessments are summarized in the lower panels. Generally speaking, participants who judge the uncertainty about their projections as "broadly similar" to the average levels of the past 20 years would view the width of the confidence interval shown in the historical fan chart as largely consistent with their assessments of the uncertainty about their projections. Likewise, participants who judge the risks to their projections as "broadly balanced" would view the confidence interval around their projections as approximately symmetric. For definitions of uncertainty and risks in economic projections, see the box "Forecast Uncertainty."

Figure 4.B. Uncertainty and risks in projections of the unemployment rate



Note: The blue and red lines in the top panel show actual values and median projected values, respectively, of the average civilian unemployment rate in the fourth quarter of the year indicated. The confidence interval around the median projected values is assumed to be symmetric and is based on root mean squared errors of various private and government forecasts made over the previous 20 years; more information about these data is available in table 2. Because current conditions may differ from those that prevailed, on average, over the previous 20 years, the width and shape of the confidence interval estimated on the basis of the historical forecast errors may not reflect FOMC participants' current assessments of the uncertainty and risks around their projections; these current assessments are summarized in the lower panels. Generally speaking, participants who judge the uncertainty about their projections as "broadly similar" to the average levels of the past 20 years would view the width of the confidence interval shown in the historical fan chart as largely consistent with their assessments of the uncertainty about their projections. Likewise, participants who judge the risks to their projections as "broadly balanced" would view the confidence interval around their projections as approximately symmetric. For definitions of uncertainty and risks in economic projections, see the box "Forecast Uncertainty."

Figure 4.C. Uncertainty and risks in projections of PCE inflation



NOTE: The blue and red lines in the top panel show actual values and median projected values, respectively, of the percent change in the price index for personal consumption expenditures (PCE) from the fourth quarter of the previous year to the fourth quarter of the year indicated. The confidence interval around the median projected values is assumed to be symmetric and is based on root mean squared errors of various private and government forecasts made over the previous 20 years; more information about these data is available in table 2. Because current conditions may differ from those that prevailed, on average, over the previous 20 years, the width and shape of the confidence interval estimated on the basis of the historical forecast errors may not reflect FOMC participants' current assessments of the uncertainty and risks around their projections; these current assessments are summarized in the lower panels. Generally speaking, participants who judge the uncertainty about their projections as "broadly similar" to the average levels of the past 20 years would view the width of the confidence interval shown in the historical fan chart as largely consistent with their assessments of the uncertainty about their projections. Likewise, participants who judge the risks to their projections as "broadly balanced" would view the confidence interval around their projections as approximately symmetric. For definitions of uncertainty and risks in economic projections, see the box "Forecast Uncertainty."

Table 3. Uncertainty and risks

Question 2(a): Please indicate your judgment of the uncertainty attached to your projections relative to levels of uncertainty over the past 20 years.

Individual responses

Respondent	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Change in real GDP	B	B	B	B	B	B	B	B	B	B	B	A	B	A	A	B	B
Unemployment rate	A	B	B	B	B	B	B	B	B	B	B	A	B	B	A	A	B
PCE Inflation	B	B	B	B	B	B	B	B	B	B	B	B	B	B	A	A	B
Core PCE Inflation	B	B	B	B	B	B	B	B	B	B	B	B	B	B	A	A	B

A = Higher B = Broadly similar C = Lower

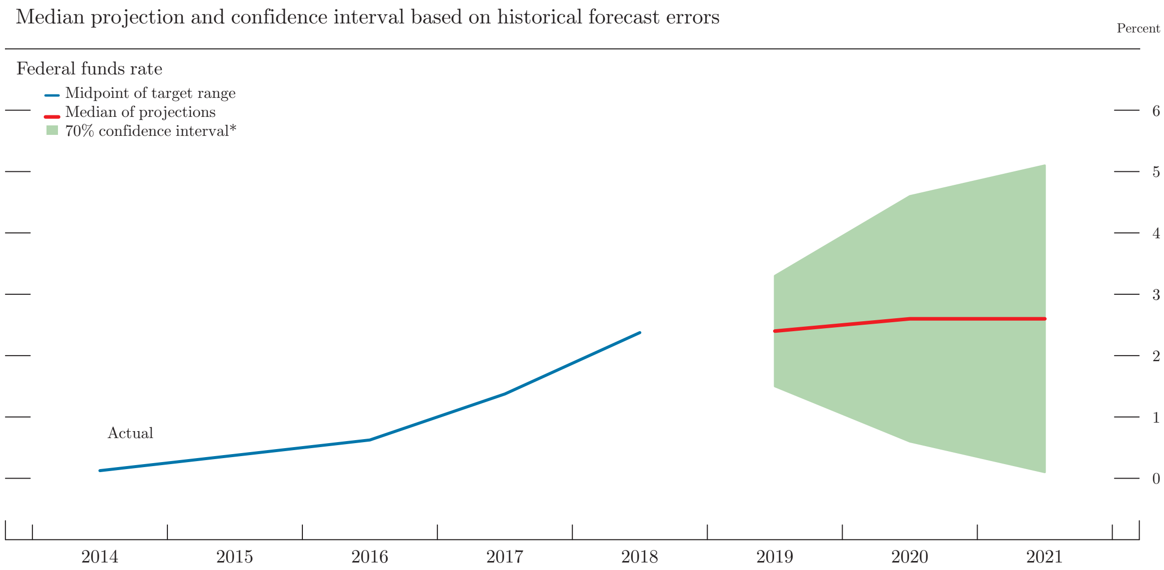
Question 2(b): Please indicate your judgment of the risk weighting around your projections.

Individual responses

Respondent	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Change in real GDP	B	B	B	B	C	B	B	B	B	C	B	B	B	C	B	B	C
Unemployment rate	B	B	B	B	A	B	B	B	B	A	B	B	B	A	C	C	B
PCE Inflation	B	B	B	B	C	B	C	B	B	B	B	B	B	B	B	C	B
Core PCE Inflation	B	B	B	B	C	B	C	B	B	B	B	B	B	B	B	C	B

A = Weighted to upside B = Broadly balanced C = Weighted to downside

Figure 5. Uncertainty in projections of the federal funds rate



NOTE: The blue and red lines are based on actual values and median projected values, respectively, of the Committee's target for the federal funds rate at the end of the year indicated. The actual values are the midpoint of the target range; the median projected values are based on either the midpoint of the target range or the target level. The confidence interval around the median projected values is based on root mean squared errors of various private and government forecasts made over the previous 20 years. The confidence interval is not strictly consistent with the projections for the federal funds rate, primarily because these projections are not forecasts of the likeliest outcomes for the federal funds rate, but rather projections of participants' individual assessments of appropriate monetary policy. Still, historical forecast errors provide a broad sense of the uncertainty around the future path of the federal funds rate generated by the uncertainty about the macroeconomic variables as well as additional adjustments to monetary policy that may be appropriate to offset the effects of shocks to the economy.

The confidence interval is assumed to be symmetric except when it is truncated at zero—the bottom of the lowest target range for the federal funds rate that has been adopted in the past by the Committee. This truncation would not be intended to indicate the likelihood of the use of negative interest rates to provide additional monetary policy accommodation if doing so was judged appropriate. In such situations, the Committee could also employ other tools, including forward guidance and large-scale asset purchases, to provide additional accommodation. Because current conditions may differ from those that prevailed, on average, over the previous 20 years, the width and shape of the confidence interval estimated on the basis of the historical forecast errors may not reflect FOMC participants' current assessments of the uncertainty and risks around their projections.

* The confidence interval is derived from forecasts of the average level of short-term interest rates in the fourth quarter of the year indicated; more information about these data is available in table 2. The shaded area encompasses less than a 70 percent confidence interval if the confidence interval has been truncated at zero.

Longer-run Projections

Question 1(c). If you anticipate that the convergence process will take SHORTER OR LONGER than about five or six years, please indicate below your best estimate of the duration of the convergence process. You may also include below any other explanatory comments that you think would be helpful.

Respondent 1: N/A

Respondent 2: Our policy goals have effectively been reached. However, it will take some time to achieve sustained convergence to longer-run levels. The fiscal stimulus and past accommodative monetary policy will keep the unemployment rate below the natural rate for several years before it returns to a longer-run sustainable level. This overshooting of full employment is eventually accompanied by a very modest overshooting of the inflation target.

Respondent 3: N/A

Respondent 4: N/A

Respondent 5: I expect the convergence process will take shorter than five years. Real GDP growth will likely decelerate to its longer-run level in the next few years. 12-month measures of PCE inflation will likely remain modestly below two percent this year reflecting past declines in energy prices, but I expect inflation to return to two percent by 2020. Whether the unemployment rate will eventually converge toward my estimate of its longer-run level is uncertain. Although I see the unemployment rate remaining below my estimate of its longer-run level over the forecast horizon, there is substantial uncertainty around estimates of the longer-run unemployment rate. Should the unemployment rate stabilize at a low level without signs of building inflationary pressures that would suggest that such a level may be consistent with sustainable growth over the medium term. Taking into account the uncertainty about the longer-run unemployment rate, and looking through an energy-related decline in inflation, we have in my view essentially achieved our objectives for inflation and unemployment.

Respondent 6: N/A

Respondent 7: N/A

Respondent 8: Developments since the December SEP indicate that the U.S. economy still appears to be experiencing low trend productivity growth. Therefore, I have not changed my estimate of 1 3/4 percent for longer-run real GDP growth.

As for u*, most estimates currently range from 4.1 to 4.6 percent. The higher estimates, including that in the Tealbook, appear to be predicated on longer-run inflation expectations currently running somewhat below 2 percent. In contrast, the lower estimates, such as that in the recent Brookings paper by NY Fed economists and alumni, are consistent with inflation expectations anchored near 2 percent. Moreover, analysis by my staff shows that the demographically-adjusted employment-population ratio and labor force participation rate have only recently risen to the levels that prevailed prior to the recession, suggesting that there is less labor market slack than implied by my previous estimates. Based on these considerations, I have reduced my estimate of the longer-run normal rate of unemployment from 4 1/2 percent to 4.1 percent.

I assume that long-term inflation expectations will remain anchored at levels consistent with the FOMC's longer-run objective. Under those conditions, my assessment of appropriate monetary policy is consistent with an undershooting of the longer-run normal unemployment rate for the next several years and an eventual small overshooting of inflation. I expect these variables to return to their longer-run levels by the mid-2020s.

Respondent 9: N/A

Respondent 10: N/A

Respondent 11: N/A

Respondent 12: I anticipate that the economy will converge to my longer-run projection within 5 years.

Respondent 13: We expect small deviations from target of headline and core inflation in 2019. GDP growth and unemployment are also expected to deviate from their long-run values conditional on the current regime. This regime, characterized by low productivity growth and a low real interest rate on short-term government debt, features GDP growth of 2.0 percent, an unemployment rate of 4.5 percent, and inflation of 2.0 percent. All projected deviations are expected to be temporary. We project inflation to be on-target in 2020 and the overshooting of GDP growth to end in 2020. The undershooting of unemployment will end in 2022. Because there are multiple potential medium-term outcomes, we cannot provide a single set of longer-run projections for GDP growth and unemployment. Calculating an average of these variables based on the outcomes in multiple regimes is potentially misleading. We do provide a 2.0 percent longer-run inflation projection that is independent of the regime.

Respondent 14: We are at our inflation target but somewhat past full employment. I believe that growth will slow by enough, over the next few years, to stabilize and then gradually reduce the employment gap. Inflation may rise modestly above our longer-run objective. If growth slows as I expect, it is possible that we will be more vulnerable to adverse shocks and policy missteps. But in the absence of new shocks and with appropriate policy, I would expect convergence in about 5 years.

Respondent 15: The unemployment rate is relatively flat over the forecast horizon, and with growth below potential and a modestly restrictive stance for monetary policy, the unemployment rate should gradually move higher after 2021. However, the transition back to equilibrium in the labor market will require a prolonged "growth recession," assuming that the federal funds rate does not move much above its 2021 level. A model-driven forecast would suggest that it will take the unemployment rate 5 or 6 years to converge to equilibrium from below. Historically, recessions have occurred with fairly high probability once growth slows below potential, so the likelihood of achieving a soft landing in the labor market from below, over an extended period, is small.

Respondent 16: N/A

Respondent 17: N/A

Uncertainty and Risks

Question 2(a). (Optional) If you have any explanatory comments regarding your judgment of the uncertainty attached to your projections relative to levels of uncertainty over the past 20 years, you may enter them below.

Respondent 1: N/A

Respondent 2: Uncertainty about my projection for economic activity and inflation is similar to its average level over the past 20 years. Inflation remains anchored by stable longer-run inflation expectations at the FOMC's stated goal of 2 percent.

Respondent 3: Fiscal and trade policy continue to be important sources of uncertainty to the outlook; uncertainty over fiscal policy has not changed, while the chances of tail events with respect to trade policy appear to have lessened. In contrast, the range of possible outcomes for growth among our major trading partners appears somewhat wider than in the recent past. Furthermore, the volatility in incoming data has made it more difficult to discern the underlying momentum in domestic demand. On balance, however, we do not feel these changes have been sufficient to boost our assessment of the uncertainty over our growth and unemployment forecasts into the "higher than historical average" bucket.

The recent data and anecdotes on inflation and inflation expectations have modestly increased the uncertainty around our inflation forecast. Nevertheless, we do not think that these changes have risen to a degree that would alter our characterization of uncertainty as broadly similar to historical levels.

Respondent 4: N/A

Respondent 5: N/A

Respondent 6: N/A

Respondent 7: N/A

Respondent 8: Although notable, uncertainty around my projections for economic activity and inflation is still roughly similar to their respective average levels over the past 20 years (the SEP standard). Continued trade tensions, volatile financial markets, slower global growth, significant political tensions in Europe, the future path of fiscal policy, and the possibility of "too low" inflation expectations are sources of uncertainty.

Respondent 9: N/A

Respondent 10: N/A

Respondent 11: N/A

Respondent 12: Uncertainty surrounding output growth and unemployment remains elevated by heightened uncertainty about the effects of fiscal stimulus and the future course of both trade and fiscal policy. As well, the persistent low value of the real natural rate of interest raises uncertainty about the underlying rate of economic growth. The impact on inflation uncertainty is less pronounced given how flat the Phillips curve seems to be.

Respondent 13: N/A

Respondent 14: An awareness that real growth has slowed is sinking in and there is an increased recognition that the economy is vulnerable to a building number of risks—-many from outside the U.S. The list of these risks includes slowing growth in Germany, trade and tariff disputes and uncertainties, concerns about debt sustainability in Italy, the possibility of a hard Brexit, new and unpredictable leadership in Mexico, and challenges in China relating to slowing growth. On the positive side, recent patience by the Fed may give room for these issues to resolve themselves.

Respondent 15: Inflation continues to come in below what we would expect given the assumed cyclical position of the economy, and forecasting under current conditions is difficult because we have little experience projecting inflation dynamics at very low levels of the unemployment rate. Guiding the economy through a prolonged growth recession will also be challenging. In addition, a number of issues related to global trade remain unresolved, and we could be underestimating the effect of tariffs on domestic prices, especially if the existing tariffs are increased or expanded to more goods. We also may be underestimating the likelihood of a global slowdown especially in Europe and China, as well as the effect of global demand on the domestic outlook. Moreover, while financial market volatility has subsided relative to the end of last year, market participants remain quite attuned to a variety of economic risks, and volatility could quickly pick back up if these risks start to materialize. This in turn could affect the economy in ways that are not well captured by our models. There also continue to be potential financial stability concerns with keeping interest rates low in an economy that is forecasted to be above full employment for an extended period of time.

Respondent 16: Elevated uncertainty about u* with real possibility that 4% or even a touch lower could be new normal. In turn there is elevated uncertainty about inflation expectations and thus dynamics in a world where inflation has rarely risen above its policy consistent anchor.

Respondent 17: The current level of uncertainty lies somewhere between the low levels experienced during the Great Moderation and the high levels experienced during the financial crisis and its immediate aftermath. Changes in trade policy and other financial and international developments have increased the uncertainty around my forecasts, but not significantly.

Uncertainty and Risks (continued)

Question 2(b). (Optional) If you have any explanatory comments regarding your judgment of the risk weighting around your projections, you may enter them below.

Respondent 1: N/A

Respondent 2: Risks to projected economic activity appear broadly balanced. On the upside, the labor market continues to show solid momentum on average and measures of consumer sentiment have rebounded recently and are at historically high levels. On the downside, recent spending data came in soft, which could persist going forward. Further downside risk arises from the ongoing tariff war and weak growth abroad.

Respondent 3: We see the risks to the outlook for growth, unemployment and inflation as broadly balanced.

In response to the weaker incoming data and concerns over the trajectory for inflation, we made a large downward revision to our growth forecast for 2019 and lowered our path for the federal funds rate throughout the projection period. We feel these changes leave the risks to our growth, unemployment, and inflation forecasts as broadly balanced.

We still see the odds as roughly equal that fiscal policy will result in a bit more or a bit less impetus than we built into our projection. International developments pose a downside risk; growth prospects abroad have worsened, and while the trade war situation seems to have improved some, there still is a risk of unfavorable outcomes. With regard to the domestic economy, the weak readings on demand are worrisome, but the recovery in some of the most recent data suggest the lull in domestic spending might be temporary. Also on the up side, financial market conditions have improved substantially this winter, and on net are back to where they were at the time of our December submission.

The firming of core inflation in 2019 and recent business contact reports of larger wage increases suggest that inflationary dynamics might be gaining more momentum than we have assumed in our baseline. However, on the downside, there is the continued softness in some survey measures of inflation expectations, weaker domestic growth, dollar appreciation, and business reports suggesting moderating materials cost pressures. In light of these developments, we incorporated a more accommodative policy path to leave our inflation forecast unchanged and maintain a symmetric balance of risks to this outlook.

Respondent 4: N/A

Respondent 5: N/A

Respondent 6: Growth in the first quarter is coming in weaker than I anticipated at the time of my last SEP submission in December. So I have revised down my estimate of GDP growth for this year and project that the decline in the unemployment rate will be a bit less than in my last projection. After making these adjustments, I see the risks around my forecasts for growth and the unemployment rate as broadly balanced. I have made little change to my inflation path and continue to see risks to inflation as broadly balanced.

Consumer and business sentiment weakened at the end of last year, in the midst of rising financial market volatility, lower equity prices, and rising credit-risk spreads. Since then sentiment has improved, equity prices have moved up (although they remain below their September peak), and volatility and credit spreads have fallen. Overall, the U.S. economy remains in a good position; growth is slowing but labor markets remain strong and inflation is near 2 percent. After a weak first quarter, I anticipate that growth will pick up and run at a pace at or slightly above trend over the forecast horizon. This slowing of growth from 3 percent last year toward trend reflects the waning effects of fiscal stimulus and the effects of past increases in interest rates. There are several risks around the forecast. The economies in Europe and China are slowing and forecasts have been revised down. The postponement of additional tariffs that were set to be imposed on imports from China has reduced some of the uncertainty, a positive development, and so far, firms have been able to handle this uncertainty fairly well. Still, the uncertainty around trade policy remains. The ultimate outcome of Brexit is unclear. While the U.S. macroeconomy is insulated from direct effects, Brexit announcements might increase financial market volatility, which could feed back on the U.S. economy. There is some risk that the weak first quarter output growth numbers will damage consumer and business confidence in the expansion and cause them to adopt a more cautious posture, limiting the rebound in growth over the remainder of the year. On the other hand, there are some upside risks, too, because these situations could turn out to be better than what is built into forecasts; in addition, the economy may have more momentum from the strength we saw in 2018 than I have incorporated into my baseline outlook.

I continue to see inflation risks as roughly balanced. Core inflation rates are currently near 2 percent. The recent weaker headline inflation numbers mainly reflect the decline in energy prices in the fourth quarter of last year. Energy prices have already moved up from their December lows, suggesting that the decline in headline inflation is likely to be temporary. I expect that inflation rates will be near 2 percent over the medium run. On the upside, labor markets remain tight and if nonlinear Phillips curve dynamics begin to kick in, inflation could move higher than I anticipate. Tariffs present firms with an opportunity to raise prices. To the extent that these are one-off changes, they should not raise the inflation rate. However, a continued roll-out of tariffs over time could lead to continued one-off changes in inflation; this could push up inflation expectations and lead to higher inflation rates over time. On the downside, recent readings of some measures of consumers' expectations of inflation have moved down a bit. If this continues, it poses a downside risk to inflation remaining at our 2 percent objective on a sustained basis. In addition, if growth abroad weakens more than expected and the dollar, in turn, appreciates, both U.S. output growth and inflation could turn out to be weaker than I anticipate.

Risks to financial stability appear elevated – leveraged lending is at high levels and underwriting standards on this debt have deteriorated; commercial real estate valuations continue to be lofty. Financial vulnerabilities could amplify an economic slowdown.

Respondent 7: N/A

Respondent 8: Given the change in my policy assumption, the risks to real economic activity appear to be broadly balanced over the forecast horizon. The primary downside risks come from the possibility that trade tensions, political events in Europe, and slower global growth could spillover and lead to slower growth for the U.S. economy. Another downside risk is that fiscal impetus could fade more quickly than anticipated. In contrast, a notable upside risk is that fiscal stimulus could have more positive demand- and/or supply-side effects than I anticipate. Possible renewed momentum associated with still-high household and business confidence is another upside risk.

The risks to inflation also appear to be broadly balanced. A major upside risk is that aggregate demand pressures as well as the effects of higher tariffs and trade tensions could begin to put more upward pressure on inflation than has been apparent so far. A significant downside risk is that slower global growth, declines in oil prices, a stronger-than-anticipated foreign exchange value of the US dollar and subdued inflation in many advanced economies may weaken domestic inflationary pressures more than I have judged and leave inflation expectations below levels consistent with the FOMC objective.

Respondent 9: N/A

Respondent 10: Downside risks to the foreign outlook, including those stemming from U.S. trade policy, pose risks to the U.S. outlook. There remains a substantial risk that Brexit could be disorderly; the Chinese economy appears to be slowing for domestic reasons, with attendant spillovers to other countries; and U.S. trade policy layers on further downside risks. Should any of these foreign risks materialize, the U.S. economy would be affected through direct trade channels; through a stronger U.S. dollar; and through financial contagion, with the latter potentially compounded if more than one risk were to materialize.

Respondent 11: N/A

Respondent 12: N/A

Respondent 13: With respect to GDP growth, the current productivity regime is one of low growth. A higher productivity regime is possible, but we see no compelling reason to predict a switch at this time. Recent increases in productivity still leave productivity in its low regime. However, as changes in fiscal and regulatory policy continue to affect the economy, we see the possibility of more rapid GDP growth. On the other hand, we see US trade policy as generating some downward risk for growth. In addition, weakening foreign economies are a concern for US growth. Thus, we view the risks on this variable as broadly balanced.

Concerning unemployment, the current rate is on the low end for an economic expansion. If a recession were to occur, the unemployment rate would rise substantially and quickly. We have no compelling reason to predict a recession during the forecast horizon. The interaction between US and foreign trade policies raises the possibility of trade disruptions that might increase unemployment. On the other hand, we also see the possibility of further declines in the unemployment rate if GDP surprises on the upside. Overall, we see the risks as broadly balanced.

For core PCE inflation, we place negligible weight on the prospect of Phillips Curve effects. However, there is a risk that such effects reassert themselves and inflation moves higher as the unemployment rate falls. It is also possible that inflation expectations drift higher and become unanchored. Trade policy changes might also put upward pressure on import prices. On the other hand, a weakening global economy could offset some or all of this price pressure. Overall, we view risks on this variable as broadly balanced.

For PCE inflation, the risks include those identified for core PCE inflation. In addition, PCE inflation depends on the behavior of energy prices. Energy prices have been drifting upward; however, a case can be made for some downward movement in energy prices in the event of a significant weakening of the global economy. Overall, we view the risks for PCE inflation as broadly balanced.

Respondent 14: Risks to the downside include the high level of corporate debt and the deterioration in credit quality of corporate debt which, in a downturn, could amplify the downside; failure to resolve tariffs and trade uncertainty; waning fiscal stimulus; the delayed impact of the Fed's rate increases; European growth breaking to the downside; political economy risks. Risks to GDP growth are, therefore, weighted to the downside, and risks to the unemployment rate are weighted to the upside.

Respondent 15: Even with an apparent slowdown in output growth in the current quarter, average payroll employment growth remains strong, especially given the cyclical position of the economy. Labor markets are expected to tighten further over the course of this year, and the unemployment rate could fall more than we anticipate if the recent gains in labor force participation are reversed. Indeed, labor force participation has run above trend for some time now as labor demand has improved. There is evidence, however, that some of the gains in participation have been among workers who, at least historically, have been less attached to the labor market. As a result, there is some risk that the participation rate will return faster to its demographically-driven downward trend causing the unemployment rate to decline faster than we currently expect and placing additional upward pressure on wages and prices.

In comparison, we regard the risks to our projection for GDP growth as roughly balanced. Data on economic activity at the end of last year have been weaker–some substantially weaker–than we expected. While some of the most recent readings on activity in January have been favorable and suggest a rebound in output early this year, the gains have not fully offset the previous loses. We continue to anticipate that the data will improve and the slowdown in GDP will prove temporary, but there is a risk that the data point to greater underlying economic weakness. The possibility of a fundamentally weaker domestic economy than we think coupled with concerns about a slowdown in the global economy point to sizeable downside risks to the outlook. Still, these issues could just as easily resolve themselves more quickly than we anticipate. We also believe that our revised path for monetary policy, which incorporates an extended pause this year before resuming increases in the federal funds rate, provides insurance against a more protracted economic slowdown domestically. Conditional on this revised path for policy we view the risks to the outlook for growth as roughly balanced.

Respondent 16: N/A

Respondent 17: Downside risks stemming from the recent softness in spending data and slowdown in foreign growth have increased. This has altered my assessment for the balance of risks for GDP, but my assessment of risks for inflation and unemployment remain roughly balanced due to offsetting factors.

Key Factors Informing Your Judgments regarding the Appropriate Path of the Federal Funds Rate

Question 3(b). Please describe the key factors informing your judgments regarding the appropriate path of the federal funds rate. If, in your projections for any year in the projection period, the unemployment rate for that year is close to or below your projection for its longer-run normal level and inflation for that year is close to or above 2 percent, and your assessment of the appropriate level of the federal funds rate for that year is still significantly below your assessment of its longer-run normal value, please describe the factor or factors that you anticipate will make the lower-than-normal funds rate appropriate. If you have revised your estimate of the longer-run normal value of the federal funds rate since the previous SEP, please indicate the factor or factors accounting for the change. You may include any other comments on appropriate monetary policy as well.

Respondent 1: N/A

Respondent 2: The labor market has exceeded full employment according to various measures and should remain tight this year. I expect the unemployment rate to bottom out at 3.7 percent by the end of the year. Inflation pressures are muted, and with economic activity above potential, I anticipate inflation will increase slightly this year, reaching 2 percent, and then modestly overshoot beginning in 2021.

My assessment of appropriate policy is generally informed by looking at simple rules that assume a low natural rate of interest of 3/4 percent. My fed funds rate path is flatter than some simple rules would suggest. This reflects an inflation rate that has been rising only gradually toward our objective from below. Beyond the near term, I envision a path for the fed funds rate that gradually reaches its longer-run level beyond 2021 to keep the economy on a sustainable growth path and limit the modest overshooting of the inflation target.

Respondent 3: The soft patch in recent economic activity combined with the tighter financial conditions relative to last autumn suggests that current-r* has moved somewhat below its longer-run level. Furthermore, we have been disappointed that inflation expectations have not moved higher along with higher actual inflation and continued resource pressure. As such, we see a more gradual pace of funds rate increases compared to December as being necessary to support growth and to firm inflation expectations symmetrically about 2 percent.

Specifically, we think it is appropriate to keep policy flat this year and through most of 2020. Given this accommodative path, by late 2020 we expect to see more definitive signs that inflation expectations are moving up to be consistent with a symmetric 2 percent target. Accordingly, we assume one rate hike in late 2020 and another in the first half of 2021, bringing us to neutral or slightly above. This policy trajectory will keep resource pressures strong enough throughout the forecast period to generate some modest overshooting of our 2 percent inflation objective in 2020 and 2021. We see this as a virtue that will help to firm inflation expectations symmetrically around 2 percent. We would note, however, that because of this crucial endogeneity between policy and inflation expectations, we expect policy will be highly data dependent in 2020 and 2021. Depending on developments, we could see a modestly firmer or modestly looser policy path as being necessary to achieve our goals.

Respondent 4: N/A

Respondent 5: My judgment regarding the appropriate path of the federal funds rate is predicated on promoting sustainable economic growth and price stability. I anticipate it will be appropriate to keep the federal funds rate unchanged through the remainder of the forecast horizon. I view this path as most appropriate due, in part, to the uncertainty that surrounds estimates of the equilibrium real interest rate and the longer-run unemployment rate. In light of this uncertainty, I favor a monetary policy strategy that deemphasizes these unknown targets and instead predicates policy actions on the outlook for inflation and the evolution of labor market conditions. Given that my outlook calls for the unemployment rate to stabilize at a low level and inflation to remain subdued, I anticipate that the funds rate will stabilize below my uncertain estimate of its longer-run normal rate. This policy path is consistent with benchmark "first difference" policy rules that divorce that path of the policy rate from any particular model or estimate of natural rates.

However, even under these benchmark "first difference" rules, my modal outlook for the economy would call for further modest increases in the federal funds rate over the next few years. The wedge between this rules-based path and my view of the appropriate path of policy arises from risk-management considerations. In light of the growing downside risks that threaten the outlook, I view a deviation from rules-based policy as well justified at this time.

Respondent 6: With respect to our monetary policy goals of price stability and maximum employment, the economy is in a very good spot. Growth is slowing from an above-trend pace, and labor markets are strong. While the unemployment rate is lower than the level that is sustainable in the longer run, inflation is near 2 percent and does not show signs of appreciably rising. The federal funds rate is now at the lower end of the range of the FOMC participants' estimates of neutral. In my view, monetary policy does not appear to be far behind or far ahead of the curve. This environment gives us the opportunity to continue to gather information on the economy and assess our forecast and the risks, before making any further adjustments in the policy rate.

My modal outlook is for growth to pick up after the soft first quarter and run at or somewhat above trend over the forecast horizon. Payroll growth will slow but be strong enough to absorb those entering the workforce and the unemployment rate will remain below my 4.5 percent estimate of its longer-run level. I anticipate that tight labor market conditions will translate into some continued firming in the labor compensation measures, in line with anecdotal reports of increasing wage pressures across a range of skill groups. So far, wage increases have been in line with productivity growth and so have not added to inflationary pressures. In my view, inflation expectations remain relatively well anchored, so after near-term weakness largely reflecting the transitory decline in energy prices in the fourth quarter of last year, I anticipate that inflation will be near 2 percent over the forecast horizon.

My modal outlook includes a few more increases in the funds rate, but I acknowledge there is considerable uncertainty around that path, both because economic shocks may move the economy off the modal path and require a policy response but also because there is uncertainty about the policy path that will be consistent with the outcomes in my modal forecast. My policy path is flatter than in my previous SEP submission reflecting the somewhat slower growth I am anticipating in 2019.

Respondent 7: N/A

Respondent 8: The principal factors behind my assessment of the appropriate path for monetary policy are my estimate of the natural real rate of interest, my economic outlook, and the balance of risks around that outlook.

Most estimates for the natural rate have changed little since the December SEP, and so I have maintained my estimate of 1/2 percent. I will continue to monitor future data and estimates to determine if an adjustment to my assumption is necessary.

The changes in FOMC communications since the December SEP emphasizing a patient, data dependent approach were important in arresting the tightening of financial conditions at the end of 2018. With downgrades of my 2019 growth and inflation projections, a later projected overshoot of inflation, and a higher projected path for unemployment, my assessment of the appropriate federal funds rate path is shallower than in December. In addition, the risks to the outlook would be tilted to the downside without this shift in the policy path. Consequently, I anticipate no change in the target range over 2019. Because unemployment is projected to be modestly below u* and inflation is projected to overshoot 2 percent slightly by 2021, I anticipate that one additional 25bps increase in the target range will be necessary sometime in 2020 or 2021 to forestall additional inflation pressures. For now, I place that increase in 2020. This path is flatter than most simple policy rules suggest, reflecting that inflation has been rising only gradually toward the FOMC's longer-run objective.

Respondent 9: In my view, appropriate monetary policy calls for an attenuated removal of accommodation until we've achieved a neutral stance.

Respondent 10: In my view, appropriate policy will require holding the funds rate flat over the next few years. The recent data for the U.S. economy have been on the soft side, suggesting that domestic demand is somewhat more fragile than appeared to be the case last year. Over the past year, foreign demand has shifted from a tailwind to a headwind. Moreover, the tightening of financial conditions late last year subsided only once it became clear that the FOMC would be "patient" in setting policy. And in a low-interest-rate environment, elevated downside risks argue for "taking out insurance" against the possibility that the realization of one of the risks could cause the funds rate to hit its effective lower bound. Finally, ongoing low inflation suggests that the inflationary risks of keeping rates low are currently rather modest.

Respondent 11: Recent data on overall activity have been weaker than I expected, and inflation has been lower. Financial market volatility and declining sentiment have likely led households and firms to be more cautious in their spending plans in the current quarter. In the medium term, political uncertainty is likely to make households and firms more cautious as well. Under these conditions, the trajectory of the federal funds rate is lower than in my previous projections and does not reach its longer-run value by the end of the forecast horizon.

Respondent 12: I anticipate that inflation will be somewhat above the FOMC target of 2 percent and that the unemployment rate will remain well below my estimate of the natural rate over the forecast horizon. Consequently, I have a modest increase in the funds rate over the next two years that takes it somewhat above my estimate of the longer run rate.

Respondent 13: A target of 2.38 percent for the forecast horizon is consistent with our assessment of current economic conditions and for the convergence of GDP growth and unemployment to their longer-run values in a regime characterized by low productivity growth and a low real interest rate on short-term government debt. A target of 2.38 percent is also consistent with the Fed's inflation target. In the event of a regime change, our federal funds rate target will change.

Respondent 14: I believe the recent weakening in the global outlook, coupled with tame inflation and our vulnerability to downside shocks, makes it unlikely that we will need to raise the funds rate above its longer-run neutral level. I also believe that the level of long-term market interest rates–especially long-forward interest rates-–conveys useful information about the neutral policy interest rate, and that a yield-curve inversion of any size or duration would signal that we've likely moved too far in efforts to remove policy accommodation. In my view it is just as likely that long-term interest rates will move lower, rather than higher, over the next few years. As a result, my baseline funds-rate path is flat through 2020. However, I stand ready to make adjustments to that baseline, as needed, in response to changes in the outlooks for real activity and inflation, and in the neutral rate. It is important that we be nimble at this stage in the business cycle, but it is also important that we not overreact.

Respondent 15: Were it not for the surprisingly weak data at the end of last year and the limited, but fairly weak, readings we have on hand for economic activity this quarter, the current unemployment rate gap would call for multiple interest rate hikes this year in a purely model-driven forecast. However, from a risk management standpoint it is prudent to be patient and wait for additional evidence that inflation is progressing toward the committee's 2 percent target and the slowdown in growth is indeed temporary, before further increasing the federal funds rate. Assuming that the economy continues to evolve as we expect, it will likely be necessary to raise interest rates at least once later this year given that the current stance of policy is still somewhat accommodative. Our path for policy, which ends at the same level as in our previous outlook, balances the need to be patient in the near term with the need to achieve a more restrictive stance of policy over the forecast horizon. We anticipate that after 2019 appropriate policy will be to raise the federal funds rate 25 basis points about every six months so that growth slows and the unemployment rate begins to move up toward its equilibrium level.

Respondent 16: The top end of our range for Federal funds is now at my estimate of long run neutral. My baseline scenario is that core inflation is unlikely to rise sufficiently above 2 under unchanged policy that would risk moving PCE inflation expectations above 2 as I believe them to be somewhat below 2 now. Absent tangible evidence that that an inflation breakout is expected to happen, I would be reluctant to recommend a policy to invert the yield curve and drive down break even inflation below 2 solely onb the basis of a model's prediction. Positive surprise on growth in and of itself would not be sufficient for me to argue for tighter policy .

Respondent 17: Although inflation is was essentially back to target, it has been drifting a bit lower lately. While job gains remain solid and the unemployment rate is below 4 percent, it is not clear that we have reached maximum employment as the labor force participation rate for prime age persons remains well below its their pre-recession levels, and wage growth remains moderate. Given the persistent undershooting of our inflation target, I believe that appropriate monetary policy implies maintaining the funds rate just below its long run level for the medium term.

Forecast Narratives

Question 4(a). Please describe the key factors, potentially including your assumptions about changes to government policies, shaping your central economic outlook and the uncertainty and risks around that outlook.

Respondent 1: N/A

Respondent 2: I expect the economy to expand at a healthy pace this year, pushing the unemployment rate a bit lower. My forecast factors in a sizable, though waning, effect of the fiscal stimulus to the economic outlook. Ongoing strength in household disposable income coupled with past gains in household wealth and high consumer confidence should support continued consumption growth. The outlook for fixed business investment appears healthy given the corporate tax changes. However, there is a risk that the recent deceleration in spending could persist, especially given policy uncertainty and declining prospects for global growth.

With the fiscal stimulus and past monetary accommodation, I expect the output and unemployment gaps to remain in place for the next few years, leading to a small pickup in inflation. I continue to expect core inflation to reach our 2 percent target on a sustained basis this year, followed by a slight overshooting in 2021. Normalization of monetary policy and a tightening of fiscal policy will help bring inflation, growth, and unemployment back to their long-run sustainable levels in the following years.

Respondent 3: The recent weakness in aggregate domestic spending and the deterioration in the outlook for foreign demand have led us to downgrade our forecast for 2019 so that we now see growth coming in a bit below potential. International concerns and waning fiscal stimulus are headwinds, but we still see the underlying fundamentals of domestic demand as solid. A more accommodative stance of monetary policy is necessary to counteract the headwinds and to keep inflation and inflation expectations on a trajectory consistent with our symmetric 2 percent objective.

In sum, we see growth running modestly below potential over the projection period. We see the output gap falling from a bit above 2 percent today to 1-3/4 percent by the end of 2021. We project the unemployment rate to stay roughly steady in 2019 and 2020 before rising to 3.9 percent in 2021, 0.4 percentage points below our estimate of the natural rate of unemployment. We see the maintenance of such resource pressures as necessary to lift inflation and inflation expectations; we also rely on a shallower path for policy normalization to communicate our commitment to a symmetric 2 percent inflation target and to firm inflation expectations around 2 percent. A non-accelerationist Phillips curve limits the upside risk to inflation. All told, we expect core inflation to be 2.0 percent this year and to rise to 2.2 percent by the end of 2021.

The key factors shaping uncertainty and the risks to the forecasts were discussed earlier in the risks and uncertainty sections.

Respondent 4: I believe that the economy still has considerable underlying momentum, notwithstanding a few weak data prints recently. Strong growth will encourage workers to rejoin/remain in the labor force, increasing labor force participation and keeping the unemployment rate about flat. The buffering effect of higher potential growth, both in response to policy changes as well as increased investment and labor force participation, will limit the spillover of growth into inflation.

Respondent 5: Central economic outlook: My forecast for real GDP growth is characterized by above-trend growth from 2018 to 2020, where supportive financial conditions and expansionary fiscal policy are the main factors boosting growth temporarily above trend. Real GDP growth will likely decelerate as financial conditions become less accommodative and the effects of the fiscal stimulus wane. I expect 12-month PCE inflation to remain modestly below 2 percent in 2019, reflecting the effects of past declines in energy prices, but to return to 2 percent in 2020.

Uncertainty and risks: I view uncertainty surrounding my projections as broadly similar to levels of uncertainty over the past 20 years, considering the magnitude of historical forecast errors and current economic and policy uncertainty at home and abroad.

I view the risks to the outlook for growth and labor markets as weighted to the downside. In addition to the uncertain timing of the pass-through of past policy rate increases to the economy, risks from abroad have become more notable. Concerns around global growth have been rising amid ongoing trade tensions and elevated levels of policy uncertainty. More recently, incoming data has confirmed that economic activity in China and the euro area has slowed. As a result, global growth expectations have been marked down. Given the limited policy space that confronts many foreign governments and central banks, there is an elevated potential for these global headwinds to intensify. Through a number of real and financial linkages, US economic growth and labor markets could be negatively impacted should foreign demand continue to deteriorate.

Moreover, a weaker global economy would likely lead to less demand for raw materials resulting in lower commodity prices. Also, to the extent that safe-haven flows into the US accompany the slowdown in foreign growth, I could envision the foreign exchange value of the dollar further appreciating. These dynamics in commodity and foreign-exchange markets would lead to disinflationary pressures for both core and headline PCE, similar to those witnessed during the 2014-2016 episode. Therefore, in an environment of slowing global growth, I view the risks to the inflation outlook as titled to the downside.

Respondent 6: While incoming data on the economy have been mixed, the U.S. economy remains in a good position. The tightening in financial conditions in the fourth quarter of last year has mostly reversed and business and consumer sentiment has improved. As anticipated, given the waning effect of fiscal stimulus and past reductions in monetary accommodation, growth is slowing from the 3 percent pace that we saw last year. In my view, the most likely outcome is that, after a soft first quarter, growth will be at or slightly above trend over the forecast horizon. But there is uncertainty around how much slowing we are seeing both in the U.S. and abroad.

Despite a weak reading on payroll job growth in February, the labor market is strong and the unemployment rate is below my estimate of its longer-run natural rate. I expect payroll employment growth will slow over the forecast horizon but that it will be strong enough to absorb those entering the labor force and the unemployment rate will stay low. The energy price declines in the fourth quarter of last year led to softer headline inflation readings in the near-term. But energy prices have moved back up, core inflation remains near 2 percent, and inflation expectations remain relatively well anchored. Thus, I anticipate that inflation will be near 2 percent over the forecast horizon.

I view overall uncertainty as roughly comparable to the historical norms of the last 20 years. As described above, while there are a number of risks to my outlook, I view the risks as broadly balanced for both the real economy and for inflation, contingent on my policy rate path.

Respondent 7: N/A

Respondent 8: Real GDP growth for 2018 was strong at just over 3 percent, close to my December projection. However, the data indicate a more substantial slowing of economic activity around the turn of the year than I had anticipated in December; in addition, growth outside of the U.S. also has been weaker. Consequently, I project that real GDP growth in 2019 will be just below 2 percent, compared to about 2 1/4 percent in my December submission.

A number of factors contribute to this markdown. First, the data on retail sales and motor vehicle sales indicate that consumer spending growth likely will be quite soft in the first quarter. Second, indicators of residential and nonresidential construction as well as equipment spending point to some further dampening of growth of residential and business fixed investment. Third, data releases outside of the U.S. indicate slower global growth than I had previously anticipated, which is likely to have some spillover to U.S. aggregate demand and production.

Nevertheless, with a continued strong labor market and fairly high consumer and business confidence, I see some of the first quarter slowdown as transitory and project that growth will rebound such that real GDP growth in 2019 will be just above its potential rate. With near-potential growth, I expect the unemployment rate to remain near the February level over the rest of the year. Given little projected change in resource slack and continued muted inflation pressures (as evidenced in the February CPI), I expect that core PCE inflation will remain a little below 2 percent for the year.

The basic contours of my projection over the rest of the forecast horizon have changed modestly from my December projection. Fading fiscal stimulus and near-neutral to slightly restrictive monetary policy contribute to a further gradual slowdown of growth to near potential in 2020 and slightly below it in 2021. With growth slightly below potential in 2021, the unemployment rate begins to rise gradually, but it remains somewhat below its longer-run normal rate at the end of 2021. Tight resource utilization leads to a gradual rise of inflation to slightly above the FOMC objective in 2021. A near-neutral monetary policy stance and minimal fiscal policy impetus contribute to bring inflation, growth, and unemployment back to their longer-run normal levels by the middle of the next decade.

Respondent 9: The pace of real GDP growth, in my outlook, slows moderately in 2019 from its swift pace in 2018. The pace of growth in 2019 is still modestly above-trend, largely due to lasting effects from recent tax reform and fiscal stimulus. By 2020, my view is that growth will have settled to trend.

I continue to judge the risks to my growth outlook as roughly balanced. While there appears to be an abundance of easily identifiable downside risks, the intensity of some of these risks–especially financial volatility, investor and household pessimism, trade policy uncertainty, and the recent government shutdown–have abated somewhat. However, slowing global growth remains a pressing downside concern. On the other hand, firms' hiring and capital investment response to the recent tax reform and stimulus may have been held back last year due to heightened uncertainty regarding other risks.

Underlying inflation has been running at or very close to target. Given the absence of slack in my projection, I see inflation continuing to hew to the FOMC's inflation objective through 2021.

The risks to my inflation outlook are balanced. The flatness of the Phillips curve in recent years could give way to a more pronounced inflation response as the unemployment rate remains below my view of its natural rate. Conversely, following a prolonged period of below-target inflation rates, inflation expectations may have drifted below our longer-run target.

Respondent 10: I laid out my assessment of the risks to the outlook under question 2(b), and my policy narrative under question 3(b) largely describes my forecast narrative.

One additional element of my forecast narrative worth emphasizing is my assumption about underlying inflation. I believe that underlying inflation is currently anchored somewhat below 2 percent. In my forecast, underlying inflation gradually rises, bolstered by a monetary policy that demonstrates the FOMC's commitment to meeting its 2 percent target on a sustained basis over time. In particular, the public is assumed to be surprised by the Committee's willingness to keep the funds rate flat at a below-long-run level over the next three years despite an unemployment rate that is, on average, 3/4 percentage point below its long-run value. That surprisingly accommodative policy leads the public to revise up their underlying inflation over time.

Respondent 11: Recent data on overall activity have been weaker than I expected, and inflation has been lower. Financial market volatility and declining sentiment have likely led households and firms to be more cautious in their spending plans in the current quarter. In addition, slow growth abroad is likely to affect exports. I am assuming that trade deals will be finalized this year and that a federal budget agreement for 2019 and 2020 will be made without further disruption. Nonetheless, in 2020 political uncertainty is likely to make firms more cautious in their investment plans. After the elections my forecast is bimodal.. One possibility is that firms and households will put the election behind them and growth will return to trend. It is also possible that a sizeable part of the population will see the results as a threat to economic stability and will moderate spending accordingly, leading to sluggish growth that is well below trend. My submission is an average of these two possibilities.

Respondent 12: My forecast is revised down in 2019 due to data suggesting that the first quarter will be weaker-than-expected. However, I expect the economic growth will rebound in the second quarter to an above-trend pace, but then gradually ease over the forecast horizon as fiscal stimulus fades. By 2021 I expect the economy to be growing at my longer-run trend pace of just below 2 percent. The unemployment rate stays well below my estimate of the natural rate of unemployment over the next three years, but I do not anticipate this will result in a significant buildup of inflationary pressures. Rather, I expect inflation to rise only slightly above the committee's 2 percent target given how flat the Phillips curve seems to be. I remain concerned about the course of fiscal policy and trade policy and their impact on the economy going forward.

Respondent 13: Our forecast continues to use a regime-based conception of outcomes for the US economy. In our conception, there are multiple regimes and we appear to have nearly converged to one of them. The current regime is viewed as persistent, and we see no reason to forecast a switch from the current regime over the forecast horizon. However, we are paying close attention to many factors, such as the effects of regulatory and tax policy changes, which might move the economy to a high productivity state. Monetary policy is regime-dependent and can be viewed as optimal given the current regime. Longer term, the economy may visit other regimes, such as ones associated with higher productivity growth, a higher return to short-term government debt, or recession. If the economy transitions to any of these states, all variables are potentially affected and, in particular, the optimal regime-dependent monetary policy path may require adjustment. However, predicting when these transitions may occur is challenging, so we forecast that the economy will remain in the current regime over the forecast horizon.

Respondent 14: In the background, the economic outlook continues to be shaped by adverse demographic trends, technology enabled disruption (which is increasing the need for improved education and skill levels), education and skill levels that are not keeping pace with business needs and are contributing to sluggish productivity growth, and the likely unsustainable path of U.S. government debt. Weak trend U.S. growth, weakening growth prospects abroad, and strong global demand for safe assets continue to hold down the equilibrium level of interest rates and the appropriate path for policy. Cyclical pressures on wage inflation are building, and appear more likely to squeeze margins than put upward pressure on price inflation. Brinksmanship in trade and other government policies, here and abroad, contributes to business uncertainty as well as uncertainty about the economic outlook, greatly complicates the conduct of monetary policy, and limits the practical usefulness of forward guidance about the likely path of short-term interest rates. Elevated levels and rapid growth in BBB corporate, leveraged, and high-yield debt mean that we risk a rapid deterioration in financial conditions in the event of a negative economic shock. That deterioration could turn what would otherwise have been a mild growth slowdown into something more serious. Fiscal stimulus is fading.

Respondent 15: Incoming data suggest a fairly sharp step down in growth in the current quarter and while we anticipate a rebound in second quarter GDP, it would take a very strong second half of the year for the economy to grow above potential in 2019–something our current model-driven estimates suggest is unlikely. Slower growth this year than in our previous outlook is followed by somewhat above potential growth in 2020 as the relatively more accommodative stance for policy acts as less of a restraint on output next year. The unemployment rate ends the forecast horizon a bit above our previous projection due to a higher starting value given the recent gains in labor force participation.

Our revised outlook assumes that the recent slowdown in activity–especially consumption and investment–will prove transitory. Retail sales tumbled at the end of last year but bounced back some in January. Auto sales and auto production through February have also been weak. Still, consumer sentiment remains high by historical standards and combined with recent employment growth and wage gains should support spending in the coming months. Housing market-related data continue to be soft and residential investment has declined more than we anticipated. Lower interest rates and slowing house price growth should, however, provide some support for housing demand. Other interest-sensitive components of demand, including consumption, will also benefit from the lower path for interest rates. Growth moderates and drops below potential after next year, as monetary policy becomes more restrictive, and the unemployment rate stops decreasing before slowly turning higher beyond the end of the current forecast horizon. Inflation remains well anchored but moves a bit further above 2 percent next year due to tightness in the labor market.

Our forecast is conditioned on additional increases in the federal funds rate that are needed to begin moving the unemployment rate back up toward equilibrium. Relative to December, the path for interest rate increases has shifted so that more of the hikes occur later in the forecast horizon. This path strikes a balance between the need to be patient in the near-term, given current conditions, and the need to move toward a more restrictive policy stance to restore equilibrium in the labor market. Indeed, relative to our last projection we are more concerned about domestic and global economic conditions and risks and their potential impact on the domestic economy in the near-term. While we expect many of these risks to resolve favorably or without much harm to the domestic economy, we also remain wary of financial conditions and the signals they may be providing about the outlook–especially the fact that the 10-year Treasury yield dropped substantially at the end of the last year and has recovered little this quarter.

We view the risks to our outlook for GDP growth as roughly balanced. While the potential for additional financial market volatility and a further slowdown in global demand remain a concern, we believe that our more patient approach to adjusting policy hedges some of these risks. In addition, our forecast continues to be conditioned on a fairly conservative view of the effects of the Tax Cuts and Jobs Act on GDP growth and it is possible that the tax changes will stimulate the economy more than we have assumed in our outlook. Continued payroll employment gains and a reversal in the recent increase in labor force participation could increase the degree of labor market tightness and result in faster wage growth than we currently anticipate–boosting housing income and consumption.

Respondent 16: N/A

Respondent 17: Core inflation is close to, but has not surpassed, target and the economy continues to add jobs with only modest increases in wage growth. This reinforces my assessment that there may still be some slack left in the economy.

Forecast Narratives (continued)

Question 4(b). Please describe the key factors, potentially including revisions to your assumptions about changes to government policies, causing your forecasts to change since the previous SEP.

Respondent 1: N/A

Respondent 2: My forecast has changed little from the previous projection. The somewhat lower 2019 growth forecast reflects recent weak spending data and less accommodative financial conditions since December.

Respondent 3: We have lowered our GDP growth forecast by a full 1/2 percentage point in 2019, left it unchanged in 2020, and, due to our more accommodative policy path, raised it 1/4 percentage point in 2021. Since December we lowered our assessment of medium-term potential output growth in line with a reduction in our projection for business investment. On net these changes leave the output gap a little higher by the end of 2021 compared with December. Our unemployment rate projection is a little higher than in December but by the end of 2021 we still see it close to 1/2 percentage point below its natural rate. Our inflation forecast is unchanged.

Respondent 4: I have acknowledged the softness of some incoming data by marking down my 2019 H1 forecast by about 0.8 ppt. I expect growth to pick in the second half supported by the strong labor market and accommodative policy. I also lowered by estimate of the longer-run unemployment rate by a tenth in recognition of the economy's apparent ability to operate at low levels of unemployment without the emergence of binding resource constraints.

Respondent 5: I have not materially changed my outlook for unemployment or inflation. However, in light of the growing downside risks to the outlook, I have marked down my path of the federal funds rate, consistent with risk-management considerations.

Respondent 6: The tightening in financial conditions in the fourth quarter of last year and lower household and business sentiment contributed to a slow-down in growth in the first quarter, which led me to mark down my GDP forecast for this year and edge up my unemployment rate path. Financial conditions have since eased, sentiment has improved, and I view the most likely outcome is for growth to remain at or slightly above trend over the forecast horizon and the labor market to remain strong. There has been little change in my inflation projection.

I have revised down the fed funds rate path associated with my projections since my last submission mainly reflecting three factors: (1) Output growth came in weaker in the first quarter than I anticipated and I have revised down my growth projection for 2019, (2) Given our December rate increase, the fed funds rate is now at the bottom of the range of FOMC participants' estimates of neutral, and (3) Even though the unemployment rate continues to be lower than the level that is sustainable in the longer run, inflation is near 2 percent and does not show signs of appreciably rising.

Respondent 7: N/A

Respondent 8: Much of the economic activity data for the U.S. and a number of major foreign economies released since the December SEP have been weaker than I had anticipated, which have led to a markdown of my growth projection for 2019 as noted in my response to question 4(a). While financial conditions tightened considerably immediately after the December FOMC meeting, they have rebounded since. On net, they remain tighter than they were in September, but had only marginal effects on this projection. Because the unemployment rate has been somewhat above my December projection and I forecast near-potential growth over the forecast horizon, the path of my unemployment projections lies somewhat above the projected path in my December submission.

In addition, as noted in my response in question 1(c), I have lowered my estimate of the longer-run normal rate of unemployment. Consequently, my assessment is that the labor market is not as tight as I judged in December.

The inflation data since December were overall on the softer side, which has been a feature of the U.S. economy through most of this expansion. Combined with my projection of near-potential growth and my assessment of less labor market tightness, I have lowered slightly the profile of my inflation projections, resulting in a small overshoot of inflation occurring in 2021, one year later than I had projected in December.

Because of the markdowns in my projections for growth and inflation, a reduction in my assessment of labor market tightness over the forecast horizon, and the risks that became evident during the financial market turbulence in late 2018, my path for the policy rate is shallower than it was in my December submission. This shallower path is necessary in my opinion to manage the risks around my outlook and to enable the achievement of the dual mandate on a sustainable basis in this more fraught environment.

Respondent 9: I have left my baseline outlook largely intact. The economic data released since our SEP submission last December has been surprisingly weak, especially with regards to retail sales and the latest jobs report. However, I view much of this surprise weakness as noise and not a true signal about the underlying momentum in the economy.

Respondent 10: My modal outlook is weaker than in December, with weaker GDP growth, especially this year, and a higher level of the unemployment rate. The downward revision to the outlook would have been greater were it not for the substantial downward revision to my path for monetary policy. Both financial and nonfinancial incoming data have contributed to this downward revision. As noted under question 3(b), asset prices have rebounded from their late December lows but only because expectations for monetary policy have been revised notably lower.

My outlook for inflation is not revised despite the weaker outlook for real activity. One reason is that I assume that the Phillips curve will remain very flat. In addition, the downward revision to my path for the federal funds rate reinforces the public's belief that the FOMC is committed to meeting its inflation objective and so leads to a somewhat higher path for underlying inflation.

Respondent 11: Data releases, including consumer spending and capital goods orders, indicate that growth will be weaker in the current quarter. I am also more concerned about political uncertainty in the medium term.

Respondent 12: Recent weaker than expected data has led me to revise down my estimate of output growth in 2019. As well, I have edged down my estimate of longer-run output growth.

Respondent 13: Recent data for the US and foreign economies have led us to decrease our projections for GDP growth in 2019.

Respondent 14: My baseline GDP growth projection is little changed since December, when I marked it down considerably in response to concerns regarding financial conditions, global growth prospects, corporate earnings guidance, and the rise in political-economy risks that could spill over to the real economy. In this round–in response to further downgrades to the global economic outlook and a lower level of long-term interest rates–I've cut my estimate of the longer-run neutral interest rate and my assessment of the appropriate path for policy. Based partly on the deterioration in financial conditions at the turn of the year and partly on the continued stability of the labor-force participation rate in the face of a strong downward demographic trend, I see a somewhat higher path for the unemployment rate than before, and that translates into a slightly lower inflation path.

Respondent 15: We believe that appropriate policy requires further increases in the federal funds rate given the current cyclical position of the economy. However, it is prudent to wait before further increasing the federal funds rate to balance the risk of weaker than anticipated underlying economic conditions against the risk of allowing the unemployment rate to fall too far below equilibrium.

Respondent 16: Global data flow since December (as evidenced by various surprise indexes) has been uniformly weak . Have materially revised down my estimate of global growth/demand for US exports. Believe the cumulative change in the dollar during this cycle has yet to be fully felt in the trade accounts. Odds elevated that China and Europe end up weaker than expected now.

Respondent 17: Incoming data, especially softer spending data in recent months, caused me to mark down my near-term output forecast. Otherwise, my forecasts are little changed.

Forecast Narratives (continued)

Question 4(c). Please describe any important differences, potentially including those related to your assumptions about changes to government policies, between your current economic forecast and the Tealbook.

Respondent 1: N/A

Respondent 2: The two projections are largely in alignment, with the exception of the anticipated path for the federal funds rate.

In both, growth is slowed by the waning effects of the fiscal stimulus and the gradual removal of monetary policy accommodation. The unemployment rate bottoms out at 3.7 percent by the end of this year and then begins to increase in late 2020. By contrast, the Tealbook projects that the unemployment rate remains at 3.6 percent until the third quarter of 2021. The persistent overshooting of full employment results—in my forecast—in inflation slightly above 2-percent. My funds rate path tops out to a much lower level relative to the funds rate path in the Tealbook.

Respondent 3: Our federal funds rate path is noticeably below the Tealbook throughout the forecast period, ending 2021 in the 2.75 to 3 percent range. We assess the long-run neutral funds rate to be 2.75 percent, a bit higher than the Tealbook, and therefore do not overshoot the long-run neutral fed funds rate by anywhere near as much as the Tealbook. Over the 2019-2021 period we assume roughly the same average impulses from tax cuts and government spending as the Tealbook; however, we assume fiscal policy will be a slight negative for growth in 2021.

Our projection for actual GDP growth is very similar to the Tealbook in 2019 and 2020 but 0.3 percentage points higher in 2021 due to our more accommodative policy path. Our revised potential growth is 0.1 percentage points higher than the Tealbook's in each year of the projection period. By the end of 2021 our output gap is 0.2 percentage points lower. We project a somewhat higher unemployment rate throughout the projection period. Combined with a lower estimate of the natural rate (4.3 percent), this leaves our unemployment rate gap at the end of 2021 at about 0.4 percentage point, about half the estimate in the Tealbook.

Our forecast for core inflation is a little higher that the Tealbook's in 2020 and 2021. Our boost from resource pressure is a not quite as large, but we condition on a more accommodative monetary policy path, which should lift underlying inflation trends and expectations more than in the Tealbook.

Respondent 4: I have a stronger outlook for potential growth than the Tealbook. Consequently, I believe that the economy can grow faster than projected in the Tealbook without much additional upward impetus to price inflation. My more optimistic outlook for potential growth is consistent with a slightly higher long-run neutral interest rate compared to that in the Staff outlook.

Respondent 5: My assumptions and projections for real GDP, unemployment, and inflation are similar to those in Tealbook. My projected path for the federal funds rate is substantially lower than in Tealbook reflecting both differences in the monetary policy rules that inform my path for interest rates as well as risk-management considerations.

Respondent 6: As in the Tealbook forecast, over the forecast horizon, I expect that growth will slow from the strong pace seen over the past two years toward a pace that is nearer to trend, labor market conditions will remain strong, and underlying inflation will remain near our 2 percent goal. Although the outcomes in the Tealbook forecast are similar to those in my forecast, the Tealbook's policy path is steeper throughout the forecast horizon than my path.

Respondent 7: N/A

Respondent 8: My set of projections is broadly in alignment with the Tealbook forecast for real growth and inflation. Some differences have developed regarding the unemployment projections. However, the most notable difference is between the anticipated paths of the federal funds rate.

In both forecasts, real growth is near its potential rate in 2019 – 2020 and below potential in 2021. However, the Tealbook projects a modest further fall in the unemployment rate, with a trough of 3.6 percent in 2019 – 20, while I project it to remain flat at 3.8 percent for those years. In addition, because of my lower assessment of u*, labor market conditions are notably less tight in my projection than in the Tealbook forecast. Despite tighter resource constraints in the Tealbook forecast, core inflation rises more gradually than in my projection: A slight overshoot of the 2 percent objective occurs earlier in my projection (2021) than it does in the Tealbook projection (2024, based on the longer-term projection). The policy rate paths in both projections have shifted downward by similar amounts since December, but the differences remain wide (about 150 bps at end-2021), partly reflecting the Tealbook's assessment of a wider positive output gap than implied in my projection.

Respondent 9: Relative to the Tealbook baseline, I have not allowed the recent data weakness to influence my near-term growth forecast as much, and have a moderately higher projection for this year. Beyond this year, much of the divergence in our growth paths owes to differing paths for the federal funds rate.

Respondent 10: N/A

Respondent 11: As usual, I expect that the interest rate path will be well below the path in the Tealbook.

Respondent 12: My anticipated path for the federal funds rate under appropriate monetary policy remains significantly lower than the Tealbook baseline.

Respondent 13: For GDP growth, our projections (excluding 2020) tend to be higher than those in the Tealbook. For unemployment, our projections tend to be higher than those in the Tealbook. Our projections for inflation are similar to those in the Tealbook. Underlying the differences in projections is a differing view of the appropriate path for monetary policy. Our regime conception views monetary policy as regime-dependent and the current regime is viewed as persistent. We acknowledge that the economy may visit other regimes in the future, but switches to these regimes are difficult to forecast. Our path for monetary policy is flat over the forecast horizon, while the Tealbook indicates further upward movement in the next few years before declining to a long-run value close to the current federal funds rate.

Respondent 14: It is in my assessment of the appropriate path for the federal funds rate that my projections differ most sharply from the Tealbook baseline. My lower path reflects my belief that weak global growth prospects, geopolitical uncertainties, and squeezed margins are likely to hold down the shorter-run neutral rate over the next few years. There is also evidence that as short-term interest rates approach longer-run neutral levels, the economy becomes more sensitive to interest-rate changes–more fragile–making a relatively shallow policy path appropriate in the absence of strong inflation pressures. My funds-rate path is not "modal": It reflects risks to output and employment growth that I now perceive are weighted to the downside.

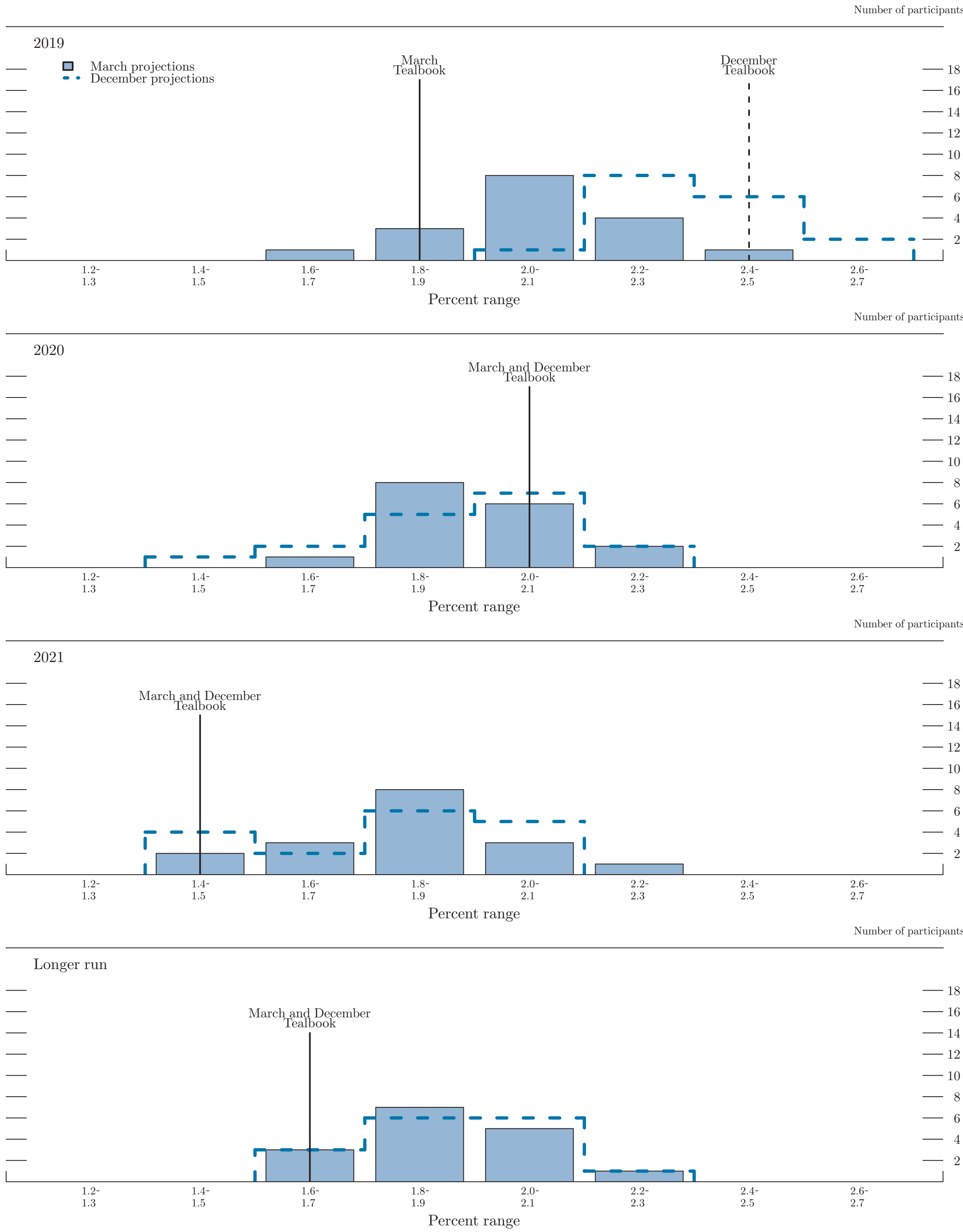
That my inflation projections are a bit above the Tealbook's, despite a slightly higher projected unemployment rate, primarily reflects my belief that longer-run inflation expectations are anchored at 2 percent.

Respondent 15: Real outcomes are qualitatively similar in the two forecasts, and like the Tealbook our economic outlook is conditioned on further increases in the federal funds rate. However, our path for policy remains a good bit shallower than theirs, suggesting that the Tealbook continues to view the underlying momentum in the economy as stronger than we do. Our outlook also takes some signal from the empirical evidence suggesting that monetary policy tightening has a larger effect on economic activity than monetary easing of the same magnitude. In addition, we continue to expect core inflation to increase more meaningfully above 2 percent than the Tealbook, in large part because inflation expectations in our model are anchored at 2.0 percent rather than 1.8 percent.

Respondent 16: N/A

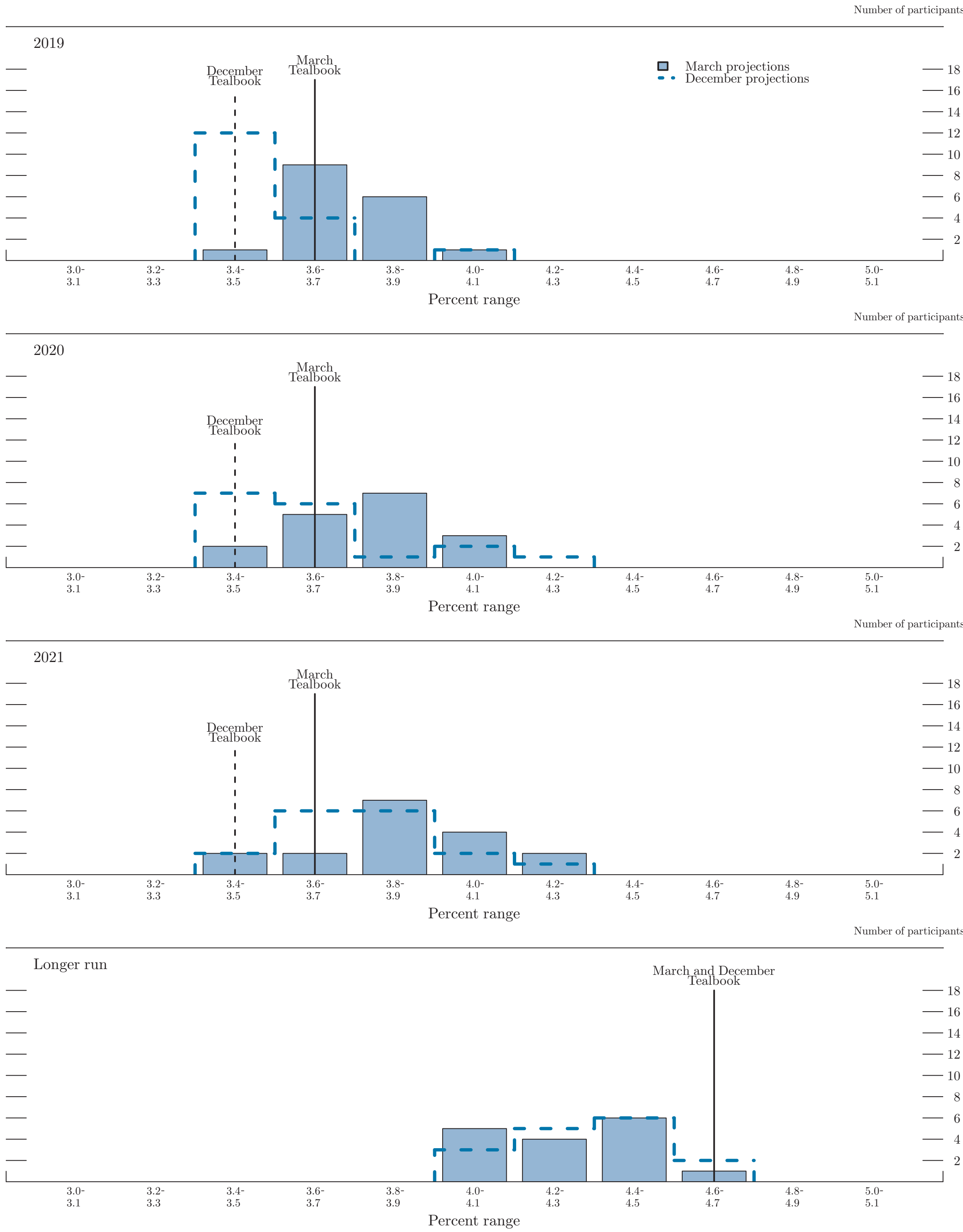
Respondent 17: Relative to the Tealbook, my forecasts for economic activity are a touch stronger while my forecast for inflation is about the same. I believe the long-run unemployment rate is lower and the improving labor market will continue to keep the labor force participation rate from falling, minimizing the downward effects of healthy job growth on the unemployment rate. I believe that it is appropriate for the federal funds rate to remain at its current level for some time rather than rise as in the Tealbook. Even with lower rates, my projection anticipates that inflation will be about the same as in the Tealbook.

Figure 3.A. Distribution of participants' projections for the change in real GDP, 2019–21 and over the longer run



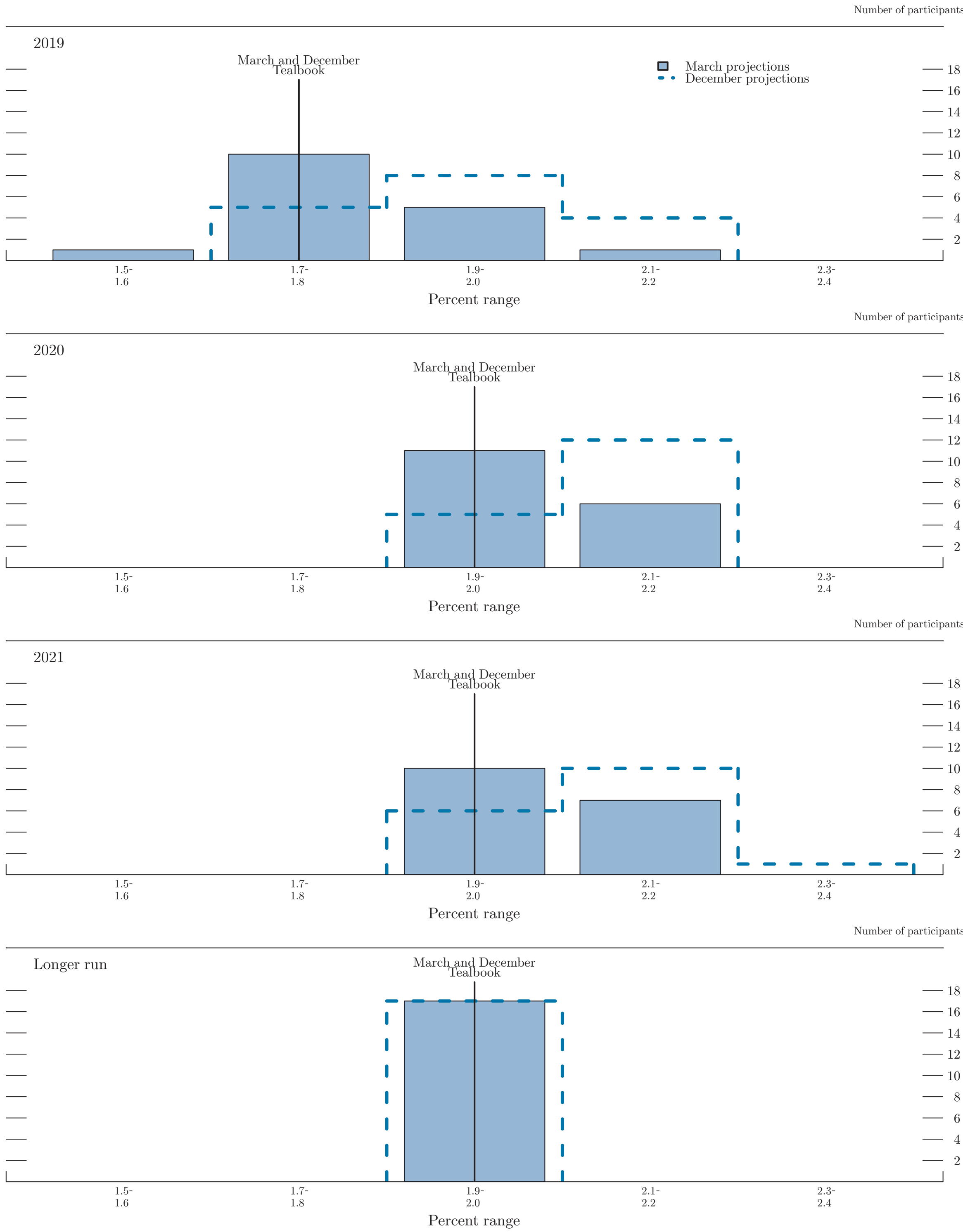
NOTE: Updated March Tealbook values are reported. Definitions of variables and other explanations are in the notes to table 1.

Figure 3.B. Distribution of participants' projections for the unemployment rate, 2019–21 and over the longer run



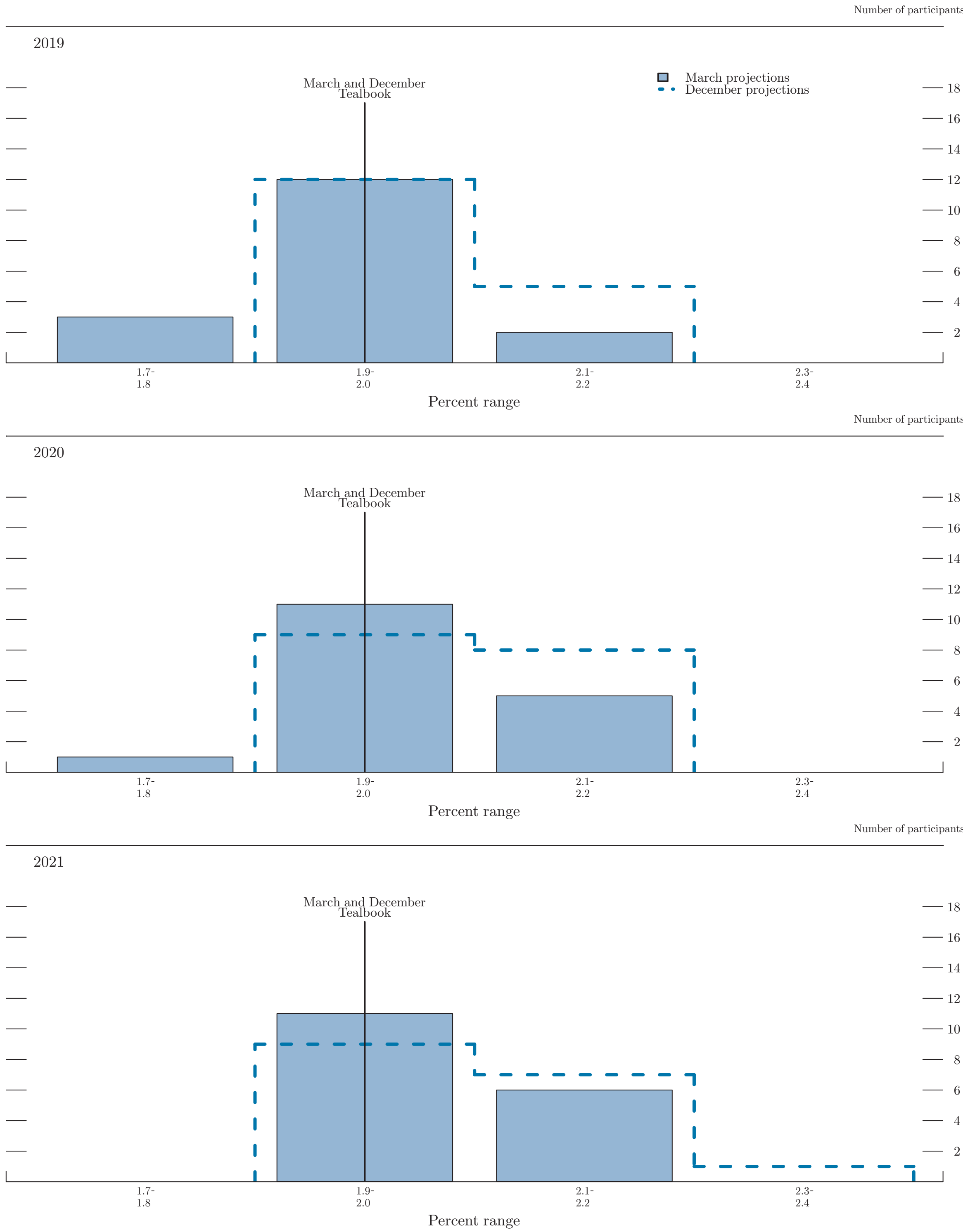
NOTE: Updated March Tealbook values are reported. Definitions of variables and other explanations are in the notes to table 1.

Figure 3.C. Distribution of participants' projections for PCE inflation, 2019–21 and over the longer run



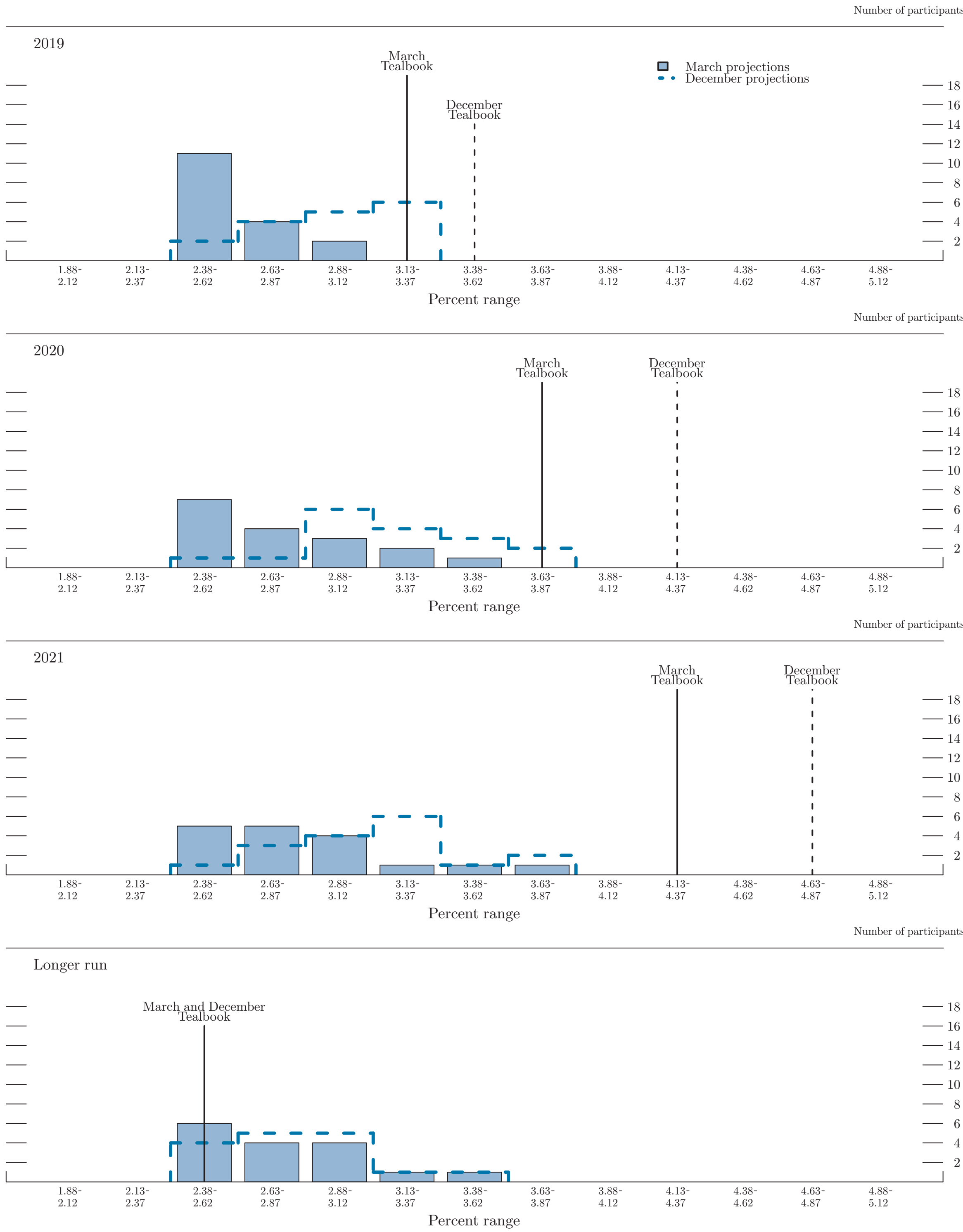
NOTE: Updated March Tealbook values are reported. Definitions of variables and other explanations are in the notes to table 1.

Figure 3.D. Distribution of participants' projections for core PCE inflation, 2019–21



NOTE: Updated March Tealbook values are reported. Definitions of variables and other explanations are in the notes to table 1.

Figure 3.E. Distribution of participants' judgments of the midpoint of the appropriate target range for the federal funds rate or the appropriate target level for the federal funds rate, 2019–21 and over the longer run



NOTE: Updated March Tealbook values are reported. Definitions of variables and other explanations are in the notes to table 1.