Table 1. Economic projections of Federal Reserve Board members and Federal Reserve Bank presidents, under their individual assessments of projected appropriate monetary policy, March 2018

Percent

Variable	Median[1]				Central tendency[2]				Range[3]			
	2018	2019	2020	Longer run	2018	2019	2020	Longer run	2018	2019	2020	Longer run
Change in real GDP	2.7	2.4	2.0	1.8	2.6 – 3.0	2.2 – 2.6	1.8 – 2.1	1.8 – 2.0	2.5 – 3.0	2.0 – 2.8	1.5 – 2.3	1.7 – 2.2
December projection	2.5	2.1	2.0	1.8	2.2 – 2.6	1.9 – 2.3	1.7 – 2.0	1.8 – 1.9	2.2 – 2.8	1.7 – 2.4	1.1 – 2.2	1.7 – 2.2
Unemployment rate	3.8	3.6	3.6	4.5	3.6 – 3.8	3.4 – 3.7	3.5 – 3.8	4.3 – 4.7	3.6 – 4.0	3.3 – 4.2	3.3 – 4.4	4.2 – 4.8
December projection	3.9	3.9	4.0	4.6	3.7 – 4.0	3.6 – 4.0	3.6 – 4.2	4.4 – 4.7	3.6 – 4.0	3.5 – 4.2	3.5 – 4.5	4.3 – 5.0
PCE inflation	1.9	2.0	2.1	2.0	1.8 – 2.0	2.0 – 2.2	2.1 – 2.2	2.0	1.8 – 2.1	1.9 – 2.3	2.0 – 2.3	2.0
December projection	1.9	2.0	2.0	2.0	1.7 – 1.9	2.0	2.0 – 2.1	2.0	1.7 – 2.1	1.8 – 2.3	1.9 – 2.2	2.0
Core PCE inflation[4]	1.9	2.1	2.1		1.8 – 2.0	2.0 – 2.2	2.1 – 2.2		1.8 – 2.1	1.9 – 2.3	2.0 – 2.3	
December projection	1.9	2.0	2.0		1.7 – 1.9	2.0	2.0 – 2.1		1.7 – 2.0	1.8 – 2.3	1.9 – 2.3	
Memo: Projected appropriate policy path												
Federal funds rate	2.1	2.9	3.4	2.9	2.1 – 2.4	2.8 – 3.4	3.1 – 3.6	2.8 – 3.0	1.6 – 2.6	1.6 – 3.9	1.6 – 4.9	2.3 – 3.5
December projection	2.1	2.7	3.1	2.8	1.9 – 2.4	2.4 – 3.1	2.6 – 3.1	2.8 – 3.0	1.1 – 2.6	1.4 – 3.6	1.4 – 4.1	2.3 – 3.0

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 12–13, 2017. 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 12–13, 2017, meeting, and one participant did not submit such projections in conjunction with the March 20–21, 2018, 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 2018*
(in percent)

Medians, central tendencies, and ranges

	Median	Central tendency	Range
Change in real GDP	2.5	2.4 – 2.6	2.2 – 2.7
PCE inflation	2.0	1.9 – 2.0	1.7 – 2.3
Core PCE inflation	2.0	1.9 – 2.1	1.7 – 2.1

Participants' projections

Projection	Change in real GDP	PCE inflation	Core PCE inflation
1	2.5	2.0	2.0
2	2.2	1.9	2.0
3	2.6	2.2	1.9
4	2.7	2.0	2.1
5	2.4	2.0	2.0
6	2.4	1.8	1.7
7	2.4	1.9	1.9
8	2.5	2.0	2.1
9	2.6	1.7	2.1
10	2.5	2.0	2.0
11	2.6	2.0	2.1
12	2.6	2.3	2.1
13	2.3	1.9	1.8
14	2.6	1.9	1.9
15	2.5	2.0	2.0

* Growth and inflation are reported at annualized rates.

Table 1.B. Economic projections for the second half of 2018*
(in percent)

Medians, central tendencies, and ranges

	Median	Central tendency	Range
Change in real GDP	3.0	2.7 – 3.3	2.5 – 3.5
PCE inflation	1.9	1.6 – 2.0	1.6 – 2.3
Core PCE inflation	1.9	1.7 – 2.0	1.5 – 2.1

Participants' projections

Projection	Change in real GDP	PCE inflation	Core PCE inflation
1	3.5	1.6	1.6
2	2.8	2.1	2.0
3	2.6	2.0	1.9
4	3.3	1.6	1.7
5	3.0	1.8	1.8
6	2.6	2.2	2.1
7	3.0	1.9	1.9
8	2.7	1.8	1.9
9	3.0	2.3	2.1
10	2.5	2.0	2.0
11	3.4	1.6	1.5
12	3.4	1.7	1.9
13	2.9	1.9	1.8
14	3.0	1.9	1.9
15	2.7	1.6	1.6

* Projections for the second half of 2018 implied by participants' March projections for the first half of 2018 and for 2018 as a whole. Growth and inflation are reported at annualized rates.

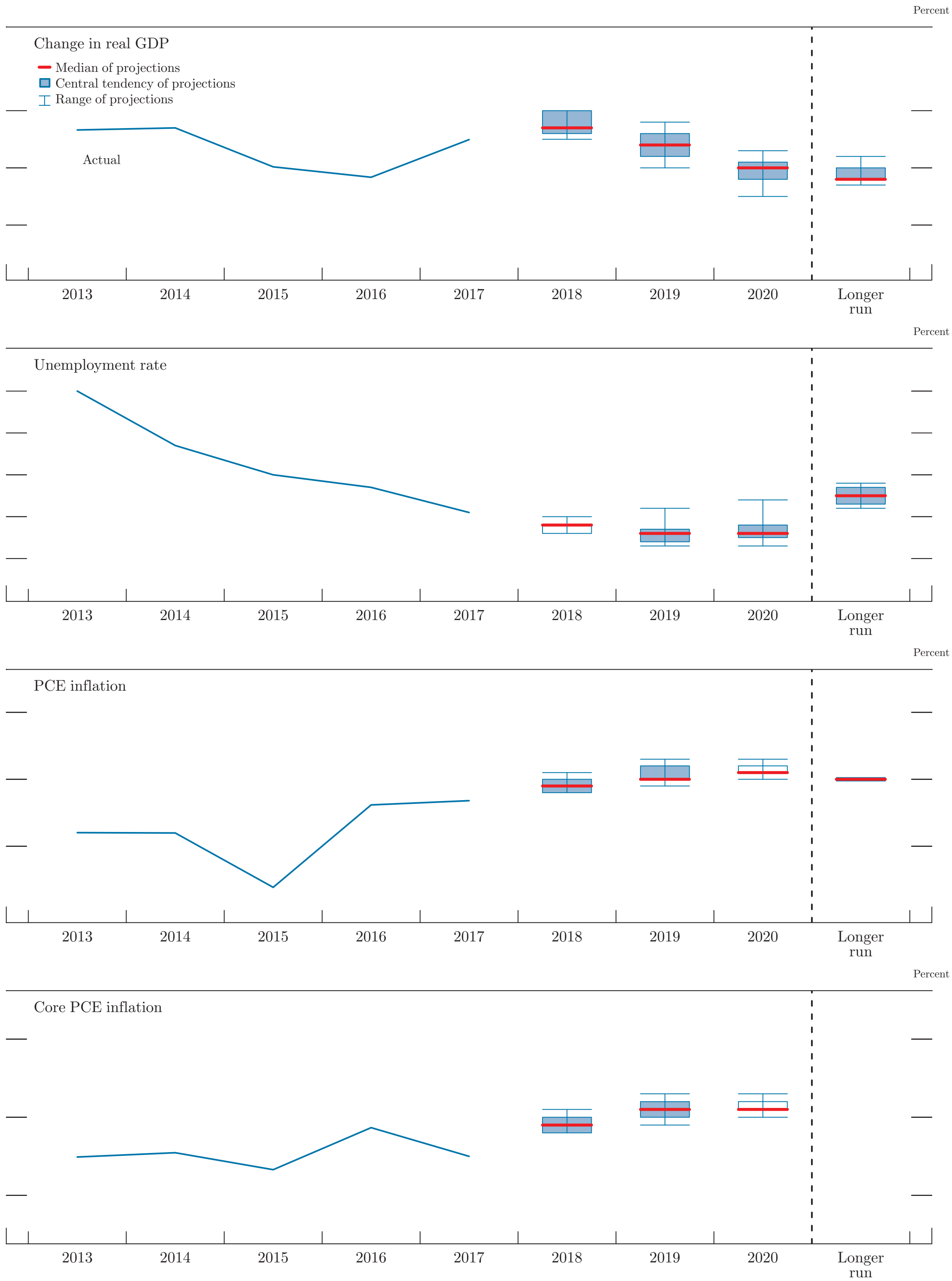
Table 2. March economic projections, 2018–20 and over the longer run (in percent)

Projection	Year	Change in real GDP	Unemployment rate	PCE inflation	Core PCE inflation	Federal funds rate
1	2018	3.0	3.6	1.8	1.8	2.13
2	2018	2.5	3.8	2.0	2.0	2.13
3	2018	2.6	3.6	2.1	1.9	2.13
4	2018	3.0	3.9	1.8	1.9	2.13
5	2018	2.7	3.6	1.9	1.9	2.38
6	2018	2.5	4.0	2.0	1.9	1.63
7	2018	2.7	3.9	1.9	1.9	2.38
8	2018	2.6	3.7	1.9	2.0	2.63
9	2018	2.8	3.7	2.0	2.1	2.38
10	2018	2.5	3.8	2.0	2.0	2.38
11	2018	3.0	3.8	1.8	1.8	1.63
12	2018	3.0	3.6	2.0	2.0	2.38
13	2018	2.6	3.8	1.9	1.8	2.38
14	2018	2.8	3.7	1.9	1.9	2.13
15	2018	2.6	3.8	1.8	1.8	2.13
1	2019	2.4	3.4	1.9	1.9	2.75
2	2019	2.1	3.7	2.2	2.2	2.63
3	2019	2.0	3.6	2.2	2.1	2.88
4	2019	2.7	3.8	2.0	2.1	2.88
5	2019	2.3	3.5	2.0	2.0	3.38
6	2019	2.2	4.2	2.0	2.0	1.63
7	2019	2.4	3.8	2.0	2.0	2.88
8	2019	2.2	3.4	2.1	2.2	3.88
9	2019	2.5	3.5	2.3	2.3	3.13
10	2019	2.3	3.6	2.1	2.1	3.38
11	2019	2.7	3.4	2.0	2.0	2.13
12	2019	2.8	3.3	2.1	2.1	3.13
13	2019	2.6	3.7	2.0	2.0	3.38
14	2019	2.4	3.5	2.0	2.0	2.88
15	2019	2.4	3.6	2.3	2.3	2.88

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

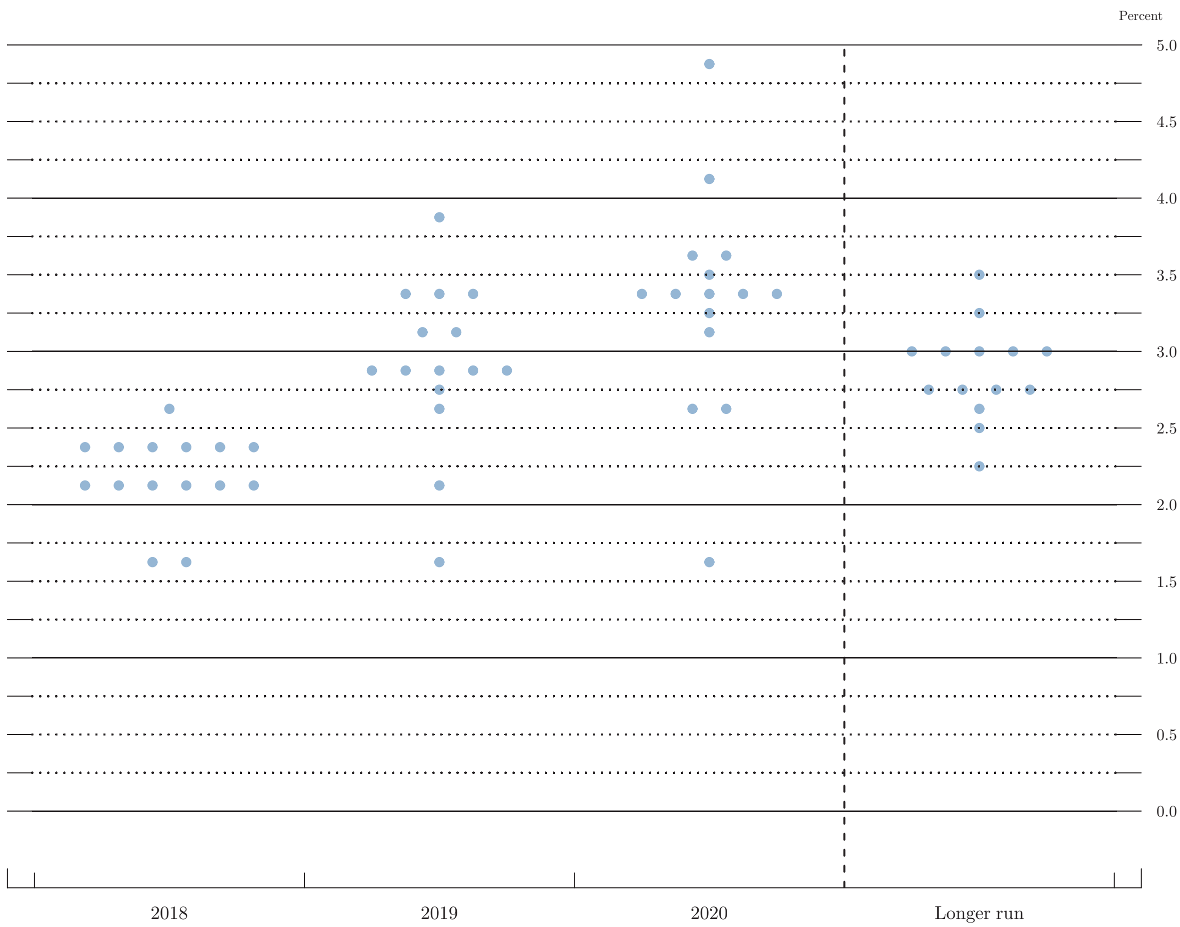
Projection	Year	Change in real GDP	Unemployment rate	PCE inflation	Core PCE inflation	Federal funds rate
1	2020	1.8	3.5	2.1	2.1	3.25
2	2020	1.8	3.9	2.2	2.2	2.63
3	2020	1.7	3.7	2.1	2.1	3.13
4	2020	2.2	3.8	2.1	2.2	3.63
5	2020	2.0	3.5	2.2	2.2	3.50
6	2020	2.0	4.4	2.0	2.0	1.63
7	2020	2.1	3.8	2.1	2.1	3.38
8	2020	1.5	3.5	2.2	2.3	4.88
9	2020	1.8	3.6	2.3	2.3	3.63
10	2020	2.0	3.6	2.1	2.1	4.13
11	2020	2.1	3.4	2.1	2.1	2.63
12	2020	2.3	3.3	2.2	2.2	3.38
13	2020	2.2	3.7	2.0	2.0	3.38
14	2020	1.7	3.6	2.1	2.1	3.38
15	2020	2.0	3.9	2.1	2.1	3.38
1	LR	1.8	4.5	2.0		2.75
2	LR	1.8	4.2	2.0		2.75
3	LR	1.8	4.6	2.0		2.63
4	LR	2.2	4.5	2.0		3.25
5	LR	1.7	4.7	2.0		2.50
6	LR			2.0		
7	LR	2.0	4.5	2.0		3.50
8	LR	1.7	4.7	2.0		2.75
9	LR	1.8	4.3	2.0		3.00
10	LR	1.8	4.8	2.0		3.00
11	LR	1.7	4.2	2.0		2.25
12	LR	1.9	4.4	2.0		3.00
13	LR	2.0	4.5	2.0		3.00
14	LR	1.9	4.3	2.0		2.75
15	LR	2.0	4.7	2.0		3.00

Figure 1. Medians, central tendencies, and ranges of economic projections, 2018–20 and over the longer run



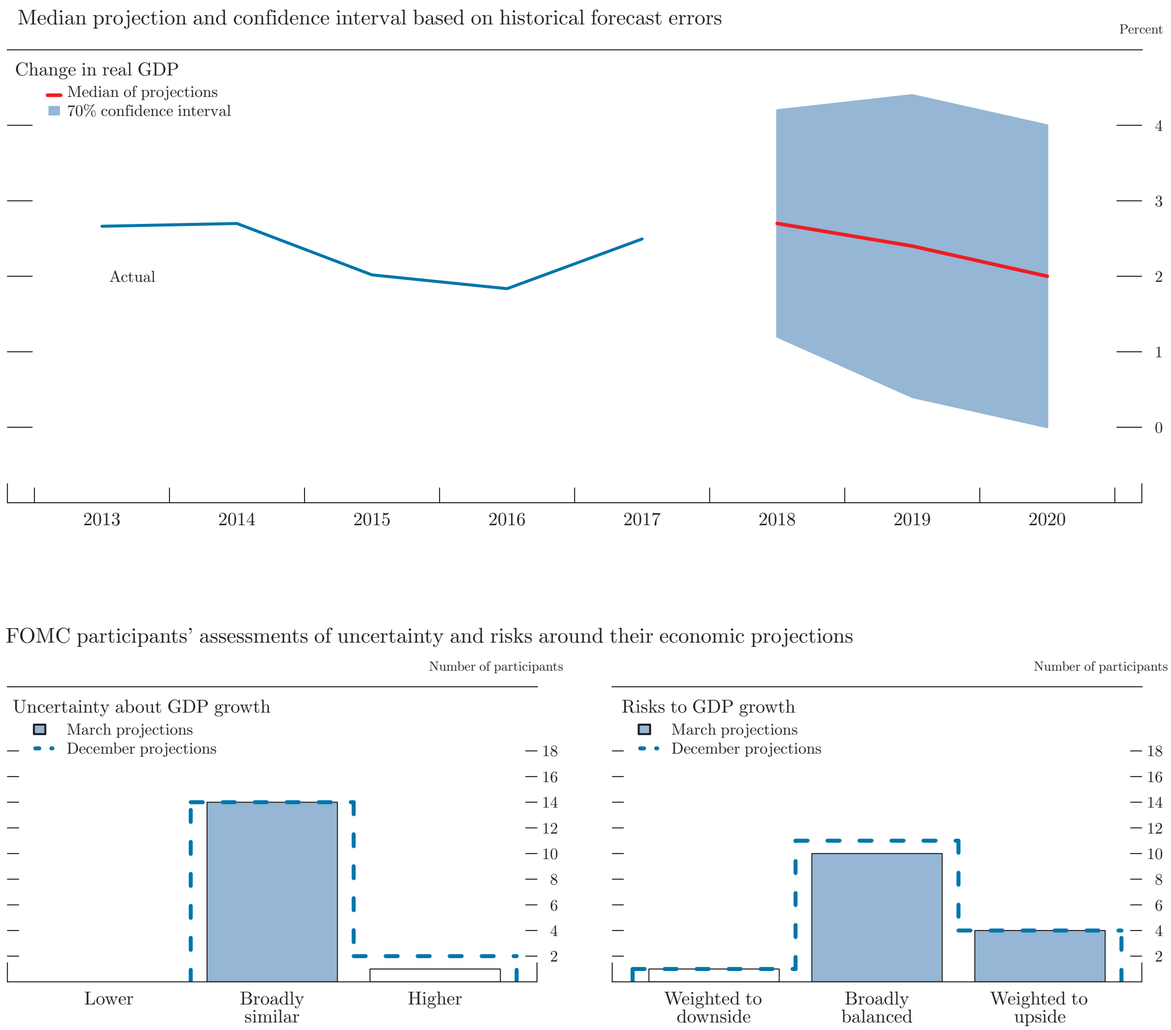
NOTE: Definitions of variables and other explanations are in the notes to table 1. The data for the actual values of the variables are annual.

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



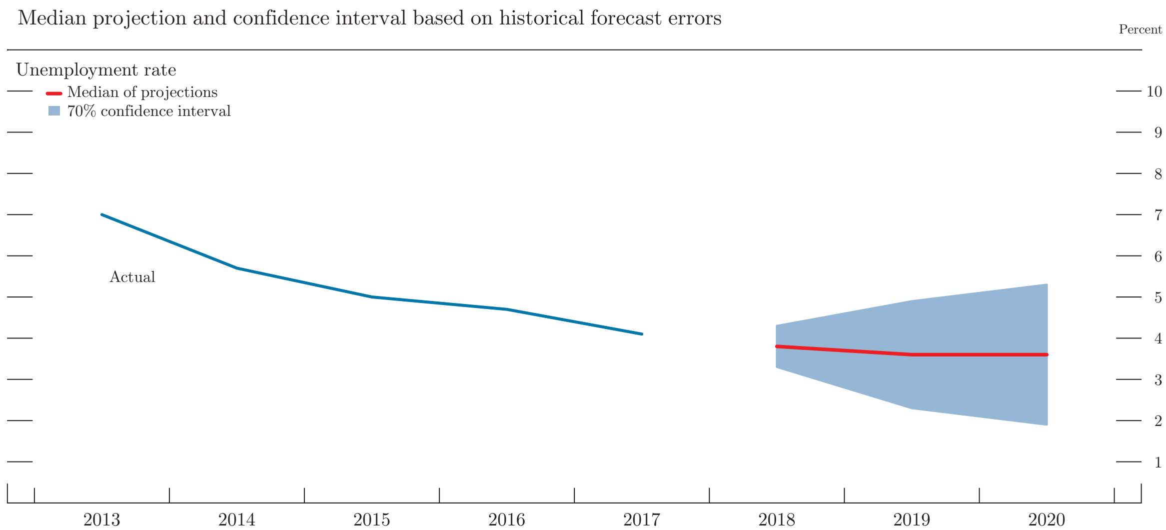
NOTE: Each shaded circle indicates the value (rounded to the nearest 1/8 percentage point) of an individual participant's judgment of the midpoint of the appropriate target range for the federal funds rate or the appropriate target level for the federal funds rate at the end of the specified calendar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

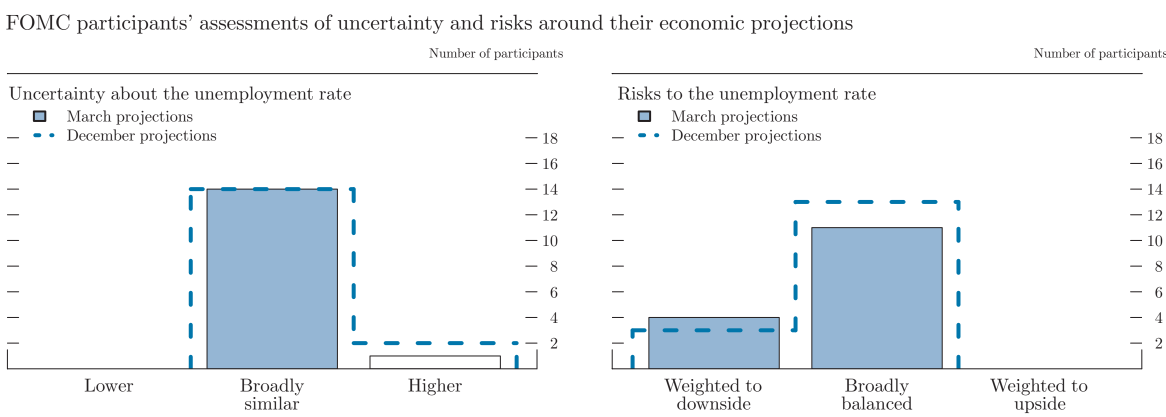
Figure 4.A. Uncertainty and risks in projections of GDP growth



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."

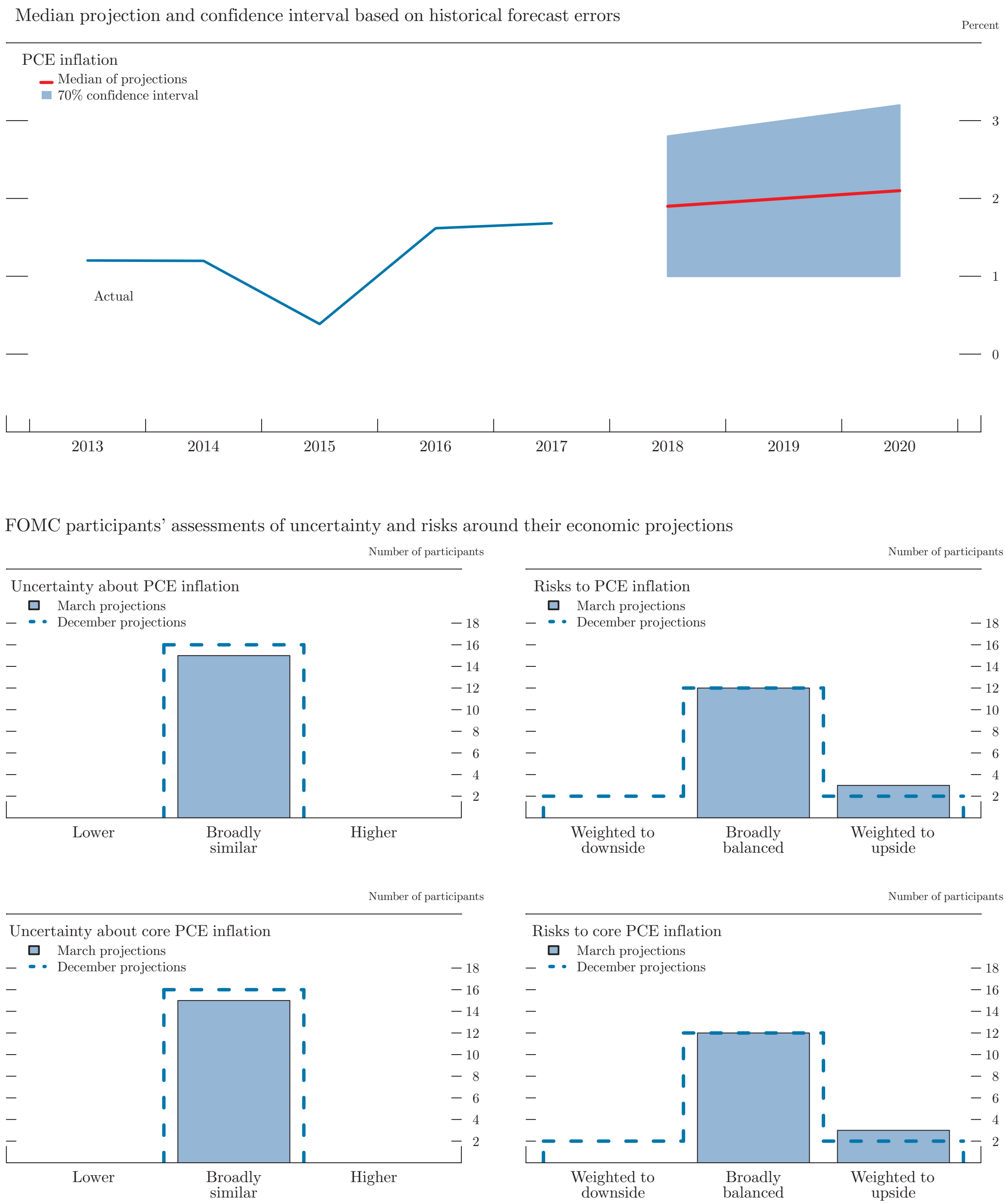
Figure 4.B. Uncertainty and risks in projections of the unemployment rate





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
Change in real GDP	B	B	B	B	B	B	B	B	B	B	B	B	B	B	A
Unemployment rate	B	B	B	B	B	B	B	B	B	B	B	B	B	B	A
PCE Inflation	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Core PCE Inflation	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B

A = Higher B = Broadly similar C = Lower

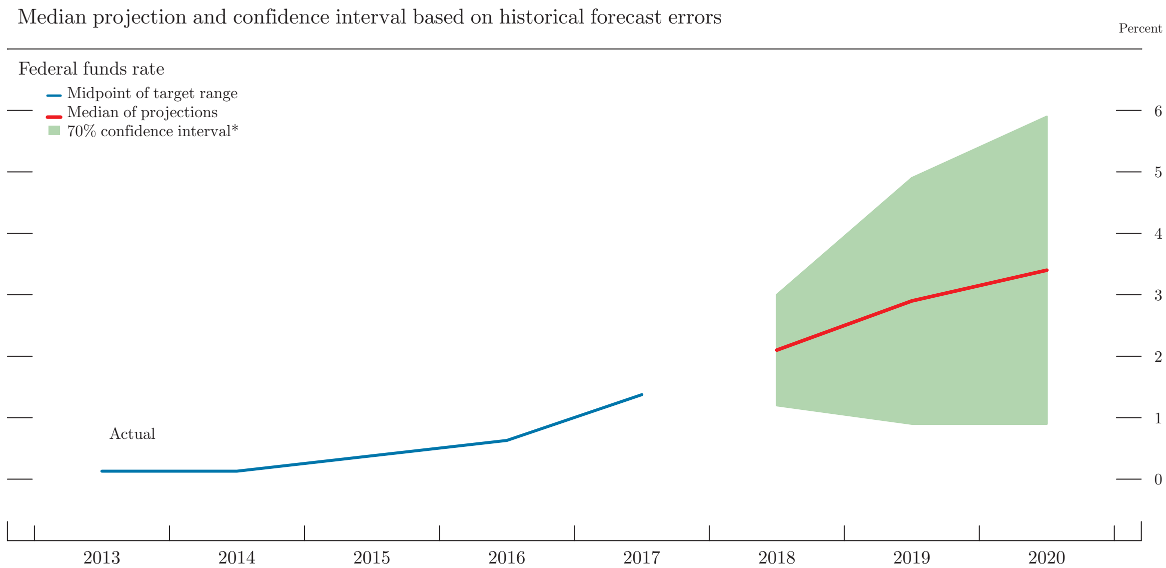
Question 2(b): Please indicate your judgment of the risk weighting around your projections.

Individual responses

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

Respondent 3: We are already below my estimate of the longer-run sustainable unemployment rate. I expect that we will be at or very near our 2-percent inflation objective by the end of this year, though the exact timing is uncertain. Unemployment will remain low, and inflation above target, during 2019 and 2020. It might easily take 3 to 5 years beyond that to converge to a reasonable approximation of full employment and price stability under appropriate policy.

Respondent 4: N/A

Respondent 5: Our dual mandate goals are reached by 2019. However, it will take a couple more years to achieve complete convergence to longer-run levels. The effects from sustained accommodative monetary policy will generate a modest degree of overshooting of inflation and an unemployment rate that remains well below the natural rate for a number of years, before returning back to longer-run levels. Recent data show no indication of a shift in longer-run levels of GDP growth or the unemployment rate.

Respondent 6: Reflecting recent data, we project a temporary and slight undershooting of core inflation for 2018. GDP growth and unemployment are also expected to deviate from a regime characterized by low productivity growth and a low real interest rate on short-term government debt. This regime features GDP growth of 2.0 percent, an unemployment rate of 4.5 percent, and inflation of 2.0 percent. We project that the undershooting of core inflation will end in 2019, the overshooting of GDP growth will end in 2020, and the undershooting of unemployment will end in 2021. Because there are multiple potential medium-term outcomes, we cannot provide a single set of projections for GDP growth and unemployment. Calculating an average of these variables based on multiple outcomes is potentially misleading. We do provide a 2.0 percent longer-run inflation projection that is independent of the regime.

Respondent 7: N/A

Respondent 8: The economy is already operating above full employment, and the medium-term outlook calls for a further decline in the unemployment rate. In order to converge back to full employment, the growth rate of the economy will need to slow below potential for a prolonged period of time. The historical record, however, places a significant probability on a "growth recession" eventually morphing into a full-blown recession. In sum, while a purely model-driven forecast would suggest convergence to the equilibrium unemployment rate from below around 2024-25, the probability that the projected soft landing will not materialize in practice is sizable.

Respondent 9: We still assume the potential GDP growth rate is 1.8 percent. We continue to judge that the longer-run normal rate of unemployment is between 4 and 6 percent, but based on our evaluation of recent developments in the labor market and inflation we now place the mode of that distribution in the lower half of that interval, between 4 and 4.5 percent. Consequently, we lowered our point estimate of the longer-run normal rate of unemployment from 4.6 percent to 4.3 percent.

At this time, we tentatively judge that any supply-side impact from the recently enacted tax legislation will have only a limited effect on potential GDP growth and the longer-run normal rate of unemployment. We will continue to monitor the impact of the legislation on these variables.

Based on our scenario analysis of labor flows and the historical behavior of the unemployment rate in long expansions, we project that the unemployment rate will be significantly below its longer-run normal level through 2020, and probably not return to that level until at least a couple of years into that decade.

We assume that long-term inflation expectations will remain anchored at levels consistent with the FOMC's longer-run objective. Under these conditions and with the projected undershooting of the longer-run normal unemployment rate over the forecast horizon, we expect inflation as measured by the PCE price index to be mildly above the FOMC's longer-run objective in 2019-20, before returning to that level early in the next decade.

Respondent 10: Having essentially achieved our objectives for inflation and unemployment, the current stance of monetary policy will likely cause a further decline of the unemployment rate below its longer-run level. Policy rates will need to adjust gradually over several years to bring unemployment back in line with the longer-run objective and ensure sustainable economic growth with price stability.

Respondent 11: N/A

Respondent 12: Relative to my December submission, I have slightly raised my estimate of GDP growth over the longer run. This change reflects my assessment of the likely economic impact of the Tax Cuts and Jobs Act.

Respondent 13: At this point, convergence is likely in five to six years.

Respondent 14: N/A

Respondent 15: I anticipate that the economy will converge to my longer-run projection within 5 years

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: The changes to the tax code passed in December and the Bipartisan Budget Act (BBA) passed in February add uncertainty to the outlook. Tax cuts will boost consumption and investment and the BBA will boost government spending over the next few years. However, the magnitude and timing of the fiscal impulse and the multiplier and crowding out effects are all uncertain. Similarly the potential for trade barriers to intensify adds uncertainty. All these considerations affect our projections for both inflation and real activity, but not by enough to move us out of the "broadly similar" uncertainty box.

Respondent 2: N/A

Respondent 3: Uncertainty about the appropriate path for the federal funds rate over the next few years is high. The adverse economic consequences of any policy errors will most likely be felt in 2020. Over 2018 and most of 2019, however, economic uncertainty is about average.

Respondent 4: N/A

Respondent 5: 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 6: N/A

Respondent 7: N/A

Respondent 8: While the forecasting exercise under current conditions may not be as uncertain as during the Great Recession, it is worth noting that spells with an economy significantly above full employment for a considerable amount of time – the kind of scenario implied by our forecast – have been rare in the post-WWII period. Therefore, there is uncertainty about the ability of our forecasting models to capture adequately some of the relevant features associated with the current state of the economy.

Respondent 9: Ours is a quantitative judgment based on the widths of the probability intervals from the FRBNY forecast distributions for real GDP growth and core PCE inflation. The widths of these intervals are not substantially different from those in our December SEP submission. Indications that the U.S. economy is progressing roughly along the lines of our earlier outlook and relatively low financial market volatility (even with the rise since the January FOMC meeting) suggest some reduction in uncertainty. However, the fiscal stimulus provided by the tax legislation and the budget agreement at a time when the economy may be beyond full employment points to some greater uncertainty about its ultimate economic effects on both real activity and inflation. In addition, the recent developments regarding tariff measures and other trade policies prompt some greater uncertainty around the economic outlook. Overall, we see these developments as approximately offsetting and thus the probability intervals for real activity and core PCE inflation forecasts remain broadly in line with the SEP standard–for inflation, this assessment takes into account the differences between forecast errors for overall consumer inflation and core PCE inflation.

Respondent 10: N/A

Respondent 11: 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.

Respondent 12: N/A

Respondent 13: N/A

Respondent 14: N/A

Respondent 15: Uncertainty surrounding output growth and unemployment remains elevated by heightened uncertainty about the effects of fiscal stimulus on an economy that is near full employment. Trade policy and the potential for significant repercussions from our trading partners is a source of increased uncertainty as well. The impact on inflation uncertainty is small given how flat the Phillips curve seems to be.

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: We see the risks to the outlook for both growth and inflation as broadly balanced. Overall, we see the odds as roughly equal that fiscal policy will result in a bit more or a bit less stimulus than we built into our projection. That said, our forecast does incorporate a fairly large fiscal boost in 2018, and we see some risk that more of this will occur in 2019 than we have assumed. The likelihood of stronger world-wide demand appears balanced against the potential for some future weakness, most notably if trade barriers intensify. Recent data suggest inflation is on a firmer path toward our objective than we thought in December, and could reflect more underlying inflationary pressures than we have built into our forecast. Also, stronger fiscal policy effects on growth could put more upward pressure on inflation than we have assumed. However, continued low levels of inflation compensation in financial markets and some surveys suggest low long run inflation expectations could hold back inflation more than we assume in our baseline forecast.

Respondent 2: N/A

Respondent 3: Fiscal-policy changes are unlikely to result in sustained material improvement in GDP growth, but will leave us with a high (and rising) ratio of debt to GDP at a time when the U.S. government is already highly leveraged. The changes will considerably complicate the conduct of monetary policy, both in the near term–when monetary policy will have to adjust to a significant, temporary boost to demand–and over the longer term–when elevated leverage will leave the fiscal authorities ill-positioned to help Fed policymakers offset future adverse demand shocks. So, near-term risks to real activity may be weighted somewhat to the upside and longer-term risks to the downside.

Respondent 4: N/A

Respondent 5: Risks to economic activity appear broadly balanced. There remains uncertainty about the effects of recent tax and budget changes on the economic outlook. In addition, the possibility of further changes to trade and immigration policies adds additional risk around the outlook

Respondent 6: With respect to GDP growth, the current productivity regime is low. A higher productivity growth regime is possible, but we see no compelling reason to predict a switch at this time. Recent increases in productivity growth still leave productivity in the low productivity regime. However, as changes in tax and regulatory policy impact the economy, we foresee the possibility of more rapid GDP growth. Thus, we see an upside risk for GDP growth. On the other hand, we do see U.S. trade policy as generating some downside risk for growth.

Concerning unemployment, the current rate is at the low end for an economic expansion. If a recession were to occur, the unemployment rate would rise substantially. We have no compelling reason to predict a recession during the forecast horizon. U.S. trade policy also 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 growth surprises on the upside. Federal stimulus associated with recent tax and spending changes might produce such a surprise. Overall, we see the risks as broadly balanced.

For core PCE inflation, we place negligible weight on the prospects of Phillips Curve effects. There is, however, a risk that Phillips Curve effects reassert themselves and inflation moves higher as the unemployment rate falls. It is also possible that inflation expectations drift higher and become unanchored. In addition, federal stimulus associated with recent tax and spending changes could push prices higher. Trade policy changes might also put some upward pressure on import prices. Thus, we see the risks on this variable to be weighted to the upside.

For PCE inflation, the risks are the same as for core PCE inflation. In addition, this variable depends on the behavior of energy prices and an upward price shock is a possibility. Overall, we see the risks as weighted to the upside.

Respondent 7: To be clear, the downside weighting means that there is some additional likelihood that the unemployment rate will decline more rapidly than in my projection, due to the possibility that productivity growth is weaker than assumed.

Respondent 8: Over the period 2018-2020, we view the risks around our projections as broadly balanced. At a longer horizon, however, our baseline forecast delivers a soft landing from a very low level of the unemployment rate to a higher level consistent with full employment. As already mentioned, these smooth transitions are rare in practice. We would therefore judge the risks to our projection of real activity growth beyond 2020 as being weighted to the downside.

Respondent 9: Ours is a quantitative judgment based on the difference between the central projection and the expected value of the New York Fed forecast distribution. We see two-sided risks associated with the tax legislation and the budget agreement. On the one hand they could have more positive supply-side and/or demand-side effects than we currently anticipate; on the other, they can have significant regional and sectoral distributional effects and generate frictions in capital stock adjustment and labor mobility that could lead to adverse supply-side and demand-side effects. Similarly, the combined effects of other changes in U.S. regulatory and trade policies on the real activity risks appear to be two-sided. Therefore, as in December, we judge these risks to be roughly balanced over the forecast horizon.

We see now inflation risks tilted to the upside throughout the forecast horizon. Longer-term inflation compensation, the Michigan survey long-run inflation expectations, and our SCE 3-year inflation expectations remain at low levels on a historical basis. Inflation indicators were firm in January, while core CPI inflation in February was about as expected, consistent with transitory factors beginning to fade, as implied in our central projection. Measures of underlying inflation have provided varying signals since the December FOMC meeting, with some rising modestly, some being little changed, and a few falling slightly. Nevertheless, global disinflationary forces appear to have subsided while financial conditions have only modestly tightened from very easy levels, indicating some upside risks. In addition, given our outlook for further tightening of the labor market, the risks of overheating have increased, contributing to the upside tilt.

Respondent 10: N/A

Respondent 11: Risks are roughly balanced. One the one hand, the effective lower bound limits monetary policy's ability to respond to negative shocks. On the other, the recent changes in fiscal policy present increased upside risks to activity.

Respondent 12: N/A

Respondent 13: I continue to view the risks around my forecast as broadly balanced, conditional on a monetary policy path that is slightly steeper than the median path in the December SEPs.

The magnitude and timing of the effect of fiscal policy (tax cuts and increased federal spending in the Bipartisan Budget Act) are uncertain and pose risks to my forecast. I am estimating that the combined effect will provide an additional 0.5 percentage point to Q4/Q4 GDP growth in 2018-2020, but there is an upside risk that the effect is larger. Beyond the forecast horizon, these fiscal policy actions pose some downside risk to the outlook because higher fiscal deficits could necessitate reduced fiscal spending, an increase in taxes, and higher longer-term interest rates.

Even without the fiscal policy actions, the underlying fundamentals of the domestic economy are healthy and the outlook for foreign economies continues to improve. Although I expect some gradual reduction in the level of accommodation, I believe monetary policy will remain accommodative and supportive of growth in many countries.

Recent readings suggest there is still some cyclical improvement in labor force participation even though there is a downward secular trend in participation. This development and the fact that price and wage inflation have remained moderate even as labor markets continue to tighten have led me to reduce my estimate of the long-run unemployment rate to 4.5 percent from 4.75 percent. But there is considerable uncertainty around this estimate and I see both upside and downside risks to my estimate.

I continue to see inflation risks as roughly balanced. Incoming data suggest that inflation is firming. My modal forecast is that inflation will gradually return to our goal of 2 percent over time, with this goal being achieved on a sustained basis in the first half of 2019.

If the dynamics of inflation have fundamentally changed, then I may be underestimating the persistence of low inflation outcomes. But if labor markets tighten more than I expect, or if nonlinear Phillips curve dynamics begin to kick in, inflation could move higher than I anticipate, especially if the withdrawal of monetary accommodation is slower than I've assumed. Even absent a change in the slope of the Phillips curve, a slower withdrawal of monetary accommodation than I've assumed poses an upside risk to my inflation forecast.

After appreciating between mid-2014 through 2016, the dollar has depreciated over the past year. I assume that this downward trend will reverse given the strength in the U.S. economy and prospects for tighter monetary policy. However, a continuation of the depreciation poses an upside risk to my inflation forecast.

The recently announced tariffs on steel and aluminum imports have not changed my outlook. Although some businesses will gain and others will lose, the effect on the macroeconomy is likely to be small provided the tariffs do not set o increasing rounds of retaliatory tariffs, which would entail downside risks to growth, upside risks to inflation, and downside risks to longer-run productivity by disrupting the efficient allocation of resources.

Risks to financial stability from very low interest rates appear to be contained so far. There does not seem to be excessive leverage and banks are holding relatively high levels of capital and liquid assets. However, equity prices still appear to be somewhat high relative to earnings even accounting for the low level of interest rates, reduced tax rates, and the tempering of stock price increases this year. Commercial real estate valuations also continue to be lofty. These signs, the relatively low level of interest rates, and the outlook for continued strength in the economy suggest that financial stability risks could rise should we fail to remove monetary policy accommodation at an appropriate pace. The sharp increase in volatility since the January FOMC meeting has not changed my outlook, but it is a reminder that we need to keep attuned to leveraged trading strategies that can lead to sharp moves in prices and liquidity.

Respondent 14: A widening trade war is a key downside risk to the economy through two channels. First, the associated adverse shock to global confidence could set in motion the unwinding of the virtuous cycle of synchronous global growth we have benefited from over the past year or so. A confidence-induced reduction in global GDP growth and the knock-on effects to US growth would tend to boost the unemployment rate. Second, historical precedent suggests a broad trade war could lead to a contraction in global trade that could adversely affect the longer-run productive capacity of the US economy. This longer-run channel is more likely to affect output growth (through productivity) than the unemployment rate.

Respondent 15: I anticipate some stimulus from the tax reform and the BBA beginning in 2018 that will boost demand, raise output growth, and lower the unemployment rate further. However, my uncertainty about the magnitude and timing of the effects of fiscal stimulus remains high.

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: We assume three increases in the funds rate in 2018, with policy then moving up to our long-run neutral value of 2.75 percent in 2019 and then to 3.25 percent in 2020. We assume balance sheet normalization proceeds according to the announced plan.

We believe this policy package represents a balanced approach to achieving our dual mandate objectives. Inflation appears to be more firmly on a trajectory towards our symmetric 2 percent objective. Yet with inflation expectations remaining relatively low and a non-accelerationist Phillips curve, we believe policy normalization should proceed at a modest pace in order to solidify inflationary expectations symmetrically around 2 percent. This is a pre-requisite for achieving our inflation objective over the longer term. Accordingly we have just three rate increases in 2018. Furthermore, we think it is appropriate to delay the first of these rate increases until June. Doing so would allow us to confirm that inflation has indeed moved up perceptibly on a year-over-year basis. Waiting for this confirmation would send an important signal to the public of our firm commitment to a symmetric inflation target. The slow pace of rate increases thereafter – which occur against the backdrop of an unemployment rate more than a percentage point below its natural rate – should bolster inflation expectations further. Resource pressure and firming inflation expectations should bring us close to 2 percent inflation by late 2019, at which time we assume the funds rate will be at its long-run neutral level. This configuration would likely generate a small overshooting of our 2 percent inflation objective in 2020, which would warrant modest increases in the federal funds rate above its long-run neutral level. Beyond 2020 we see rates leveling o for a time, which should lead to a further modest overshooting of our inflation target, thereby helping to cement inflation expectations symmetrically around 2 percent. Of course data dependent policy would react more aggressively if inflation expectations firmed more robustly than we anticipate.

Respondent 2: My projection for the federal funds rate is informed by a simple policy rule with a gradual rise in the short-run equilibrium funds rate.

Respondent 3: As the economy's momentum carries it further past full employment and eventually past 2-percent inflation, it will be appropriate to transition to a mildly restrictive monetary policy stance. A mildly restrictive policy maintained over several years will give us our best chance for moving the economy along a smooth glide path back to full employment and price stability. Achieving and maintaining a mildly restrictive monetary policy in the face of shifting fiscal-policy currents will prove challenging, and my confidence that the funds-rate path I have specified will prove to be appropriate is lower than usual. At issue is whether we can slow the economy to a sustainable rate of growth without inverting the yield curve. I think that we can, but the margin for error is small.

Risks to my 2018 funds-rate projection are tilted to the upside.

Respondent 4: N/A

Respondent 5: The labor market has exceeded full employment according to various measures and I expect it to continue to strengthen over the next couple of years with considerable impetus from fiscal policy. I expect the unemployment rate to fall below 4 percent this year, and continue to decline into 2019 before eventually returning to its natural rate of 4.7 percent. I anticipate that strong economic conditions will gradually push inflation up over the next few years, causing it to modestly overshoot our 2 percent objective in 2019 and 2020.

My assessment of appropriate policy is generally informed by looking at simple rules that adjust for the zero lower bound and assume a low natural rate of interest of $1/2$ percent.

My fed funds 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 moderately overshoots its long-run level in 2019 and 2020 as policy acts to unwind the overshooting in inflation and labor market conditions.

Respondent 6: A target of 1.63 percent for the forecast horizon is consistent with our assessment of current economic conditions and the convergence of inflation, GDP growth, and unemployment to their values in a regime characterized by low productivity growth and a low real interest rate on short-term government debt. In the event of a regime change, such as a shift from low productivity growth to high productivity growth, our target federal funds rate will change.

Respondent 7: My projection assumes that labor productivity will grow more rapidly than we have observed recently. This assumption contributes to my projection that the longer-run interest rate is 3.5 percent.

Respondent 8: Optimal control policy simulations prescribe a higher path for the federal funds rate than the one penciled in here. More aggressive policy tightening, however, could increase the probability of a recession in ways that our linear models are unable to capture. Our projected path for the federal funds rate tries to balance this concern against the concern that running an economy above full employment for a prolonged period of time might create distortions that, too, increase the probability of a future downturn.

Respondent 9: The principal factors behind our assessment of the appropriate path for monetary policy are the current state of the economy, our central economic outlook, and our balance of risks around the outlook. The steepness of the policy path also depends on how overall financial conditions respond to our policy actions.

The real growth outlook has improved noticeably, financial conditions have modestly tightened, the near-term inflation outlook is moving up, and the balance of risks for inflation tilts toward the upside. Consequently, our projection of the appropriate policy path is a bit steeper relative to the December SEP submission: the target FFR ranges at the end of 2018, 2019 and 2020 are 2 $1/4$ – 2 $1/2$ percent, 3 - 3 $1/4$ percent and 3 $1/2$ - 3 $3/4$, respectively. We judge the additional tightening of the policy stance relative to what we projected in December as appropriate to ensure achievement of the FOMC's objectives over the medium term following the projected small inflation overshoot and the unemployment undershoot. Our policy path remains fairly shallow and is consistent with the gradual rising path of the natural interest rate as projected by the New York Fed sta DSGE model.

Our estimate of the longer-run equilibrium real short-term interest rate remains in the range of 0 – 2 percent, consistent with estimates and forecasts from a variety of models. Adding the objective for inflation (2 percent) gives our estimated range for the nominal equilibrium rate as 2 – 4 percent. Our modal projection is now in the center of this range, taking into account still fairly subdued trend productivity growth, higher longer-term sovereign yields, a diminishing global "saving glut," and demographic factors. Consequently, as reported in the response to question 3(a) we have raised our point estimate of the nominal equilibrium rate to 3.0 percent. Our appropriate policy path thus slightly overshoots the longer-run FFR.

Respondent 10: My judgment regarding the appropriate path of the federal funds rate is predicated on promoting sustainable economic growth and price stability. The economy has reached full capacity and we have essentially achieved price stability, yet I view the appropriate level of the federal funds rate to be below my estimate of its longer-run level in 2018. That the federal funds rate is still low despite the economy's return to full employment and price stability reflects the Committee's past decisions, and I view a gradual path of the funds rate as important to promote economic and financial stability. Balancing a gradual path of the federal funds rate with accommodative monetary policy, stronger growth, lower unemployment, and higher inflation, I believe the funds rate will need to rise above its longer-run level in 2019 and beyond.

Respondent 11: Although inflation appears to be firming, it has been running below our 2 percent target for quite some time. While the labor market continues to strengthen, it is not clear that we have reached maximum employment as the labor force participation rate and employment-population ratio for prime age persons remain well below their pre-recession levels, and wage growth remains subdued. Given the persistent undershooting of our inflation target, I believe that appropriate monetary policy implies a very gradual path for the federal funds rate.

Respondent 12: Relative to my December submission, my projection now incorporates a slightly faster pace of tightening in 2018. This change is meant to help forestall a persistent overshoot of our inflation objective. It reflects primarily my expectation that GDP will grow faster and the unemployment rate will decline more over the next several years than I had previously anticipated.

Respondent 13: I continue to view a gradual upward path for the funds rate as appropriate; the slope of the path will depend on the evolution of the economy, medium run outlook, and the risks around the outlook, in particular, for inflation and labor markets.

Over the forecast horizon, I project growth above trend and the unemployment rate below my estimate of its longer-run level, which I have lowered by 0.25 percentage point to 4.5 percent in this submission. The subdued rate of wage growth during the expansion partly reflects sluggish productivity growth. Labor markets are tight, but subdued wage growth and the recent increases in labor force participation suggest they aren't quite as tight as I've been assuming. I anticipate that further tightening in the labor market will translate into some firming in labor compensation measures, in line with anecdotal reports of increasing wage pressures across a range of skill groups. However, if productivity growth remains low, wage gains will likely be slower than in past expansions.

Incoming data indicate some firming in inflation. In the near term, the year-over-year inflation measures are likely to move up when last March's sharp decline in the price of cell phone service plans falls out of the numbers. This increase is not likely to be sustained, but my modal projection is that inflation will gradually rise to our goal over the forecast horizon.

Given that monetary policy affects the economy with a lag, I believe appropriate monetary policy should reflect both actual and projected progress toward the Committee's goals. Based on the outlook and risks, I believe it will be appropriate for the FOMC to move rates up over the course of the forecast horizon. This strategy would seem to prudently balance the risk of stronger-than-expected growth leading to overheating in labor markets, which would necessitate sharper, and potentially destabilizing, rate increases in the future versus the risk that inflation will continue to undershoot our goal, causing an unanchoring of inflation expectations and possible loss of Fed credibility. With above-trend growth, labor markets beyond full employment, and inflation moving back to 2 percent over the forecast horizon, I believe it will be appropriate for the funds rate to rise somewhat above my longer-run estimate of 3 percent in order to promote our longer-run goals of maximum employment and price stability.

Respondent 14: Under current and projected conditions, a gradual path of increases in the federal funds rate is appropriate. It is likely that underlying trend inflation is currently running somewhat below the FOMC's 2 percent target. In this situation, raising the federal funds rate only gradually despite an unemployment rate that is below its longer-run normal rate and inflation that is moving closer to target will help signal to the public that the FOMC is serious about achieving its inflation objective and help to reanchor underlying trend inflation at 2 percent. Consistent with the symmetry of the target, inflation in my projection slightly exceeds the FOMC's target in 2020.

Respondent 15: My projection for the appropriate path of the federal funds rate is higher over the next two years compared to December. My forecast for output growth and inflation are higher due to anticipated effects of additional fiscal stimulus. While I remain concerned about the realization of generally soft inflation over the last few quarters, the incoming data suggest that a firming of inflation is somewhat more likely to occur over the forecast horizon.

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: The fundamentals underlying private domestic final demand are strong. Despite recent weakness in consumer spending indicators, we see accommodative monetary policy, a robust labor market, and improved balance sheets supporting strong gains in consumer spending and investment going forward. Stronger foreign demand is another plus for the outlook. We also expect growth in 2018 will be boosted close to 1 percent by tax cuts and higher government spending. The gradual removal of monetary accommodation and a smaller impulse from fiscal policy are projected to bring GDP growth down in 2019 and 2020. (We assume the fiscal impulse is only a tenth or two in 2020.) On the supply side, we assume the tax bill will boost potential growth a bit over the forecast period. In sum, we now project growth will run more than a full percentage point above potential in 2018, about a 1/2 percentage point above in 2019, and then slow to a bit below potential in 2020.

We think the natural rate of unemployment currently is 4.6 percent and that it will trend down to 4.5 percent by 2020. So at 4.1 percent, the current unemployment rate is 50 basis points below our estimate of the natural rate. We expect the unemployment rate to move down further, reaching 3.4 percent in 2019 and rising a little in 2020, leaving a 1.0 percentage point gap from the natural rate we expect to prevail at that time.

We infer from the relatively low readings on key measures of inflation expectations that the persistent component in underlying inflation is currently below 2 percent. But we are projecting various factors will help boost this trend closer to our inflation target. With unemployment forecast to undershoot the natural rate substantially, resource pressures should provide a notable lift to inflation going forward. That said, a non-accelerationist Phillips curve limits the upside risk to inflation even with the unemployment rate near 3-1/2 percent. Indeed to achieve our inflation objective we also rely on our assumed shallow path for policy normalization and a strongly communicated commitment to a symmetric 2 percent inflation target solidifying inflation expectations. All told, we see inflation reaching 1.8 percent this year, 1.9 percent in 2019, and modestly overshooting our objective in 2020.

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

Respondent 2: My outlook consists of above trend growth for the next two years, before converging to trend in 2020. A moderate overshoot of potential is driven by recent changes to the tax code and the recently enacted Bipartisan Budget Act (BBA) that increases federal discretionary spending significantly. The change in the tax code accelerates capital investment plans, pulling some investment spending forward into the latter half of this year and 2019. However, it is my judgment that the tax reform will only lead to modest changes in output growth.

The risks to my growth outlook are weighted to the upside. Recently enacted fiscal measures could have a much more transformative effect on growth that I currently expect. Although I do recognize that there is some downside risk due to uncertainty over future trade policy and reaction from our primary trading partners.

Consistent with some of the stronger readings in recent months and given the absence of resource slack in my projection, I see inflation converging to target by the end of this year.

The risks to my inflation outlook are tilted to the upside. I see the potential for growth to overshoot my projection, which would put upward pressure on inflation. And, while recent history suggests that the response of inflation to resource slack is somewhat muted, it may be more pronounced at high rates of resource utilization.

Respondent 3: My projections assume that restrictions on international trade turn out, in practice, to have narrow application, and do not lead to a destructive cycle of retaliation and counter-retaliation.

At the firm level, pricing power is being increasingly challenged and profit margins are under pressure. Companies are seeking to defend margins by investing in technology that allows them to replace people and improve productivity. They are also, increasingly, looking to merger activity as a way to lower costs and increase scale. Nevertheless, with the labor market tight and still tightening, cyclical inflationary forces are building. We should see confirmation of those building pressures in coming inflation reports, and I expect 12-month trimmed-mean inflation to reach 2.0 percent by the end of 2018.

The more immediate danger is the economic excesses and imbalances that can develop when decision makers come to believe that low interest rates and above-trend growth can be sustained. Unrealistic expectations lead to unwise commitments–commitments that have the potential to produce out-sized responses when interest rates normalize, growth moderates, and imbalances must be unwound. While real imbalances are not yet evident, they have the potential to develop if we do not continue to remove policy accommodation.

Financial imbalances are another threat. The fiscal authorities have put the U.S. government on a track toward high and rising leverage at a point in the business cycle when we might have expected a move in the opposite direction. With asset valuations still high, we need to closely guard against a possible build-up of private-sector leverage, too, and be alert to other financial strategies that depend on strong growth and low interest rates.

Our "Statement on Longer-Run Goals and Monetary Policy Strategy" recognizes that realized inflation is not an adequate guide to policy by itself: It calls for us to look at the size and likely persistence of full-employment overshoot in addition to the size and likely persistence of inflation undershoot. The unemployment rate cannot stay below the natural rate indefinitely, and a large full-employment overshoot necessarily implies either a very sharp or a very persistent slowing of output and employment growth at some point in the future–a slowing that will leave the economy vulnerable to adverse shocks and policy mistakes. Our best chance of achieving and sustaining price stability is to extend the expansion of the US economy, and our best chance for extending the expansion is to moderate it, sooner rather than later.

Respondent 4: I believe that the economy has considerable momentum, helped along by expansionary fiscal policy. Strong growth will push down the unemployment rate, but by a fairly modest amount as workers are drawn into the workforce increasing labor force participation. 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: The economy continues to expand at a solid pace relative to trend, which has pushed the unemployment rate lower. Since the December SEP, I have factored in a sizable amount of fiscal stimulus to the economic outlook. Going forward, ongoing strength in households disposable income coupled with past gains in household wealth should support continued consumption growth. The outlook for fixed business investment also appears strong given the recent tax changes and budget legislation. However, there is uncertainty regarding the size and timing of these effects.

In this environment, I expect the economic expansion to proceed at a pace that is well above potential. Output and unemployment gaps were closed in 2016. With considerable fiscal stimulus and some monetary accommodation still in place, I expect these gaps to overshoot for the next few years, leading to a gradual pickup in inflation over the next few years. I continue to expect inflation to reach our 2 percent target in 2019, and to overshoot slightly in 2020. Normalization of monetary policy and a tightening of fiscal policy will help bring inflation, growth, and unemployment back to their long-run sustainable levels by the following years.

Respondent 6: Our forecast continues to use a regime-based conception of outcomes for the U.S. 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 an exit from the current regime over the forecast horizon. We are, of course, paying close attention to many factors that might precipitate a regime change, such as a change in tax policy that 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 the previously mentioned higher productivity growth, a higher real return to short-term government debt, or recession. If the economy transitions to any of these states, all variables may be affected and, in particular, the optimal regime-dependent policy may require adjustment. However, predicting when these transitions may occur is very challenging, so we forecast that the economy will remain in the current regime over the forecast horizon.

Respondent 7: In conversations with senior business executives I have heard very optimistic remarks on the broad economic outlook and on the outlook for their own firms. I believe that this optimism will support above-trend GDP growth this year and next. In addition, expansive fiscal policy will also boost growth. While the unemployment rate falls below its long-run level in my projection, I do not believe that inflation will spike much. Inflation expectations appear to be well anchored. Also, factors such as improved transparency of pricing, offshoring of production, and competition from foreign sellers will make it difficult for domestic firms to raise prices significantly.

Respondent 8: After solid advances in 2017:H2, activity in the first quarter of 2018 appears to be growing at a more modest pace. Fundamentals for spending, however, remain very favorable and we expect growth this year to outstrip potential by almost a full percentage point. Several factors contribute to this outlook. Gains in payrolls remain well above trend, households' net worth is high relative to income, monetary policy is still accommodative, and fiscal policy actions are highly supportive of growth in the near and medium term.

Relative to the December forecast, our fiscal policy assumptions have been updated to reflect the enactment of the Tax Cuts Jobs Act and of the Bipartisan Budget Act. Overall, these fiscal measures are expected to provide more support to GDP growth than what we were envisioning in December. As a result, we now expect the economy to continue to grow faster than potential throughout 2019, despite a tightening of monetary policy. The effects of monetary policy become more apparent in 2020, when the pace of growth in economic activity decelerates below potential and the unemployment rate reverses its course, rising marginally relative to 2019.

While the fiscal stimulus contributes importantly to the economy's underlying momentum, it is not the only driver. Financial conditions remain favorable, with high equity valuations, steady house price appreciation, and interest rates that are still low by historical standards. The two most recent employment reports have shown remarkable strength in hiring, with cyclical improvements in labor force participation. All of these factors provide solid underpinnings for household expenditures, and should give firms incentives to increase capacity. In addition, foreign economies appear to be on a more solid footing, and the restraint to foreign demand from a dollar appreciation forecast has yet to materialize. We expect the unemployment rate to drop this year to 3.7 percent, and to 3.4 percent by the end of 2019. This level is roughly 1 1/4 percentage point below our assessment of the equilibrium unemployment rate, which stands at 4.7 percent. With the unemployment rate projected to stay below its equilibrium level over the forecast horizon, we expect inflation to increase modestly above 2 percent.

Given the economy's momentum, monetary policy needs to assume a tightening stance to raise the unemployment rate back to a level consistent with full employment. The current forecast is conditioned on increases in the federal funds rate that cumulate to 350 bp by the end of 2020. Almost 40 percent of the projected increase is necessary to bring monetary policy back to a neutral stance. While the expected path for the federal funds rate is much higher than markets' expectations, by historical standards it represents a cautious pace of policy tightening given that the unemployment rate is already below its estimated equilibrium level. Such an approach tries to strike a balance between the financial stability risks associated with an even more gradual increase in rates, and the risk that faster policy tightening may increase the probability of the economy falling into a recession. It is nevertheless important to recognize that the past does not provide much guidance in terms of how to conduct policy so as to achieve a soft landing when the economy is beyond full employment.

We view the risks around the GDP growth outlook as roughly balanced. We take a fairly conservative view of the effect of the Tax Cuts and Jobs Act on GDP growth, and the Tealbook baseline outlook highlights the risk that the tax cuts will stimulate activity by more than what we are currently expecting. At the same time, a prolonged period of monetary policy tightening may weaken real activity by more than we think. For example, in our forecast the projected increase in interest rates elicits only a small negative response in stock market valuations. With valuations already stretched, a more severe reaction with a larger spillover effect on the real economy is a relevant risk. As concerns prices, it is possible that the equilibrium unemployment rate may be lower than what we are currently estimating. A countervailing risk is given by the possibility of a nonlinear response of inflation in the presence of persistently tight labor market conditions.

Respondent 9: The enactment of the tax legislation (TCJA) and the passage of the Bipartisan Budget Act of 2018 (BBA) are significant developments affecting our outlook. While we expect the TCJA to begin to have a noticeable effect on the economy in the coming months, we assume that much of the increased spending on goods and services from the BBA will occur with some delay: we project little growth effect in 2018H1 and a moderate effect in 2018H2, with the largest boost to growth taking place in 2019. In contrast, at this time, our projection does not incorporate any significant effects on either real activity or inflation from higher import tariffs.

Our projected GDP growth rate in 2018 is now 2.8 percent (Q4/Q4), with the impact from fiscal stimulus offsetting a larger drag to growth from net exports. For 2019, while we still anticipate slower growth than in 2018 as a result of an aging business cycle and a tightening of financial conditions as monetary policy normalizes further, we boosted the projected growth rate to 2 1/2% (Q4/Q4), which is 0.5 percentage point above our December projection. With fiscal stimulus anticipated to fade in 2020, we project real GDP growth to slow to near its potential rate.

Our projected path for the unemployment rate shows a steady decline over the forecast horizon reflecting in part the stronger growth projection for 2018 and 2019 as well as a slight boost to average weekly hours in those years. This latter adjustment reflects our assumption that, in a tight labor market, a larger-than-usual amount of the improvement in labor market conditions will manifest itself in a higher work week. We now expect the unemployment rate to reach 3.7 percent by the fourth quarter of 2018, rather than 3.8 percent as in our December submission, and then decline to 3.5 percent by 2019Q4 rather than rise to 4.0 percent. By 2020 we assume the unemployment rate starts slowly moving towards the longer-run rate of 4.3 percent.

Finally, we have changed slightly our projected inflation path relative to December. For 2018, core PCE inflation is at 2.1 percent on a Q4/Q4 basis and headline PCE inflation moves down from 2.1 percent to 2.0 percent due to a lower expected path for energy prices. Consistently with stronger growth we now anticipate a slightly stronger inflation overshooting than we had in December, with both headline and core PCE inflation projected at 2.3 percent on a Q4/Q4 basis for 2019 as well as 2020; nonetheless, we anticipate that inflation expectations will remain at levels consistent with the FOMC's longer-run objective.

Respondent 10: Modal forecast: My forecast for real GDP growth is characterized by above-trend growth from 2018 to 2020, which is partly attributable to an expansionary fiscal policy stance. Without the fiscal stimulus, and as monetary policy accommodation is gradually removed, real GDP would likely increase at its longer-run rate from 2019 onward, based on modest increases in the labor force and moderate productivity gains. I expect headline and core inflation to rise above 2 percent over the forecast horizon reflecting accommodative monetary policy, real GDP above potential, and tightening labor market conditions.

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 projection errors and current economic and policy uncertainty at home and abroad. The risks to economic growth, inflation, and unemployment appear broadly balanced. On the downside, possible changes in government policies appear to be a source of uncertainty, including the risk of more restrictive trade and immigration policies. Furthermore, the current accommodative stance of monetary policy could lead the unemployment rate to significantly undershoot its natural level. In the past, periods of overheating have often led to higher inflation, financial imbalances, and ultimately recession. Upside risks to my forecast stem from greater-than-expected momentum in the economy, the possibility that elevated business confidence translates into sustained increases in investment and productivity, and the possibility that tax reform may increase inflationary pressures.

Respondent 11: Core inflation remains below target and the economy continues to add jobs without increasing wage pressures. This reinforces my assessment that there continues to be slack in the economy.

I expect that recent fiscal policy changes will boost both actual and, to a lesser degree, potential output.

Respondent 12: The main factors shaping my economic outlook include an increasingly strong labor market, highly supportive domestic financial conditions, solid growth abroad, accommodative domestic fiscal policy, and more data suggesting that inflation is rising toward our 2 percent objective.

Respondent 13: The fundamentals supporting the expansion remain favorable, including accommodative financial conditions, household balance sheets that have improved greatly since the recession, strong labor market conditions, relatively low oil prices, and accommodative monetary and fiscal policy. The tax changes imply higher disposable personal income and after-tax corporate profits, which should lead to somewhat higher spending over the forecast horizon. The budget package will expand federal government spending, although the timing is uncertain. Consumer and business sentiment remain positive. Consistent with the data, business contacts report ongoing tightness in labor markets, more widespread difficulties in finding qualified workers, and the increasing need to raise wages in order to retain workers across a range of skill groups and occupations. The global outlook has improved over the last year. Inflation rates here and abroad are fluctuating around a general upward trajectory, supported by accommodative monetary policy.

I project above-trend growth and that labor market strength will continue and move the economy somewhat further beyond maximum employment.

Incoming data indicate that inflation is firming and businesses are reporting an increased ability to pass on cost increases to customers. In the near-term, year-over-year inflation rates will likely move higher when last year's idiosyncratic factors, like the sharp decline in prices of cell phone service plans, drop out of the numbers. While those levels aren't likely to be sustained, I expect inflation to move up to our 2 percent goal on a sustained basis over the forecast horizon based on my projection that growth will be above trend, labor markets will continue to strengthen, and inflation expectations will continue to be reasonably well-anchored.

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 them as broadly balanced for both the real economy and inflation.

Respondent 14: The recently enacted tax cut and spending legislation play an important role in my outlook for real GDP, importantly boosting GDP growth this year and next. In contrast with the Tealbook baseline, I assume that the higher spending caps of the BBA are not extended, which, along with higher interest rates, contributes to a growth slowdown in 2020. With real GDP growth exceeding potential for the next couple of years, the unemployment rate continues to decline and bottoms out at 3-1/2 percent next year. The uptick in inflation this year reflects in large part the passing of temporary factors that held down inflation in 2017. Going forward, an important factor contributing to rising inflation is the FOMC's patience in raising interest rates despite low unemployment and inflation that is close to the FOMC's objective; that patience helps reanchor underlying trend inflation at target.

Respondent 15: My forecast calls for above trend growth of 2.6 percent in 2018, edging down to 2 percent in 2020. My near-term forecast is slightly higher compared to December in part due to additional fiscal stimulus from the Bipartisan Budget Agreement. While I expect some additional demand effect from fiscal policy, my uncertainty about the magnitude and timing of the effect remains high. This is especially so given that resource utilization in the economy seems to be at an already high level. As well, uncertainty about trade policy and the potential for escalating trade frictions with our partners is elevated. I expect the unemployment rate to remain below my estimate of the natural rate over the forecast horizon as output grows at a healthy pace and the labor force participation rate declines further. While inflation has generally been running a bit soft over the past few quarters recent data show some improvement for the inflation outlook. I anticipate that inflation will slightly exceed the committee's target in 2019 and 2020. With stronger output growth, lower unemployment, and higher inflation compared to my December projection, I have steepened my path for the appropriate level of the federal funds rate.

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: We revised our GDP growth forecast for 2018 up 0.4 percentage point due to the boost to government spending in the BBA. (The tax package that passed in December is not very different from the one we assumed in our December submission, and consequently we modified its effects only slightly in our current projection.) We would have adjusted our forecast for 2018 up by more had it not been for the weaker-than-expected near term growth we see in the incoming data. Our forecast for 2019 is unchanged despite the new fiscal stimulus and for 2020 it is down 2 tenths. This trajectory reflects a higher policy rate path than we assumed in December. All told we project a touch more overshooting of potential and undershooting of unemployment than in our December forecast. Our stronger forecast for growth and incoming inflation data led us to revise up our inflation forecast a tenth this year but our somewhat tighter monetary policy leaves our inflation forecast unchanged for 2019 and 2020.

Respondent 2: I have marked up my 2018 and 2019 real GDP growth projections largely on additional government spending due to the passage of the Bipartisan Budget Act of 2018.

My path for the unemployment rate is lower than last submission throughout the forecast horizon. In light of a quickening pace of job gains without any appreciable change in wage pressures, I lowered my estimate of the natural rate of unemployment by 0.2 percentage points.

Given a stronger growth profile and roughly "on-target" near-term inflation readings, I have marked up my inflation projection throughout the medium term horizon.

Respondent 3: The main difference is in my assessment of the appropriate path for the federal funds rate. In response to somewhat-greater-than-expected, debt-financed fiscal stimulus, I now have extra 25-basis-point rate hikes in both 2019 and 2020, and I've increased my estimate of the longer-run funds rate by 1/8 percentage point.

Respondent 4: I have incorporated additional fiscal spending related to BBA 2018 into my forecast. I had previously incorporated the effects of the TCJA into my forecast.

Respondent 5: Since December, I boosted my projection for growth in 2018 through 2020 based on additional fiscal stimulus from the recent budget agreement and slightly larger assessed effects of the tax changes than I had previously expected. In light of research showing that fiscal multipliers are lower in expansions and other considerations, I assume a somewhat smaller impact of the tax reform than that described in the special memo issued by the Board sta on January 19th.

My inflation projection is largely unchanged from September. I continue to expect inflation to reach the 2% target by 2019 and modestly overshoot through 2020.

Respondent 6: Recent data has caused us to change our projections for GDP growth for 2018 and 2019 and slightly our projection of core inflation for 2019.

Respondent 7: N/A

Respondent 8: The real outlook has been revised upward, and so the outlook for inflation, as a result of more fiscal stimulus than what we were expecting in December. Given the stronger outlook, we are also projecting a higher level of the federal funds rate by the end of the forecast horizon.

Respondent 9: As noted earlier, the passage of the tax legislation and the budget agreement are the primary factors that led us to boost our growth projections from those in December, with continued strong momentum in the global economy also a contributing factor. However, incoming data suggest modestly less strength in 2018H1, and we project the fiscal stimulus to raise real GDP growth rate primarily in 2018H2 and 2019. The combination of a stronger growth projection and stronger labor market conditions than anticipated have led us to lower notably the path of the unemployment rate over the forecast horizon relative to December. We assume no material effect of the fiscal stimulus on the potential growth rate. We did lower our assumed longer-run normal level of the unemployment rate relative to December, but that change reflects our assessment of the implications of recent developments in the labor market, wage growth, and inflation rather than any anticipated effects from the tax legislation.

With resource constraints projected to be tighter, inflation is expected to rise a bit more than we projected in December, resulting in a slightly larger overshoot of the FOMC's longer-run inflation objective in 2020. This overshoot helps to support inflation expectations and thus helps to achieve the Federal Reserve's mandated objectives over the longer run.

As explained under 3(b) we judge that a slightly steeper policy path is now appropriate to sustain our projections. We now assume a little bit more tightening in 2018 and 2020 relative to December, putting the policy rate somewhat above its longer-run normal level–which we also see as slightly higher than in December–in 2019-20. This overshoot of the longer-term policy rate is meant to ensure that the overshoot of inflation and undershoot of unemployment remain temporary, and the longer-run objectives are met within 5 – 6 years.

Respondent 10: I revised up my estimate of the macroeconomic effects of fiscal stimulus from the Tax Cuts and Jobs Act (TCJA) and the Bipartisan Budget Act (BBA). Although I had anticipated a sizeable effect of the TCJA in 2018-2020 in my December projection, I raised my projection for real GDP growth in 2018 by a further 0.2 percentage point and lowered my projected unemployment rate in 2018 by 0.1 percentage point based on the recent law, which front-loaded tax cuts more than anticipated. I expect the BBA will boost growth primarily in 2019 and penciled in a 0.3-percentage-point increase in real GDP growth and a 0.1-percentage-point lower unemployment rate in 2019. I see negligible effects on headline and core PCE inflation. The expansionary fiscal policy stance reinforces my view that an appropriate pace of tightening will entail four rate increases in 2018, four in 2019, and three in 2020.

Respondent 11: Employment has continued to grow robustly.

The changes to fiscal policy were larger than I expected.

Respondent 12: Employment has grown faster than I hand anticipated in December, and so has economic activity abroad. The economic impact of the Tax Cuts and Jobs Act will likely be larger and more frontloaded than I had anticipated in December. I have now incorporated into my projection the sta 's estimate of the economic impact of the Bipartisan Budget Act of 2018.

Respondent 13: The narrative of my forecast is similar to that in December. Economic fundamentals remain healthy and, with the passage of the budget bill, fiscal policy is likely to provide a somewhat larger addition to growth than I assumed in my previous projection. I have edged up my growth forecast and edged down my unemployment rate forecast over the projection horizon. My lower estimate of the longer-run unemployment rate also contributes to a lower path for the unemployment rate in this submission. Recent readings on inflation have firmed, and I continue to expect inflation to gradually firm further over the forecast horizon.

Given current conditions, the medium run outlook, and risks, I view an upward path of monetary policy as appropriate and a prudent course that balances the risks given that growth is expected to be above trend, the unemployment rate is expected to remain below its longer-run level, and inflation is projected to gradually move to our goal of 2 percent over the forecast horizon. My funds rate path is slightly steeper than in my December projection given the stronger growth and lower unemployment rate I am now projecting. To best promote our goals of maximum employment and price stability, I anticipate it will be appropriate for the funds rate to move somewhat above its longer-run level (which I estimate at 3 percent) over the forecast horizon.

Respondent 14: The passage of the BBA is the main reason for the upward revision in my GDP outlook this year and next, and also to the lower unemployment rate. The passage of highly stimulative fiscal policies at a time of near full employment has improved prospects that the FOMC will be able to achieve its inflation objective sustainably, as discussed above.

Respondent 15: I have incorporated additional fiscal stimulus in my forecast. However, I have significant uncertainty about the timing and magnitude of effects of tax reform and the budget agreement.

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: Our federal funds rate path is noticeably below the Tealbook over the next three years, ending 2020 at 3.25 percent. We assess the long-run neutral funds rate to be 2.75 percent so we do not overshoot the long-run funds rate by nearly as much as the Tealbook does.

Our projection for Q4-to-Q4 GDP growth in 2018 is similar to the Tealbook, but a bit weaker in 2019 and 2020. Our forecast is based on a touch smaller, but more front-loaded, impulse from tax cuts and government spending, and a shallower path for the funds rate. We view the output gap currently to be narrower than the Tealbook so that by the end of 2020 it remains about 1-1/2 percentage point smaller than the Tealbook's. Like the Tealbook we project the unemployment rate to fall further below where we think the natural rate is. However our projection for the unemployment rate averages several tenths higher than the Tealbook while we assume the natural rate of unemployment is a little lower. Accordingly, our 3.5 percent unemployment rate projection for 2020:Q4 undershoots the natural rate by about a 1/2 percentage point less than in the Tealbook.

We do not see quite as much of an increase in inflation over the next couple of years as in the Tealbook, despite our more accommodative monetary policy path. However, like the Tealbook we see a small overshooting of our inflation objective in 2020.

Respondent 2: While I have notched up my baseline forecast for growth due to the BBA of 2018, my projection remains muted relative to the Tealbook baseline. I am continuing to mark in a smaller impact from the recent tax changes on overall growth than the Tealbook, creating much of the divergence in our growth trajectories. As a result, my forecast calls for much less of an undershoot of my longer-run unemployment rate–which is now roughly 1/2 of a percentage point below the Tealbook's estimate.

Respondent 3: There are three main differences between my projections and the Tealbook forecast. First, I have inflation rising more and more quickly than is forecast in the Tealbook. Inflation has been held down by the lagged effects of declines in energy and imported-goods prices that we saw in 2015 and 2016, but those restraining effects will dissipate as we move into 2018. Second, I have the federal funds rate leveling o considerably earlier than is assumed in the Tealbook, and at a lower level. The key to achieving sustainable price stability, in my view, is to prolong the economic expansion. Our best chance for prolonging the expansion is to continue to remove accommodation, and then shift to a policy stance that is restrictive, but only mildly so. Finally, I don't expect the unemployment rate to fall quite as fast or quite as far as is forecast in the Tealbook. I would be quite concerned to see a labor-market overshoot as large as that found in the Tealbook. An important, unresolved issue is whether we can remove accommodation quickly enough, or find sufficient underutilized labor resources, to avoid the Tealbook outcome.

Respondent 4: I have a stronger outlook for potential growth than the Tealbook. Consequently, I believe that the economy can grow faster in the near-term 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 Sta outlook.

Respondent 5: The Tealbook projects a more substantial and protracted overshooting of full employment, with the unemployment rate declining to 3.1 percent at the end of 2020, and inflation returning to the 2 percent target very gradually. In my projection, there is more modest overshooting of unemployment and output through early 2019, and those gaps begin to close in 2020. I see the unemployment rate bottoming out at 3.5 percent by the middle of 2019.

The ramping down of the fiscal stimulus and the gradual removal of monetary policy accommodation slows growth closer to potential by the end of 2019. Finally, the persistent overshooting of full employment pushes inflation back to 2 percent by 2019 and results in a slight overshooting of inflation for some time afterwards.

Respondent 6: For GDP growth, our projections are slightly below those in the Tealbook. For inflation, our projections are similar to those in the Tealbook. Differences arise with respect to monetary policy implications because the Tealbook projections incorporate the idea of a longer-run steady state to which the economy is converging. Monetary policy has to be set appropriately as the economy transitions to the longer-run steady state. This tends to imply an upward-sloping policy rate path. Our regime conception, in contrast, views monetary policy as regime-dependent and the current regime is viewed as persistent. It is acknowledged that the economy may visit other regimes in the future, but switches to these regimes are quite difficult to forecast. This suggests a flat path for the policy rate over the forecast horizon relative to that contained in the Tealbook. The Tealbook also has a substantial undershooting of the unemployment rate, far more than our undershooting, before returning to its longer-run value of 4.7 percent.

Respondent 7: My projection assumes that labor productivity will grow more rapidly than in the Tealbook. A consequence is that the unemployment rate declines more slowly than in the Tealbook.

Respondent 8: We view our forecast as qualitatively similar to the Tealbook. The Tealbook real forecast is stronger than ours, mostly as a result of a more sanguine assessment of the impact of the tax cuts on GDP. Still, in both forecasts monetary policy needs to tighten noticeably more than what financial markets are currently pricing in order for the unemployment rate to stop declining and revert back to a level consistent with full employment.

Respondent 9: Our growth projections are fairly similar to those in the Tealbook over 2018 – 20, but there are larger differences between the Tealbook forecast and our projections for the other SEP variables.

We project, as the Tealbook, an undershooting of the unemployment rate, but our path is less steep, with the unemployment rate projected to bottom out at 3.5 percent by end-2019, and slowly moving up afterwards to a longer-run unemployment rate which is 0.3 percentage point lower than in our December submission. By contrast, the Tealbook projects the unemployment rate to decline to 3.1 percent in 2019 while maintaining unchanged its longer-run normal rate at 4.7 percent. The stronger undershooting of unemployment in the Tealbook is the counterpart of a sizable positive output gap that arises in the Tealbook forecast, which is larger than in December.

One other difference in the labor market projections concerns the paths for labor force participation. In our projection, the participation rate rises gradually to 63.2 percent in 2019, while in the Tealbook this rate is steady at 62.7 percent through end-2019. This difference reflects our assumption of some positive cyclical effects on participation.

For inflation, the two forecasts continue to differ. We see overall PCE inflation rising to 2 percent in 2018 and to 2.3 percent in 2019-2020, before returning to objective early in the next decade. The Tealbook projects inflation still below target in 2018 and mildly overshooting in 2019-20: Core inflation is projected at 2.1 percent in 2019 and 2.2 percent in 2020, despite a larger undershooting of unemployment than in our projection (it also remains above objective in the early years of the next decade according to the Tealbook's long-term outlook). The considerable persistence of inflation and the flat Phillips curve in the Tealbook appear to require a prolonged period of above-potential growth in order to induce inflation to rise to (and eventually beyond) the longer-run inflation goal. As mentioned previously, the overshoot of inflation in our projection occurs to prevent inflation expectations from falling below levels consistent with the FOMC's longer-run objective.

In terms of the uncertainty and risk assessment, both projections see uncertainty at near normal levels and risks to real growth broadly balanced. The Tealbook also sees risks as broadly balanced for inflation, while we see risks to inflation as tilted to the upside.

Finally, our monetary policy path is below the Tealbook path for 2018 – 20. In addition, our assumption for the longer-run normal policy rate is now 50 basis points above that of the Tealbook, which is unchanged at 2.50 percent. Both policy paths have an overshooting of the longer-run FFR in 2019 – 20, although the Tealbook's is appreciably larger, which is a reflection of the larger projected positive output gap in the Tealbook forecast: The inertial Taylor 1999 rule used in the Tealbook eventually calls for much tighter policy to address such gaps.

Respondent 10: My assumptions and projections are qualitatively similar to those in the Tealbook. Quantitatively, I anticipate somewhat slower growth in real GDP and a higher unemployment rate through 2020 than Tealbook.

Respondent 11: Relative to the Tealbook, my forecast for economic activity is a bit stronger, but my forecast for inflation is broadly similar. 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 rise more gradually than in the Tealbook. Even with lower rates, my projection anticipates that inflation will return to target at about the same time as the Tealbook.

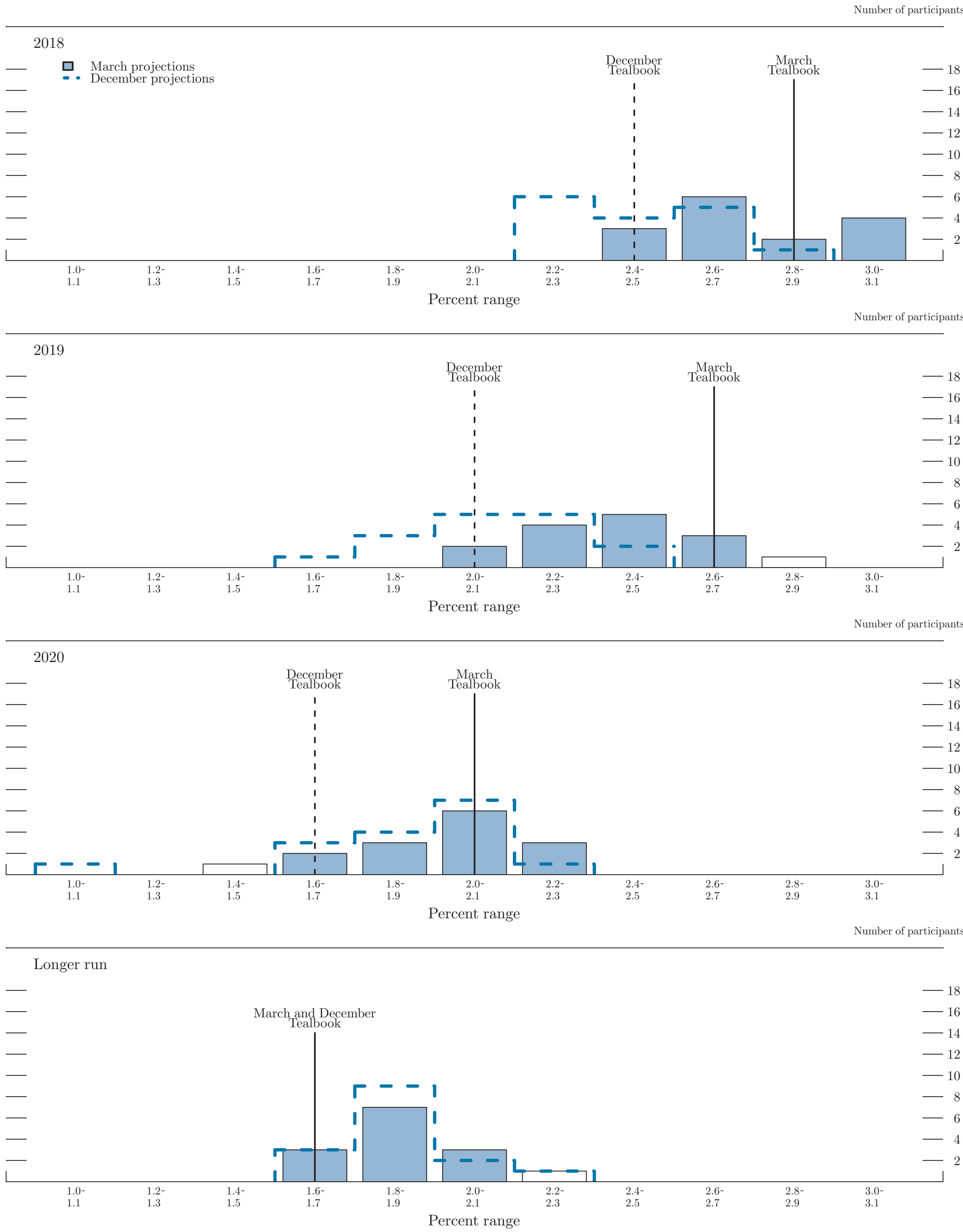
Respondent 12: My projections for GDP growth, the unemployment rate, and inflation are broadly consistent with the Tealbook. I have slightly stronger growth and a slightly higher path for the unemployment rate. The latter reflects mainly my assessment that, at least over the medium term, the labor force participation rate will be higher than projected in the Tealbook. My path for the target federal funds rate is substantially lower than the Tealbook path.

Respondent 13: As in the Tealbook forecast I expect that the economy will grow at an above-trend pace, labor market conditions will continue to strengthen, and inflation will gradually rise to our 2 percent goal. However, the inflation and labor market dynamics in my outlook differ from those in the Tealbook forecast, as I project that the inflation rate will rise to 2 percent rather than overshoot it and I do not project as great a fall in the unemployment rate. Thus, compared to the Tealbook forecast, I see inflation somewhat better anchored at target and see somewhat stronger inflationary pressures. My funds rate path is a little lower than in the Tealbook forecast because the economy remains closer to maximum employment and price stability, so there is less need for monetary policy to slow the economy. My fiscal policy assumptions are similar to those in the Tealbook forecast, but I am a little more skeptical about supply-side responses to the tax package.

Respondent 14: N/A

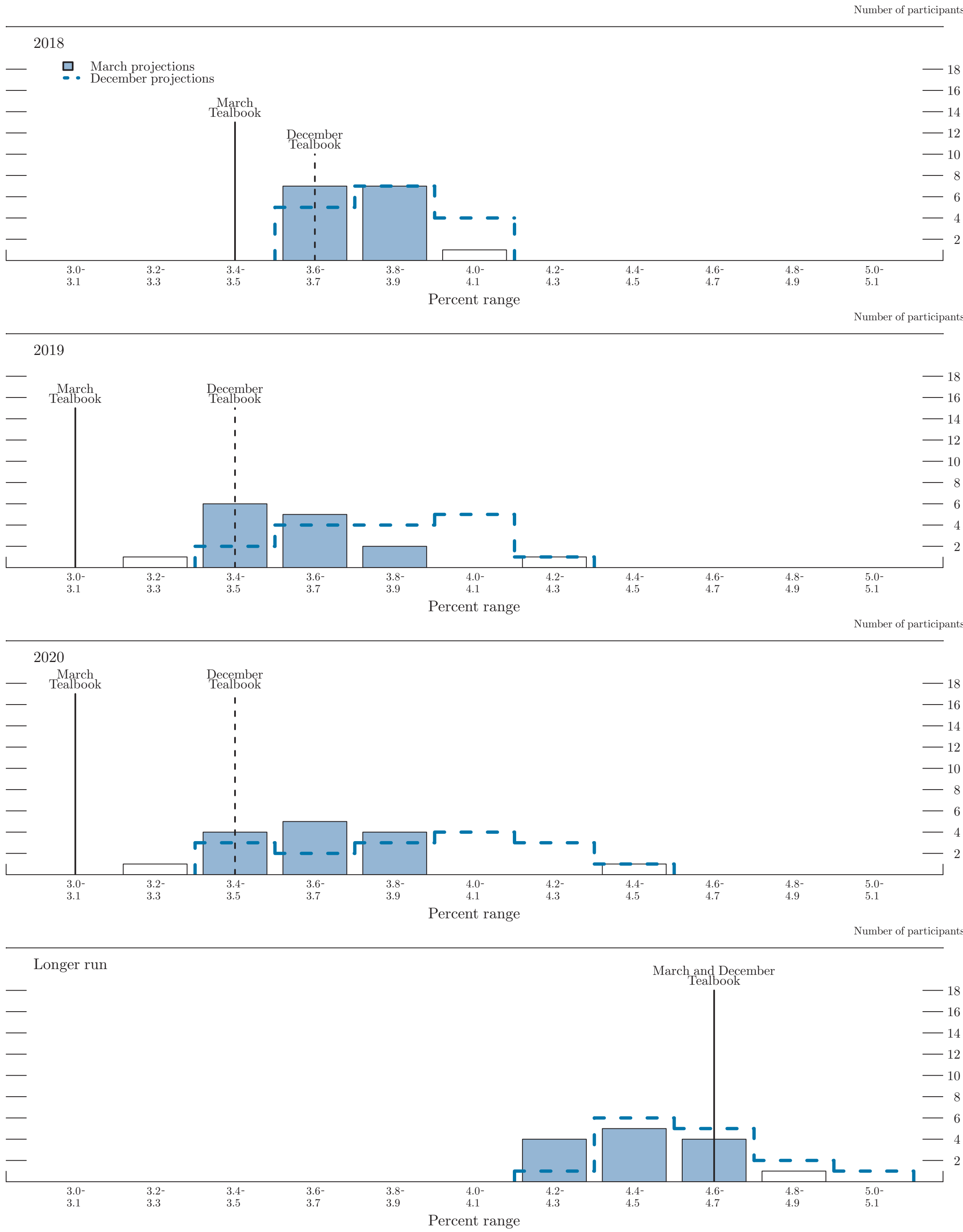
Respondent 15: My path for appropriate monetary policy remains considerably more accommodative than the Tealbook over the forecast horizon.

Figure 3.A. Distribution of participants' projections for the change in real GDP, 2018–20 and over the longer run



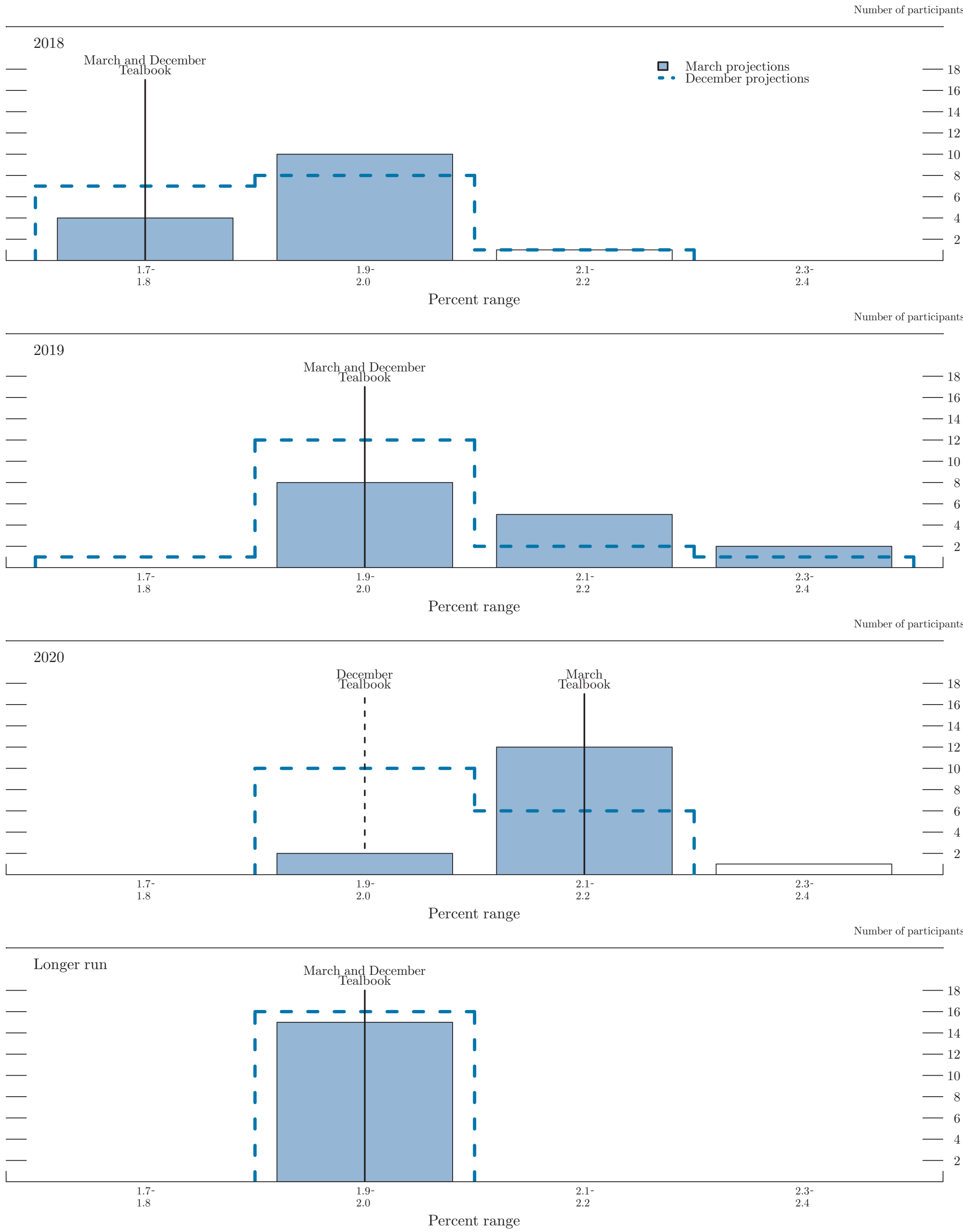
NOTE: Updated March Tealbook values are reported. Definitions of variables and other explanations are in the notes to table 1.

Figure 3.B. Distribution of participants' projections for the unemployment rate, 2018–20 and over the longer run



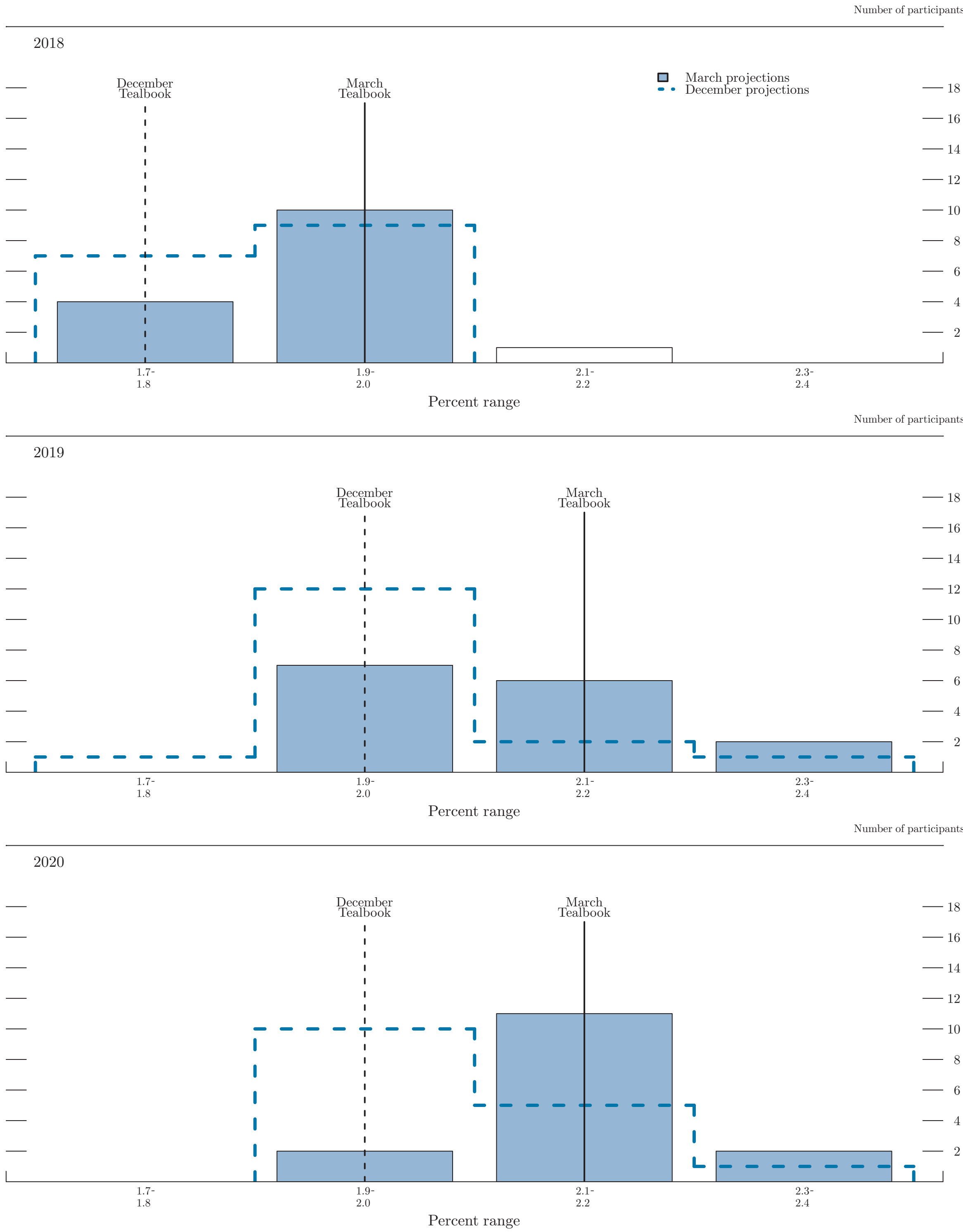
NOTE: Updated March Tealbook values are reported. Definitions of variables and other explanations are in the notes to table 1.

Figure 3.C. Distribution of participants' projections for PCE inflation, 2018–20 and over the longer run



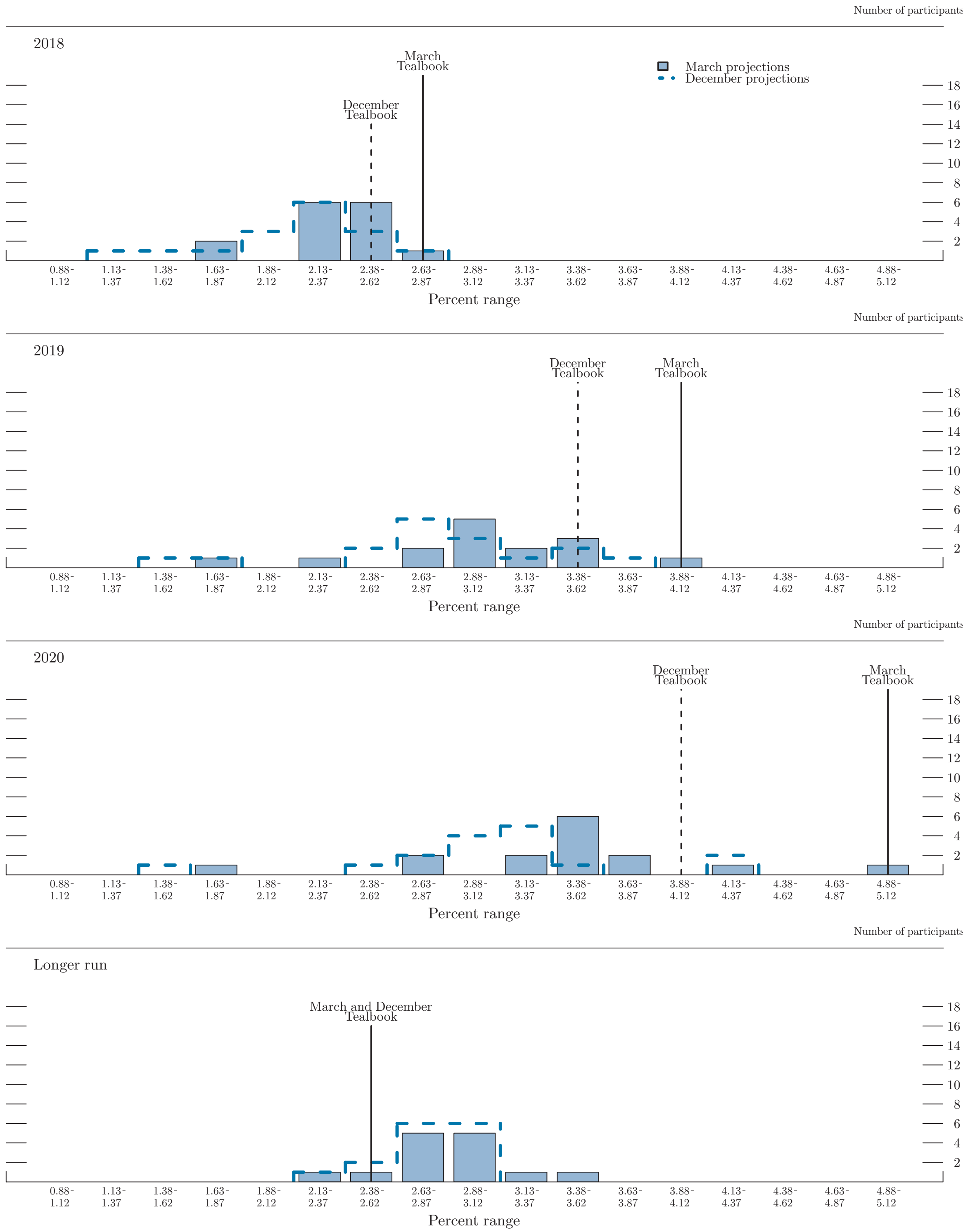
NOTE: Updated March Tealbook values are reported. Definitions of variables and other explanations are in the notes to table 1.

Figure 3.D. Distribution of participants' projections for core PCE inflation, 2018–20



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, 2018–20 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.