

**Economic projections of Federal Reserve Board members and Federal Reserve Bank presidents under their individual assessments of projected appropriate monetary policy, September 2016**

Advance release of table 1 of the Summary of Economic Projections to be released with the FOMC minutes

Percent

Variable	Median <sup>1</sup>					Central tendency <sup>2</sup>					Range <sup>3</sup>				
	2016	2017	2018	2019	Longer run	2016	2017	2018	2019	Longer run	2016	2017	2018	2019	Longer run
Change in real GDP	1.8	2.0	2.0	1.8	1.8	1.7-1.9	1.9-2.2	1.8-2.1	1.7-2.0	1.7-2.0	1.7-2.0	1.6-2.5	1.5-2.3	1.6-2.2	1.6-2.2
June projection	2.0	2.0	2.0	n.a.	2.0	1.9-2.0	1.9-2.2	1.8-2.1	n.a.	1.8-2.0	1.8-2.2	1.6-2.4	1.5-2.2	n.a.	1.6-2.4
Unemployment rate	4.8	4.6	4.5	4.6	4.8	4.7-4.9	4.5-4.7	4.4-4.7	4.4-4.8	4.7-5.0	4.7-4.9	4.4-4.8	4.3-4.9	4.2-5.0	4.5-5.0
June projection	4.7	4.6	4.6	n.a.	4.8	4.6-4.8	4.5-4.7	4.4-4.8	n.a.	4.7-5.0	4.5-4.9	4.3-4.8	4.3-5.0	n.a.	4.6-5.0
PCE inflation	1.3	1.9	2.0	2.0	2.0	1.2-1.4	1.7-1.9	1.8-2.0	1.9-2.0	2.0	1.1-1.7	1.5-2.0	1.8-2.0	1.8-2.1	2.0
June projection	1.4	1.9	2.0	n.a.	2.0	1.3-1.7	1.7-2.0	1.9-2.0	n.a.	2.0	1.3-2.0	1.6-2.0	1.8-2.1	n.a.	2.0
Core PCE inflation <sup>4</sup>	1.7	1.8	2.0	2.0		1.6-1.8	1.7-1.9	1.9-2.0	2.0		1.5-2.0	1.6-2.0	1.8-2.0	1.8-2.1	
June projection	1.7	1.9	2.0	n.a.		1.6-1.8	1.7-2.0	1.9-2.0	n.a.		1.3-2.0	1.6-2.0	1.8-2.1	n.a.	
Memo: Projected appropriate policy path															
Federal funds rate	0.6	1.1	1.9	2.6	2.9	0.6-0.9	1.1-1.8	1.9-2.8	2.4-3.0	2.8-3.0	0.4-1.1	0.6-2.1	0.6-3.1	0.6-3.8	2.5-3.8
June projection	0.9	1.6	2.4	n.a.	3.0	0.6-0.9	1.4-1.9	2.1-2.9	n.a.	3.0-3.3	0.6-1.4	0.6-2.4	0.6-3.4	n.a.	2.8-3.8

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 June projections were made in conjunction with the meeting of the Federal Open Market Committee on June 14-15, 2016. One participant did not submit longer-run projections in conjunction with the June 14-15, 2016, meeting. For the September 20-21, 2016, meeting, one participant did not submit longer-run projections for the change in real GDP, the unemployment rate, or the federal funds rate.

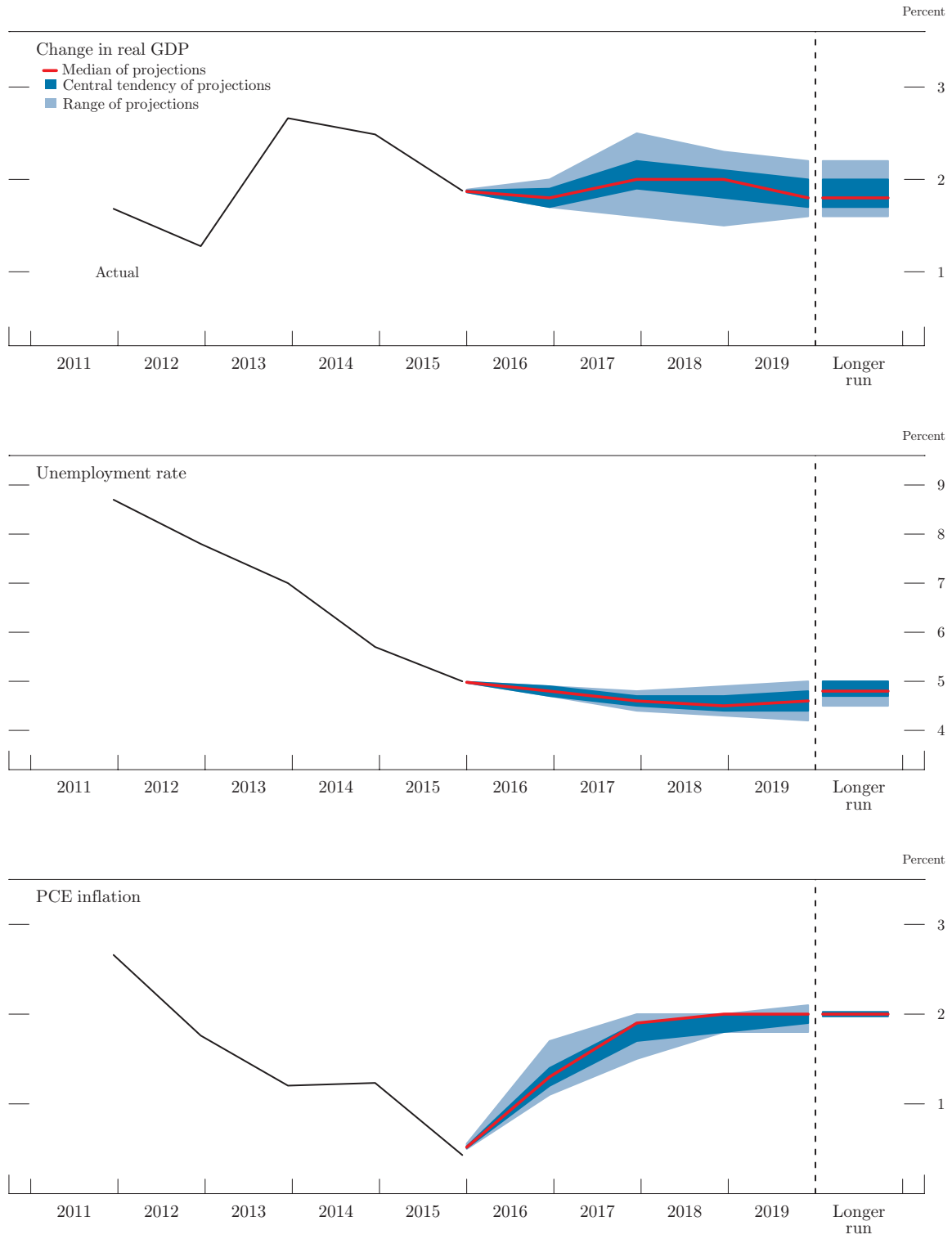
1. For each period, the median is the middle projection when the projections are arranged from lowest to highest. When the number of projections is even, the median is the average of the two middle projections.

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.

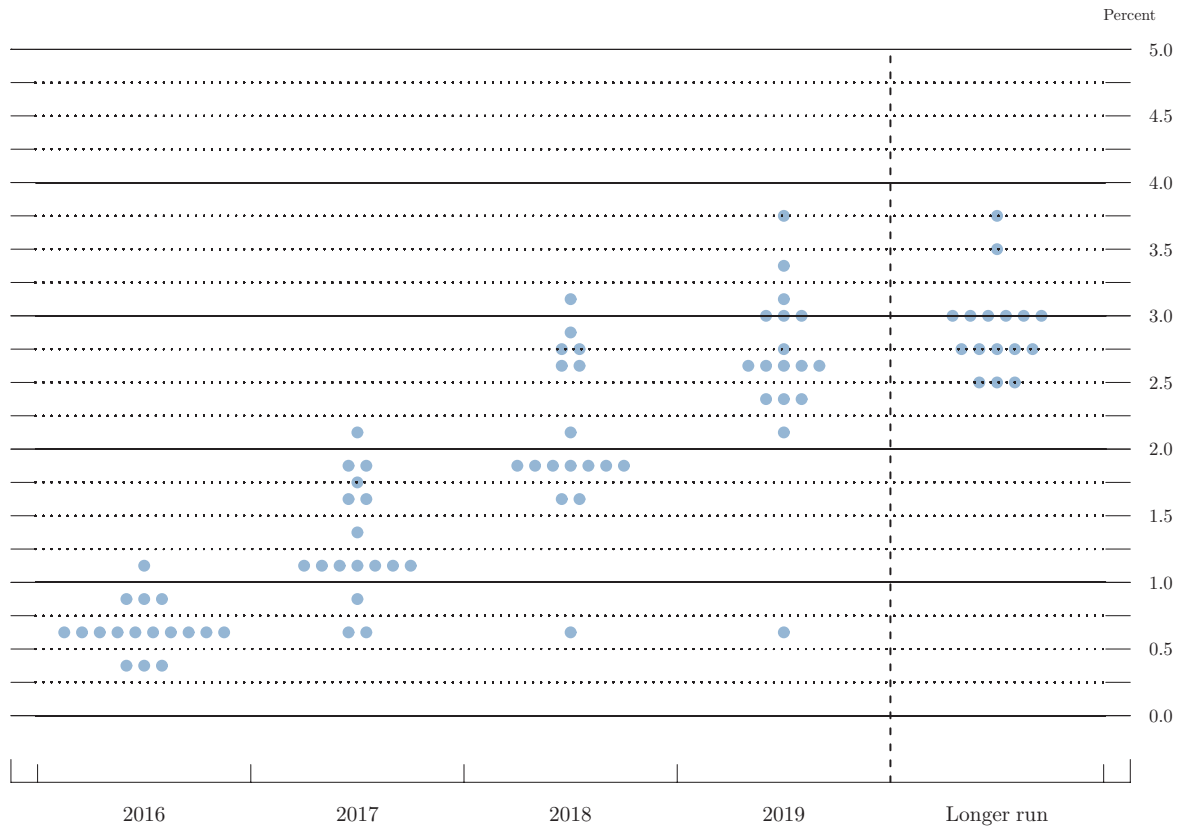
4. Longer-run projections for core PCE inflation are not collected.

Figure 1. Medians, central tendencies, and ranges of economic projections, 2016–19 and over the longer run



NOTE: Definitions of variables and other explanations are in the notes to the projections table. 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.

## Explanation of Economic Projections Charts

The charts show actual values and projections for three economic variables, based on FOMC participants' individual assessments of appropriate monetary policy:

- Change in Real Gross Domestic Product (GDP)—as measured from the fourth quarter of the previous year to the fourth quarter of the year indicated, with values plotted at the end of each year.
- Unemployment Rate—the average civilian unemployment rate in the fourth quarter of each year, with values plotted at the end of each year.
- PCE Inflation—as measured by the change in the personal consumption expenditures (PCE) price index from the fourth quarter of the previous year to the fourth quarter of the year indicated, with values plotted at the end of each year.

Information for these variables is shown for each year from 2011 to 2019, and for the longer run.

The solid black line, labeled “Actual,” shows the historical values for each variable.

The lightly shaded areas represent the ranges of the projections of policymakers. The bottom of the range for each variable is the lowest of all of the projections for that year or period. Likewise, the top of the range is the highest of all of the projections for that year or period.

The dark shaded areas represent the central tendency, which is a narrower version of the range that excludes the three highest and three lowest projections for each variable in each year or period.

The solid red line depicts the median projection in each period for each variable. The median value in each period 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.

The longer-run projections, which are shown on the far right side of the charts, are the rates of growth, unemployment, and inflation to which a policymaker expects the economy to converge over time—maybe in five or six years—in the absence of further shocks and under appropriate monetary policy. Because appropriate monetary policy, by definition, is aimed at achieving the Federal Reserve's dual mandate of maximum employment and price stability in the longer run, policymakers' longer-run projections for economic growth and unemployment may be interpreted, respectively, as estimates of the economy's normal or trend rate of growth and its normal unemployment rate over the longer run. The longer-run projection shown for inflation is the rate of inflation judged to be most consistent with the Federal Reserve's dual mandate.

## Explanation of Policy Path Chart

This chart is based on policymakers' assessments of appropriate monetary policy, which, by definition, is the future path of policy that each participant deems most likely to foster outcomes for economic activity and inflation that best satisfy his or her interpretation of the Federal Reserve's dual objectives of maximum employment and stable prices.

Each shaded circle indicates the value (rounded to the nearest  $\frac{1}{8}$  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.