The Fed's Economic Forecasts, Uncertainties and Monetary Policy

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Going back to 1980, the Fed has been publishing economic forecasts as part of an effort to be more accountable to Congress. Beginning with the financial crisis in 2008-2009, in an effort to enhance transparency, the Fed has been updating its economic forecasts on a quarterly basis. Beginning in 2012, the Fed has provided estimates of the Fed funds rate deemed appropriate by FOMC members in its Summary of Economic Projections (SEP). These forecasts of the economy and the Fed's "dot plots" influence the Fed's monetary policy and provide important and closely followed forward guidance.

Several observations are appropriate. While economic forecasting is always difficult, since the financial crisis, the Fed's forecasts have been inaccurate and its errors have followed a clear pattern. While this expansion has had some unique characteristics, there is room for improvement. The Fed needs to enhance its internal forecasting procedures and economic modeling efforts, particularly as they capture the effects of micro regulatory and tax policies, and take better advantage of its unique access to data and anecdotal evidence. The Fed must build on its recent changes to how it communicates forecasting uncertainties. In addition, the Fed's longer-run forecasts and statements by Fed members have conveyed the impression that the economy and monetary policy are operating in a new normal that is far different than the past. This is a risky presumption. What are the implications if the new normal evolves toward the old normal?

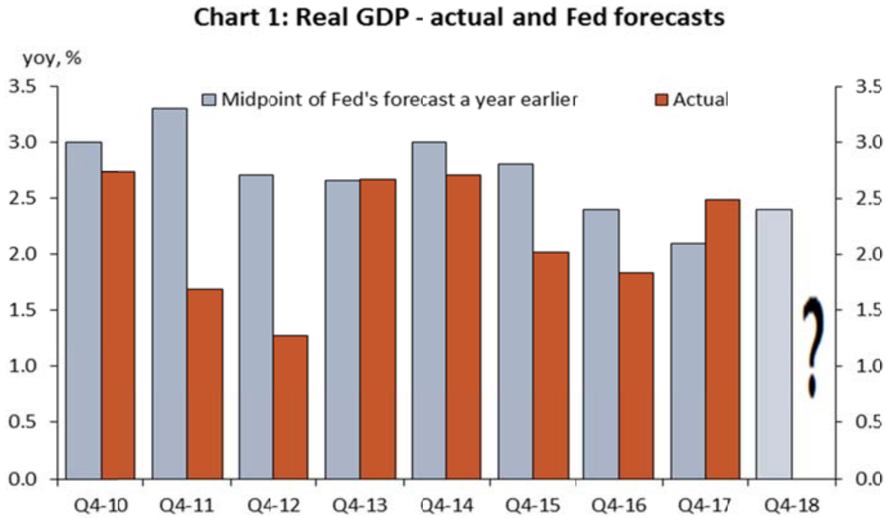
These forecasting and communications issues require immediate attention as the US economy gains momentum.

The Fed's recent forecasting track record

From 2010 to 2016, the Fed nearly persistently over-estimated economic growth and under-estimated declines in the unemployment rate. In 2017, the direction of the Fed's real GDP forecasting errors reversed, as the Fed under-estimated growth by a wide margin, and seems on track to do the same in 2018. The Fed's margins of forecasting error have been decidedly bigger than before 2008-2009, and modestly larger than private forecasters.

The Fed's quarterly SEPs are the compiled forecasts of FOMC members. The central tendency forecasts are the range of FOMC member forecasts that eliminates the three highest and lowest forecasts. FOMC members submit their forecasts prior to each quarterly FOMC meeting, debate them at the meeting, and may revise them before the final SEPs are compiled. Chart 1 compares actual growth with the midpoint of the FOMC's central tendency forecast of real GDP prepared in the fourth quarter of the prior year (measured fourth quarter to fourth quarter). From 2010-2016, actual real GDP growth was below the Fed's median FOMC forecast all but one year (2013). Actual growth was below the lower band of the Fed's central tendency forecasts in five of the seven years and below the lowest estimate

of any FOMC member in four of those years. Over the seven year period, the mean absolute error of the FOMC's forecast (based on the midpoint of the central tendency) is 0.7 percentage point.



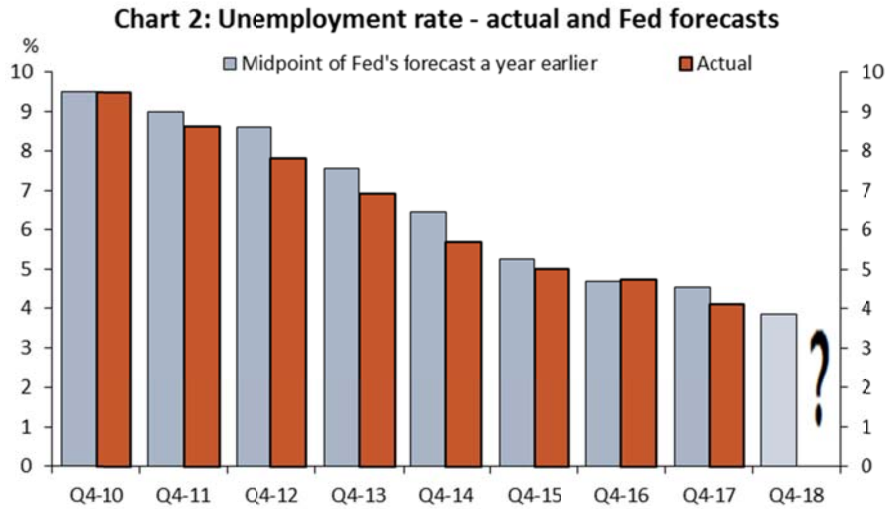
Sources: Federal Reserve and Bureau of Economic Analysis

The direction of the errors shifted for 2017. In the Fed's December 2016 SEPs, the Fed's midpoint forecast for real GDP was 2.1 percent, with central tendency range of 1.9-2-3 percent and a full range of 1.7-2.4 percent. Actual growth was 2.5 percent. In December 2017, amid building momentum in the economy and near-certainty that tax reform legislation would be passed, the FOMC's median growth forecast was 2.5 percent in 2018 and 2.1 percent in 2019. The Fed maintained its longer-run forecast of 1.8 percent growth. The Fed's central tendency band and full range for 2018 were set at 2.2-2.6 percent and 2.2-2.8 percent, respectively.

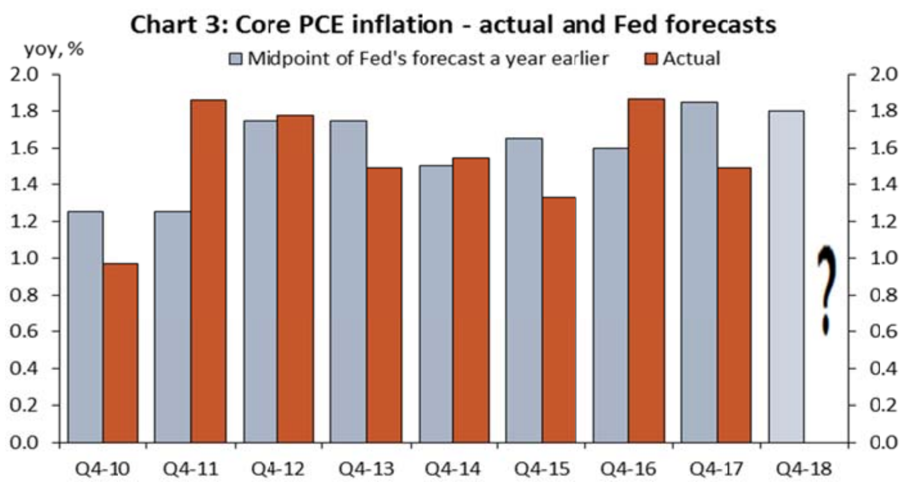
New Fed Chairman Powell, in his first Congressional testimony, highlighted the building economic momentum and said the Fed would be re-assessing its forecasts of the economy and appropriate federal funds rates.

While real growth fell far below the Fed's forecasts in 2010-2016, the unemployment rate fell by more than the low end of the FOMC's central tendency forecasts in five of the seven years (Chart 2). This reflected a combination of larger-than-expected declines in unemployment and larger-than-expected declines in the labor force participation rate. Cumulatively, the FOMC's midpoint estimates of the declines in the unemployment rate at the end of the following year captured only 41% of the actual decline between 2011 and 2017.

The Fed's forecasts of inflation have been closer to the mark, presumably because core inflation has remained below the Fed's 2 percent longer-run target and its trend has been fairly muted, hovering between 1.3-1.9 percent during 2011-2017 (Chart 3).

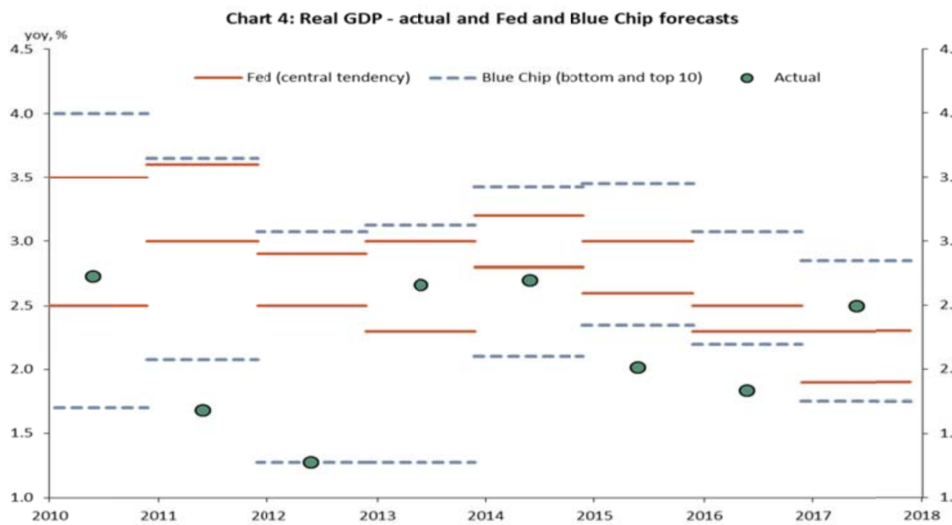


Sources: Federal Reserve and Bureau of Labor Statistics



Sources: Federal Reserve and Bureau of Economic Analysis

Compared to private sector forecasters, the Fed's economic forecasting track record has been a bit below average. The average forecast of the Blue Chip Economic Indicator (BCEI), a compilation of roughly 50 private forecasters, over-estimated real GDP growth during 2010-2016, similar to the Fed, but the magnitude of its errors were modestly smaller. Also like the Fed, the BCEI under-estimated the decline in the unemployment rate, and the magnitude of error of its average forecaster was slightly larger than the Fed's. The Blue Chip also provides average forecasts of its bottom and top ten forecasters, and these wider ranges captured larger portions of actual outcomes in real GDP growth than the Fed's central tendency forecasts (Chart 4).

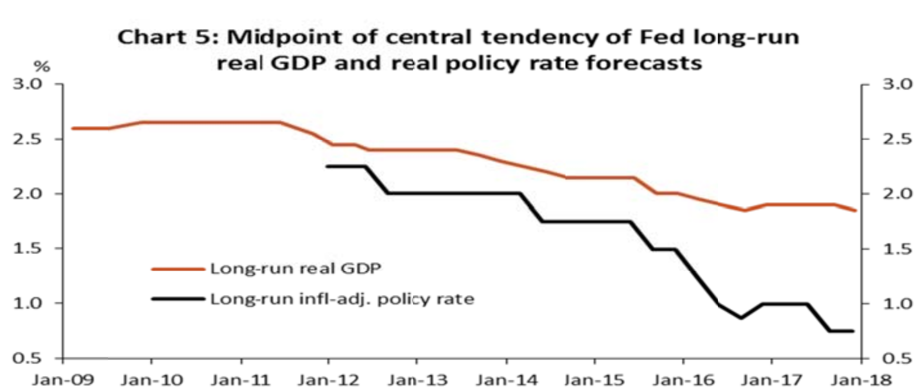


Sources: Federal Reserve, Blue Chip Economic Indicators and Bureau of Economic Analysis

The Fed does not provide official forecasts of wages, but Fed members expressed surprise and disappointment that wages did not accelerate in response to the lower unemployment rate. In response, the Fed lowered its estimates of the natural rate of unemployment, most recently to 4.6 percent. With the unemployment rate at 4.1 percent, the Fed continues to forecast higher wages.

The Fed has aggressively lowered its estimates of longer-run GDP growth. As real GDP growth and productivity gains disappointed, the FOMC's midpoint estimate of potential growth declined from 2.6 percent in its 2010-June 2011 forecasts to 1.8 percent currently. This mirrors the lower estimates of potential growth of the Congressional Budget Office.

Reflecting these diminished projections of potential growth, the Fed's midpoint estimate of the longer-run appropriate nominal federal funds rate fell dramatically to 2.75 percent from 4.25 percent in 2012. As shown in Chart 5, adjusted for the Fed's 2 percent inflation target, this downward revision of the real longer-run Fed funds rate has been substantially more than its downward revision of potential GDP growth. This may reflect a number of factors, including a perceived change in the relationship between its Fed funds rate and real GDP or that inflation is less sensitive to real GDP.



Source: Federal Reserve

Observations about Fed's Forecasts

The clear pattern of the Fed's forecasting errors reflects the Fed's tendency through 2016 to over-estimate the stimulative impact of extending its unprecedented monetary ease well after the recovery was self-sustaining, and tendency to under-estimate the economic impacts of the government's fiscal and regulatory policies and other nonmonetary factors. This led the Fed to expand the scope of monetary policy beyond its natural limits and be very slow to take away the excessive ease. Only recently has the Fed begun to appropriately acknowledge some of the limitations of monetary policy, but its recent forecasts have been slow to acknowledge the important roles played by other economic policies.

Since the recovery took hold (2011-2012), the Fed's efforts to stimulate stronger growth through aggressive quantitative easing and reinvestment policy, sustained negative real policy rates and forward guidance were only partially successful, but involved sizable risks. They were thwarted by other factors, particularly the government's tax and regulatory policies that increased business operating costs, raised uncertainties and dampened business confidence. The Fed's policies definitely stimulated financial markets and the economy continued to expand. Employment rose and the unemployment rate came down. However, nominal GDP—the broadest measure of aggregate demand—did not accelerate through 2016, and real growth remained disappointing. The Fed's success at lowering the real costs of capital did little to stimulate business investment, and productivity was sluggish.

The Fed's standard justification for its unprecedented ease has two themes. First, if the Fed had not taken aggressive actions during the financial crisis, the economic contraction would have been worse. No disagreement here, but the financial crisis was in 2008-2009, and too frequently that argument is used to justify monetary policy long after the recovery from financial crisis had become self-sustaining. The second argument is that if the Fed had raised rates any sooner, the economic expansion would have collapsed or been severely damaged. This is highly questionable. It assumes that the maturing economic expansion during 2012-2016 was significantly more fragile than any previous expansion. It also ignores historical evidence that once prior expansions unfolded, normalizing interest rates did not harm growth.

The slow economic growth despite the easy monetary policy highlights the Fed's limitations. In an important speech entitled "From Adding Accommodation to Scaling It Back", March 3, 2017, Chair Yellen highlighted many challenges facing the economy that have contributed to poor performance and acknowledged that "These unwelcome developments unfortunately reflect structural challenges that lie substantially beyond the reach of monetary policy" and stated that "Fiscal and regulatory policies—which are of course the responsibility of the Administration and the Congress—are best suited to address such adverse structural trends."

The Fed's prior policies and its subsequent forecasts do not seem to capture the essence of these sound observations. The Fed's current perspective on economic performance seems to be lagging behind.

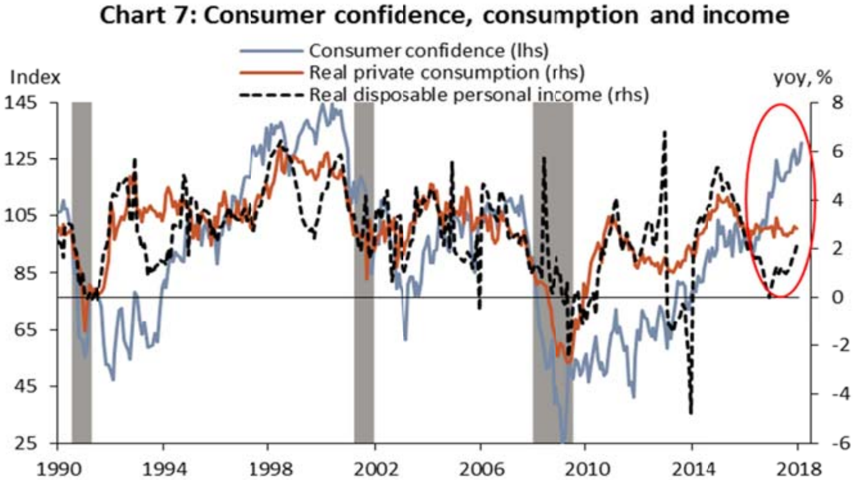
The Fed should take advantage of its unrivaled access to anecdotal information provided by its District Banks and try to extract more information about business and consumer behavior and incorporate these insights into its economic modeling. Currently, the Fed compiles information on economic, credit and banking conditions around the districts as inputs to its Beige Book. But enhanced collection and analysis would likely improve understanding. This is particularly true currently when confidence measures hover near all-time highs.

Consider the shift from the Fed over-estimating GDP growth through 2016 to under-estimating it in 2017 and likely in 2018. The pickup in economic growth—both business investment and consumption—beginning in 2017 has been coincident with the shift toward deregulation and the associated sharp rise in confidence (see Mickey Levy and Roiana Reid, "US: 'Soft' Data and 'Hard' Outcomes", March 9, 2017 and Charts 6 and 7). This easing of regulatory burdens and elevated confidence have contributed to a pickup in production, employment, investment and consumer spending. While these factors underlying improving business conditions have been mentioned in the Fed's Beige Books and separately by some Federal Reserve Bank Presidents, their importance seem to be inadequately captured in the Fed's macroeconomic modeling and official forecasts.

Chart 6: Small business views on regulation and ISM manufacturing sentiment

Sources: National Federation of Independent Business and Institute for Supply Management

Chart 7: Consumer confidence, consumption and income



Sources: The Conference Board and Bureau of Economic Analysis

The Fed also seems to be under-estimating the positive impacts of the Tax Cuts and Jobs Act, particularly in an environment of elevated confidence. The Fed's assessment that the tax legislation will provide a modest and temporary boost to the economy is based primarily on estimates of a one-time fiscal stimulus and the increase in budget deficits—a standard neo-Keynesian approach—while understating potential responses to structural reforms that raise after-tax profits and reduce the tax penalty on US businesses with overseas earnings, raise expected after-tax returns on new capital and facilitate more efficient mobility of capital.

The narrowness of the bands of the Fed's central tendency forecasts and the magnitude of its forecast errors draw attention to its forecasting procedures and objectives. Is there too much "group think" during the Fed's discussions about the economy? Are potential outlier FOMC members constrained by the process? Is the Fed's Senior Staff forecast too dominant in the preparation of the FOMC member forecasts? Should the Fed also make public the Senior Staff forecasts on a timely basis? (Currently, these forecasts are made available with a five year time lag.) These issues deserve consideration.

The Fed has taken significant steps toward increasing transparency about forecasting errors, based on the important contributions of Loretta Mester, President of the Federal Reserve Bank of Cleveland (see "Acknowledging Uncertainty", presented to the Shadow Open Market Committee, October 7, 2016). The Fed now publishes a 70 percent confidence interval around the FOMC's midpoint and range of projections based on historic projection errors of government and private forecasters. However, its value is limited. The FOMC's midpoint and central tendency forecasts, which are a compilation of the "best forecasts" of the individual FOMC members, get the bulk of the attention, and prone to misinterpretation.

The Fed should prepare and publish an additional forecast that is derived from each FOMC member's forecast of a range that captures an 80 percent probability of actual outcomes. This would reduce misinterpretations of the Fed's forecasts. The Fed should also communicate more clearly that monetary policy influences intermediate-term outcomes, it has little influence over near-term economic and inflation conditions. As such, Fed members should refrain from quick-response commentary on high-frequency data, which gives the false impression that the Fed can affect near-term outcomes.

Observations on the Longer-run Forecasts and Policies

The Fed perceives it is conducting monetary policy in a new normal environment in which achieving the objectives of sustained but far slower potential growth and 2 percent inflation involves a significantly lower federal funds rate and the maintenance of a very large balance sheet with significant excess reserves in the banking system. Through 2016, the shortfalls of real growth and inflation provided the Fed flexibility to maintain a negative real Fed funds rate and bloated balance sheet. The disappointing growth and productivity also supported the Fed's diminished expectations of potential growth and the associated low estimates of the natural rate of interest (r*).

A critical question is whether the Fed's new normal forecast plays out. That is what the Fed is betting on. My hunch is there is a sizable probability that it will not. While potential growth is unlikely as strong as historical trends, the new normal may not be as distinctly different as the Fed currently perceives. The Fed has been bracing for downside risks and worried about inflation being too low. Inflation was not too low, and as Chairman Powell stated in his Congressional testimony, "some of the headwinds the U.S. economy faced in previous years have turned into tailwinds." Nominal GDP accelerated above 5 percent annualized in the second half of 2017, and that momentum is expected to persist in 2018. If so, real growth would be roughly 3 percent and inflation 2 percent. But if the softer nominal spending growth of 2012-2016 that reflected the dampening impacts of non-monetary factors proves to be an aberration and stronger economic activity persists into 2019, then inflation pressures would mount, and the Fed would need to reconsider its perspective on the new normal. I expect that achieving the Fed's mandate will require the Fed to raise rates and unwind its balance sheet more than its current forecasts and strategies suggest.