# The U.S. Economic Outlook and Monetary Policy

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**Introduction**

I thank the European Economics and Financial Centre for the invitation to speak to this distinguished audience, in this venerable venue, at this historically significant time. I will focus my remarks today on the other side of the pond – in particular, the U.S. economy and monetary policy. But as you know, we live in a global world, and so we are monitoring very closely what is happening on this side of the pond and assessing the implications for the economic outlook and monetary policy on my side of the pond. Before I begin, I should note that the views I'll present today are my own and not necessarily those of the Federal Reserve System or my colleagues on the Federal Open Market Committee.

**The Economic Outlook**

The consequences of last week's decision by U.K. voters to exit the European Union are on everyone's mind. This is a developing story, and how it plays out will ultimately determine its implications for the global economy and monetary policy. For the U.S. economy, while the risks and uncertainty surrounding the outlook have increased, it is too early to judge whether conditions in the aftermath of the decision will necessitate a material change in the modal outlook. In structuring my remarks today, I think it would be helpful to first discuss my views on the U.S. economy prior to the vote. These were the views I carried into the Federal Open Market Committee (FOMC) meeting two weeks ago and that helped inform the economic projections I submitted as part of the FOMC's latest Summary of Economic Projections (SEP). I will then discuss the potential ramifications of the U.K.'s exit decision for the U.S. economic outlook.

In thinking about the economic outlook, I try to stay focused on underlying fundamentals because they determine the outlook for the economy over the medium run, the time horizon over which monetary policy can affect the economy. In my view, the underlying fundamentals supporting the U.S. economic expansion remain sound. These include accommodative monetary policy, household balance sheets that have improved greatly since the recession, continued progress in the labor market, a more resilient banking system, and low oil prices. There are risks around all forecasts, but my modal forecast has been that over the next two years the U.S. economy will continue to expand at a pace slightly above its longer-run trend, which I estimate to be about 2 percent; that the unemployment rate will remain slightly under its longer-run level, which I estimate to be about 5 percent; and that inflation will continue to gradually return to the Federal Reserve's 2 percent target. Of course, even in the best of times, without the increased uncertainty of our current situation, there is some variation in growth and other economic indicators over time. The trick is to extract the signal about where the economy is headed from economic and financial market information that can often be quite noisy.

***Economic growth***

We've seen this kind of variability in the quarterly measures of U.S. GDP growth. Growth in the first quarter of the year slowed, although less so than originally estimated. Incoming information suggests that we are seeing a rebound of growth in the second quarter. This is very similar to the pattern we saw in 2014 and 2015. Consumer spending, which makes up about two-thirds of output in the U.S., has accelerated in recent months. The continued improvement in household balance sheets, growth in personal income, low borrowing rates, and relatively low oil prices have all buoyed consumer spending. In the U.S., the drop in gasoline prices by almost $1 per gallon between 2014 and 2015 saved the average household about $700. Although gasoline prices have moved up in the past couple of months, the U.S. Energy Information Administration now forecasts that the average price of gasoline will be down again this year, resulting in another $200 in cost savings for the average household. Some of those savings have been spent. For example, we've seen high levels of auto sales for the past two years. Some households likely saved part of the windfall instead of spending it, or used it to pay down debt. Either way, stronger household balance sheets will help support future consumption spending.

The U.S. housing sector has been gradually recovering for some time. In the aftermath of the housing crash, house prices in the U.S. began rising again in mid-2011, and for the past two years, they have been increasing at a 5 to 6 percent annual rate. At the aggregate level, homeowners lost an unprecedented $7 trillion in real estate equity during the housing crash, but the increases in house prices have allowed homeowners to recover nearly all of that. Sales of existing homes, which make up the bulk of home sales in the U.S., are now back near the levels seen before the housing bubble run-up in the early to mid-2000s. I am using the pre-bubble level as my benchmark because we shouldn't want to see the housing market return to bubble proportions. Other parts of the housing sector haven't yet fully recovered. Construction and sales of new homes have been rising at a gradual pace, but they are not back up to their pre-bubble levels. Starts remain below the levels consistent with projections of household formation over the longer run, and in some markets, the supply of housing hasn't kept up with demand. In addition, the type of housing being built has shifted. Over the past five years, increases in multifamily housing starts have significantly outpaced increases in single-family starts. This may reflect a shift in preferences toward more urban living, but it likely also reflects the desire on the part of some people who lived through the crisis to rent rather than own. Mortgage rates are low but households are being careful in not taking on more mortgage debt than they can handle, and banks are lending to those with good credit quality. My assessment of conditions is that the recovery in housing should continue at a moderate pace.

In contrast to housing, business fixed investment remains weak. While the sharp drop in oil prices since mid-2014 benefited consumers and many businesses, firms in the drilling and mining sector, their suppliers, and regions whose economies depend on the energy sector have been hurt. We have seen the effects in parts of the Cleveland Fed District where steel production has been down and firms tied to energy have had to cut jobs and reduce investment. Business contacts in the steel industry have told us they've been encouraged by the firming in oil and other commodity prices since the start of the year, but they remain uncertain about the sustainability of those increases. Other contacts in the energy sector have told us that the price increases have spurred moving forward on some investment projects that had been put on hold. But even outside of the energy sector, business investment has been soft despite generally accommodative financial conditions. Manufacturers have been investing but mainly to maintain current operations rather than to expand. Some manufacturers in the Cleveland District have told us that businesses' reluctance to expand capacity reflects concern about the overall longer-run direction of the economy rather than concerns about the economy in the near term or their own firms' performance. Part of the softness in investment reflects weakness in demand outside of the U.S., which has hurt U.S. exports.

Indeed, firms exposed to U.S. trade have had to operate in a very challenging environment. From mid-2014 until last week, the nominal value of the U.S. dollar has appreciated about 18 percent on a broad trade-weighted basis. This has placed a significant drag on manufacturing output and export growth. But the slowdown in the rate of appreciation in recent months was starting to diminish the drag on growth from net exports. In the first quarter, net exports made a slightly positive contribution to U.S. output growth; in contrast, they subtracted about a half of a percentage point from growth last year.

Of course, global growth, commodity price changes, and currency fluctuations are not necessarily independent events. For example, a portion of the more than 50 percent decline in oil prices since mid-2014 likely reflects expectations of weaker growth in China and other countries, although supply factors have likely played a greater role. The appreciation of the U.S. dollar since mid-2014 has reflected expectations that real growth in the U.S. will continue to be stronger than growth abroad, as well as projected real interest rate differentials between the U.S. and other economies. We have to be careful not to think of these shocks as independent events and merely sum their effects. We live in an interconnected global economy. Changes in prices and currency values are one way economies reach a new equilibrium after a shock.

While I would expect investment to begin to pick up as overall economic growth expands, the weakness in investment and the associated slow pace of productivity growth pose a risk for the longer-run growth of the U.S. economy. Structural productivity growth is a key determinant of the longer-run growth of output and increases in living standards. And investment in capital, including human capital, is a key determinant of productivity growth. Labor productivity growth has risen at only a half of a percent annual rate over the past five years. Part of this weakness is cyclical: weak investment during the recession and early part of the expansion contributed to slow productivity growth over this period. But the weakness in investment and productivity has persisted. Productivity growth is very difficult to forecast, so the softness may reverse itself, or it may be longer lasting and reflect a structural issue. If it's the latter, then the longer-run growth rate of the U.S. economy may be lower than the 2 percent growth I've been assuming.

As this overview suggests, some parts of the U.S. economy have fared better than others. But overall, economic growth has proven to be resilient and at a pace slightly above trend. The pace has been sufficient to generate significant progress in labor markets.

***Labor markets***

Since the trough in early 2010, the U.S. labor market has added more than 14 million jobs, which is about 10 percent of employment, and the unemployment rate has fallen more than 5 percentage points from its peak of 10 percent in late 2009. Over the past two years, there have also been significant improvements in other gauges of the under-utilization of labor, such as measures tracking the number of part-time workers who would rather work full-time and the number of people who have only been looking for work sporadically or have been discouraged from looking at all because they don't think they will find a job. Increasingly, we are hearing from businesses that they are having trouble finding qualified workers. Early on, such reports were concentrated in high-skilled occupations in information technology, health care, and specialized construction. Now, the reports are expanding to include lower-skilled jobs and less-specialized occupations in a broader set of industries.

So when the U.S. labor market report for May was released early last month, it garnered considerable attention. Just when we were beginning to see signs of a pickup in growth in the second quarter, we received news that firms added just 38,000 jobs to their payrolls in May. Part of the weakness reflected the effects of a strike by workers at Verizon Communications. But even adjusting for that, which accounted for about 35,000 jobs, the pace was a considerable step down from the 200,000-plus jobs per month the U.S. economy was adding last year and early this year. The question is: was this the start of a reversal from the considerable progress that's been made in labor markets, or was this the type of transitory change we typically see during expansions?

My read of the available data puts me in the second camp: I believe the U.S. labor market remains sound and that we'll continue to see further improvements in the job market, although the pace of improvement will necessarily slow given the progress that's already been made. It's important to put the May jobs report into context. One thing we have learned is that we shouldn't take too much signal from one or two monthly reports. Payroll growth has slowed several times during this expansion, only to pick up again. We will see how payrolls behaved in June when the report is released next Friday.

In addition, we should expect to see some slowdown in the pace of job growth as the economy nears full employment. The bigger surprise may have been the very strong job numbers early this year. Adjusting for the Verizon strike, over the past three months firms added an average of 127,000 jobs per month. That pace exceeds the 75,000 to 120,000 per month range of trend employment growth estimates from various models that take into account the aging of the population and other demographic factors affecting labor force participation. So it is enough to put further downward pressure on the unemployment rate.

Other incoming data remain consistent with an improving labor market. Claims for unemployment insurance are low. The rates of job openings and hiring are high. The quit rate is also high, suggesting that workers are confident enough to be looking for better jobs. The unemployment rate is low. Of course, just as I discount taking a strong signal from weak May payrolls, I don't read May's sharp drop in the unemployment rate to 4.7 percent as indicating a significant tightening in labor market conditions.

The drop reflected not only a decline in the number of unemployed people but also an outsized decline in the labor force participation rate. The participation rate varies from month to month, but averaging over the past several months, the level of the participation rate is consistent with estimates of its longer-run downward trend. Another positive is that there are signs in the data and from anecdotal reports that wages may be accelerating.

All of this suggests to me that labor market progress will continue. At the same time, I do not want to underestimate the difficulty that many people have had finding work during the recession and slow recovery and that many continue to have, or the persistent differences in the employment situation faced by different demographic groups in the U.S. There are serious longer-run workforce development issues affecting U.S. labor markets, and the deep recession and slow recovery have exposed and exacerbated these problems. Technological advances and globalization are changing the nature of available jobs and the skill sets needed to perform those jobs. As a country, the U.S. needs to ensure that people can enter and remain productive members of the modern labor force. This will raise our shared standard of living and make us more competitive in the global economy. I believe that government programs and private-public partnerships, including educational assistance, retraining programs, and apprenticeships, can be effective in addressing these long-run labor force challenges and should be brought to bear. On the other hand, I do not believe that monetary policy would be effective in addressing these longer-run problems. So from the standpoint of what monetary policy can do, I believe the economy is basically at maximum employment, one part of the Fed’s dual mandate.

***Inflation***

The other part of the Fed’s dual mandate is price stability. Inflation has been running below the Fed’s goal of 2 percent for quite some time. Low inflation partly reflects the effects of earlier declines in the price of oil and other commodities, which began in mid-2014, as well as the appreciation of the dollar, which has held down the prices of nonpetroleum imports into the U.S. According to dynamic simulations of the Federal Reserve Board staff's SIGMA model, a 10 percent rise in the real value of the dollar affects core inflation via import prices fairly quickly, resulting in a drop of about 0.5 percent in core inflation a year after the shock, which partially reverses over the subsequent year. A shock to the value of the dollar also tends to reduce GDP with a lag, and the model indicates that this would put additional downward pressure on inflation.[1]

The most recent inflation data have been encouraging and in accord with the pattern anticipated by the FOMC. Inflation measures have gradually risen as the effects of previous declines in oil prices and dollar appreciation have begun to fade. Headline PCE and CPI inflation, as measured by the year-over-year changes in the underlying indices, have moved up from the very low levels recorded last year and have been stable at a little more than 1 percent in recent months. The core inflation measures, which omit food and energy prices because they tend to be volatile, have also been moving up and are above the headline numbers. Another gauge of underlying inflation, the Cleveland Fed's median CPI inflation rate, rose to over 2.5 percent in May, its highest level in over seven years.[2]

Stable inflation expectations are an important component of inflation dynamics. Even in the face of sizable declines in energy prices, inflation expectations have been relatively stable in my view. At this point I expect them to remain reasonably well anchored, but I am monitoring readings carefully. There are various measures of inflation expectations. Survey-based measures have tended to be more stable than those based on market data. Inflation compensation, as distinct from expectations, is the difference in yields between nominal U.S. Treasury securities and Treasury inflation-protected securities. Inflation compensation has fallen by more than the survey measures of expectations, but various models suggest

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[1] See Chart 5 in Stanley Fischer, "U.S. Inflation Developments," remarks at the Federal Reserve Bank of Kansas City Economic Policy Symposium, Jackson Hole, WY, August 29, 2015.

[2] The Cleveland Fed's median CPI inflation rate is available at https://clevelandfed.org/our-research/indicators-and-data/median-cpi.aspx.

that the movement more likely reflects changes in liquidity premia and inflation risk premia rather than changes in inflation expectations. Over a period of heightened market volatility and safe-haven flows into U.S. Treasury securities, I take less of a signal about inflation expectations from the market-based measure of inflation compensation than from the survey measures. The Cleveland Fed's model of inflation expectations provides somewhat of a compromise by incorporating survey measures, as well as market data on nominal Treasury yields and inflation swaps. Its measure of 5-year inflation, 5 years from now has been stable, at about 1.9 percent, in recent months.[3]

Given these readings on inflation and inflation expectations, so long as the real side of the economy continues to perform as expected, I anticipate that inflation will continue to gradually move back to our goal of 2 percent over the next couple of years.

**Monetary Policy**

In setting monetary policy, the FOMC assesses both realized and expected progress on our statutory longer-run goals of price stability and maximum employment. That assessment encompasses a wide range of economic information – the official economic statistical releases and financial market indicators, as well as the information FOMC participants garner by speaking with contacts in our regions.

At its June meeting two weeks ago, the FOMC decided to maintain the target range of the federal funds rate at ¼ to ½ percent. The FOMC indicated that with gradual adjustments in the stance of monetary policy, it anticipates further improvements in the economy. This was reflected in the Summary of Economic Projections also released at the June meeting. The median projection among the FOMC participants shows growth at about 2 percent over the next three years, consistent with the median

[3] The Cleveland Fed's inflation expectations measure is available at https://clevelandfed.org/our-research/indicators-and-data/inflation-expectations.aspx.

estimate of longer-run trend growth; the unemployment rate coming down a bit from current levels and remaining under the median longer-run estimate of 4.8 percent through 2018; and inflation gradually moving up to 2 percent by the end of 2018.

In June, the FOMC also indicated that economic developments will likely warrant only gradual increases in the fed funds rate. Of course, the timing of those rate increases and the overall slope of that gradual path will depend on how the economy, the economic outlook, and the risks evolve.

Indeed, in the June projections, the median fed funds rate path of appropriate policy was somewhat shallower than in the last set of projections in March – partly reflecting somewhat slower growth projected for this year, and partly reflecting a lower estimate of the fed funds rate over the longer run.

I supported the decision not to change rates in June. My reason did not reflect a fundamental change to my outlook. The progress being made on our policy goals and the outlook suggest that a gradual upward path of interest rates continued to be appropriate. A gradual path means that monetary policy will remain accommodative for some time to come, providing support to the economy and insurance against downside risks. As I said, I do not think we are at the start of a significant reversal in labor markets, and I view the inflation data as supportive of a gradual return to target. Now, some might argue that in an abundance of caution, we should wait for clarity on these issues, and I agree that there are risks to acting too soon. But there are also risks to forestalling rate increases for too long when we are continuing to make cumulative progress on our policy goals. Waiting too long increases risks to financial stability and raises the chance that we would have to move more aggressively in the future, which poses its own set of risks to the outlook. I believe waiting too long also jeopardizes our future ability to use the nontraditional monetary policy tools that the Fed developed to deal with the effects of the global financial crisis and deep recession. If we fail to gracefully navigate back toward a more normal policy stance at the appropriate time, then I believe there is a non-negligible chance that these tools will essentially be off the table because the public will have deemed them as ultimately ineffective. This is a risk to the outlook should we ever find ourselves in a situation of needing such tools in the future. Of course, such a risk is hard to measure and is not one we typically consider. But we live in atypical times, and we need to take the whole set of risks into account when assessing appropriate policy.

So why, then, did I think it appropriate not to raise rates in June? The reason was timing. There was considerable uncertainty about the outcome of the upcoming U.K. referendum on membership in the European Union. The vote was being held a week after the June FOMC meeting. It was clear there was going to be volatility in financial markets surrounding the vote. If the vote favored exit, there was the potential for disruption in markets. Given that I do not think U.S. monetary policy is behind the curve yet, I saw little cost in waiting to take the next step.

**After the U.K. Referendum**

It is an understatement to say that market volatility increased on the outcome of the U.K. referendum. We are now in a world of heightened economic and political uncertainty, and I expect we will be living with uncertainty for a while as the U.K. and Europe establish the terms of their new relationship.

When a shock like this hits financial markets, the first task of central bankers is to ensure that there is sufficient liquidity and funding to allow markets to continue to function in an orderly way in the midst of extreme volatility, and to assure the public that we are prepared to act as necessary. The Bank of England, the finance ministers and central bank governors of the G7 countries, and several other individual central banks including the European Central Bank, the Bank of Japan, and the Federal Reserve, put out statements last Friday indicating that they stand ready to use established liquidity tools to support market functioning.[4] Central banks are monitoring the situation for possible contagion across financial markets. Despite the volatility, markets have been functioning in an orderly manner. The considerable efforts undertaken in the U.K., Europe, the U.S., and other countries in response to the global financial crisis to increase the resiliency of the financial system, including higher capital and liquidity requirements, mean financial institutions are now in considerably better shape to withstand short-run volatility while continuing to extend credit to households and businesses.

Ultimately, global economies will adjust to the new trading and labor relationships negotiated between the U.K. and Europe. It is too early to judge what the magnitude of the effects on the global economy will be and, for the U.S. economy, whether there will be a material change in the medium-run outlook. It will depend on how the situation evolves, so the assessment will take some time to fully develop. While the U.K. represents about 4 percent of world output and global trade, London is one of the major financial centers of the world. About 4 percent of U.S. exports go to the U.K., which is a relatively small share, but the financial ties between our two countries are larger. Barring any major disruption in financial and banking markets, one of the main mechanisms through which the exit decision could affect the U.S. economy is through dollar appreciation, which, depending on its persistence and magnitude, could dampen U.S. export growth and cause a delay in the return of inflation to 2 percent. Slower growth outside of the U.S. would also lower demand for U.S. exports. But it is important to remember that exports make up only about 12 percent of U.S. output, so whatever the reduction in export growth, it would mean a smaller reduction in overall GDP growth.

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[4] See the following statements released on June 24, 2016: Statement from the Bank of England; Statement from the Governor of the Bank of England Following the E.U. Referendum Result; Statement of G-7 Finance Ministers and Central Bank Governors; ECB is Closely Monitoring Financial Markets; Statement by Minister Aso and Governor Kuroda on the U.K.'s Decision to Leave the E.U.; and The Federal Reserve is Carefully Monitoring Developments in Global Financial Markets.

Heightened and persistent uncertainty is another factor that can affect the economy. When the exit decision was announced, investors moved away from risk assets. Higher credit spreads and lower equity prices, coupled with continued uncertainty, could put firms and households in a wait-and-see mode, reducing economic activity for a time. In his speech yesterday, Bank of England Governor Mark Carney highlighted the dampening effect uncertainty could have on economic performance in the U.K. and indicated possible responses to it.[5]

As I said, it is too soon to judge the full magnitude of such effects. At this point, we need to continue to monitor developments. For example, some of the tightening in financial conditions after the announcement of the vote's outcome has been reversed in recent days. As we see how things play out, we will have a better sense of whether the medium-run U.S. economic outlook has been meaningfully affected and whether that changes our assessment of appropriate U.S. monetary policy going forward. Monetary policymakers cannot let the lack of economic clarity distract us from our important mission. We must continue to use the best available models, analysis, and judgment to assess the situation. As an FOMC member, I will remain focused on and committed to setting monetary policy to promote the Federal Reserve's longer-run goals of price stability and maximum employment for the benefit of the public.

[5] Mark Carney, "Uncertainty, the Economy and Policy," Bank of England, June 30, 2016.