

For release on delivery  
12:30 p.m. EDT  
July 10, 2015

Recent Developments and the Outlook for the Economy

Remarks by

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Chair

Board of Governors of the Federal Reserve System

at

The City Club of Cleveland

Cleveland, Ohio

July 10, 2015

Thank you, President Mester, and thank you to the City Club for inviting me to speak today. I am aware of the club's history and its tradition of promoting the free exchange of ideas, and I will do my best to allow plenty of time for your questions, which I understand are an important part of that tradition.

Communicating with the public is an important part of my job. A few weeks ago, I held a news conference after the latest meeting of the Federal Open Market Committee (FOMC). Next week I will deliver the Federal Reserve's semiannual report on monetary policy and answer questions from members of Congress at public hearings of the House and the Senate.

On those occasions and in appearances such as this one today, the aim is to account for the FOMC's policy actions and explain how they are intended to achieve the specific goals that the Congress has assigned us. We do so because it is important that the Federal Reserve remains accountable within the framework of our democracy. We also do so because we can more effectively achieve our mandated goals--maximum employment and price stability--as well as help maintain stability in the financial system if people understand what we are doing and why. Finally, it's important for us to hear perspectives and experiences from a wide range of participants in the economy. This club stands for free and open communication, and so does the Federal Reserve.

### **The Recovery from the Great Recession**

This month marks six years since the end of the Great Recession--our nation's most severe economic downturn since the 1930s. U.S. economic output--as measured by inflation-adjusted gross domestic product, or real GDP--fell more than 4 percent from the end of 2007 to the middle of 2009. One of the hardest-hit industries was manufacturing,

which, as you well know, is important to Ohio. The unemployment rate peaked at 10 percent nationally, and it reached 11 percent here in Ohio. U.S. nonfarm payrolls shrank by 8-1/2 million jobs during 2008 and 2009, or about 6 percent of the national workforce. Over that same period, Ohio lost more than 400,000 jobs, or 7-1/2 percent of the state's employment.

In response to the financial crisis, the severe recession, and the risk that inflation would fall persistently far below levels consistent with price stability, we at the Federal Reserve took forceful actions. The FOMC aggressively cut our short-term interest rate target, the federal funds rate, from above 5 percent to near zero by the end of 2008 to lower borrowing costs and help spur household spending and business investment. With short-term interest rates near zero, the FOMC provided further support to the economy through our large-scale asset purchases--buying large amounts of Treasury and mortgage-related securities in the open market. These purchases pushed down longer-term borrowing rates for millions of American families and businesses. During the economic recovery, we put additional downward pressure on longer-term borrowing rates by explaining publicly that we intended to keep short-term interest rates low for a long time. Longer-term borrowing rates, such as those for mortgages and automobile loans, are lower if people expect short-term rates in the future to remain low or to rise only very gradually.

Although evidence suggests that our policy actions were effective, the pace of the economic recovery has been slow.<sup>1</sup> Growth in real GDP has averaged only about

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<sup>1</sup> A number of studies have found that the Federal Reserve's asset purchases put downward pressure on long-term interest rates. These include Joseph Gagnon, Matthew Raskin, Julie Remache, and Brian Sack (2011), "The Financial Market Effects of the Federal Reserve's Large-Scale Asset Purchases," *International Journal of Central Banking*, vol. 7 (March), pp. 3-43; and Stefania D'Amico, William

2-1/4 percent per year since 2009, about 1 percentage point less than the average rate seen over the 25 years preceding the Great Recession. In Ohio, economic output has increased at about the same pace as in the nation as a whole in recent years. In the labor market, the U.S. unemployment rate stood at 5.3 percent in June, around half as high as its peak after the recession and close to many economists' assessment of its longer-run natural rate--the level that can be sustained without risking excessive inflation. The U.S. economy has created 12 million jobs since the labor market's low point, and total nonfarm payrolls are now 3-1/2 million greater than just prior to the recession. Ohio's unemployment rate has declined even more during the recovery than the nation as a whole, and at 5.2 percent in May, it was somewhat below the U.S. average in that month. Nevertheless, although nonfarm payrolls in Ohio have increased by around 400,000 jobs since the low point for the state's employment, payrolls have yet to surpass their level just prior to the recession.

Manufacturing is important to Ohio, and people here are keenly aware of the challenges that American manufacturing has faced for many years. U.S. manufacturing output--as measured in the Federal Reserve's index of industrial production--plunged about 20 percent during the recession. That's substantially more than the overall percentage decline in economic output. Partly as a result, U.S. manufacturing employment fell 2-1/4 million during 2008 and 2009, a significantly larger percentage decline than occurred in overall employment. And while manufacturing employment

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English, David López-Salido, and Edward Nelson (2012), "The Federal Reserve's Large-Scale Asset Purchase Programs: Rationale and Effects," *Economic Journal*, vol. 122 (November), pp. F415-46. Moreover, the Federal Reserve's forward guidance and asset purchase policies have been estimated to have helped lower unemployment and boost inflation; see Eric M. Engen, Thomas Laubach, and David Reifschneider (2015), "The Macroeconomic Effects of the Federal Reserve's Unconventional Monetary Policies," Finance and Economics Discussion Series 2015-005 (Washington: Board of Governors of the Federal Reserve System, January), <http://dx.doi.org/10.17016/FEDS.2015.005>.

nationwide has increased about 850,000 since the end of 2009 as production has recovered, there are still almost 1-1/2 million fewer manufacturing jobs than just before the recession.

Unfortunately, the number of U.S. manufacturing jobs has been generally decreasing since its peak in the late 1970s. A similar trend has also been seen in Ohio, where manufacturing jobs have shrunk from about 25 percent of the state's private-sector employment in 1990 to about 15 percent now. So, some of the decline in manufacturing jobs since the recession reflects the longer-term structural downtrend of employment in this sector. But labeling a part of the losses in manufacturing jobs as structural, rather than related to the recession, in no way diminishes how wrenching those losses have been. This painful trend reflects a number of long-term challenges faced by domestic manufacturers, including the relative costs of labor and investment in producing domestically versus abroad. However, U.S. factory workers, on average, are more productive than their counterparts abroad, and domestic manufacturers report that they are looking for more workers with these greater skills as they increase their use of automation and redesign their production processes.

### **Current Conditions in the Labor Market**

As I noted, the national unemployment rate has declined markedly during the economic recovery. But it is my judgment that the lower level of the unemployment rate today probably does not fully capture the extent of slack remaining in the labor market-- in other words, how far away we are from a full-employment economy. In assessing labor market slack, we try to distinguish between the effects of cyclical fluctuations in the economy and the influences of longer-term structural changes, such as the aging of the

workforce and other demographic trends. Cyclical and structural factors both have affected a number of measures of labor market outcomes that bear on our assessment of slack, including labor force participation (that is, how many people are working or are actively looking for work), the number of people working part time who would rather work full time, the pace of hiring, and the rate at which people are quitting jobs.

Let's first consider the labor force participation rate. It continued to decline substantially after the recession ended, with the pace of those declines slowing only over the past year or so even as the unemployment rate has continued to fall. Many working-age people who are not in the labor force have chosen that status voluntarily; examples would include retirees, teenagers and young adults in school, and people staying home to care for children and other dependent family members. Even in a stronger job market, it is likely that many of these individuals would prefer not to work. And, indeed, a noticeable portion of the decline in labor force participation seen over the past decade or so clearly relates to the aging of baby boomers and their ongoing retirements.<sup>2</sup> However, the pace of decline in the participation rate accelerated during the recession, as some individuals who lost their jobs became discouraged and stopped looking for work. It appears that, despite a drop in the participation rate reported in June, the pace of this decline has slowed since early last year. Nevertheless I think a significant number of individuals still are not seeking work because they perceive a lack of good job opportunities, and that a stronger economy would draw some of them back into the labor force.

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<sup>2</sup> See Stephanie Aaronson, Tomaz Cajner, Bruce Fallick, Felix Galbis-Reig, Christopher Smith, and William Wascher (2014), "Labor Force Participation: Recent Developments and Future Prospects," *Brookings Papers on Economic Activity*, Fall, pp. 197-275, [www.brookings.edu/~media/Projects/BPEA/Fall-2014/Fall2014BPEA\\_Aaronson\\_et\\_al.pdf](http://www.brookings.edu/~media/Projects/BPEA/Fall-2014/Fall2014BPEA_Aaronson_et_al.pdf).

Another factor we consider when assessing labor market slack is the elevated number of workers who are employed in part-time jobs but would prefer to have full-time work--in other words, those classified as “part time for economic reasons.” At around 4-1/2 percent of employment, the share of such workers is notably larger than has been historically typical in a growing economy. Some portion of the greater share of workers who are part time for economic reasons may reflect structural rather than cyclical factors.<sup>3</sup> For example, the ongoing shift in employment away from manufacturing and toward services, a sector which historically relied more heavily on part-time workers, may be boosting the share of part-time jobs. Despite these structural trends, which make it difficult to know where the share of those employed part time for economic reasons may settle in the longer run, I continue to think that it probably remains higher than it would be in a full-employment economy.

Other indicators also generally corroborate the view that while the labor market has improved, it still has not fully recovered. For example, the rate at which employees quit their jobs for other opportunities has tended to go up in a strong economy, since more workers voluntarily leave their jobs when they have greater confidence about their ability to find new ones and when firms are competing more actively for new hires. Indeed, the quits rate has picked up as the labor market has improved over the past few years, but it still is not as high as it was through much of the early 2000s. Another important indicator is the number of available positions, or job openings, that employers currently have posted. Job openings have increased significantly over the past year and a

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<sup>3</sup> See Tomaz Cajner, Dennis Mawhirter, Christopher Nekarda, and David Ratner (2014), “Why Is Involuntary Part-Time Work Elevated?” FEDS Notes (Washington: Board of Governors of the Federal Reserve System, April 14), [www.federalreserve.gov/econresdata/notes/feds-notes/2014/why-is-involuntary-part-time-work-elevated-20140414.html](http://www.federalreserve.gov/econresdata/notes/feds-notes/2014/why-is-involuntary-part-time-work-elevated-20140414.html).

half, and, in another encouraging sign, the pace of hiring has also stepped up in the past year or so, though it too continues to run somewhat below the levels that prevailed through the middle part of the last decade.

Finally, the pace of wage increases also may help shed some light on the degree of labor market slack, since wage movements historically have tended to respond to the degree of tightness in the labor market. Here too, however, the signal is not entirely clear, as other factors such as longer-run trends in productivity growth also generally influence the growth of compensation. Key measures of hourly labor compensation rose at an annual rate of only around 2 percent through most of the recovery. More recently, however, some tentative hints of a pickup in the pace of wage gains may indicate that the objective of full employment is coming closer into view.

### **Recent Inflation Developments**

While the labor market has moved closer to the FOMC's mandated goal of maximum employment, less progress has been made in moving inflation close to the FOMC's longer-run objective of 2 percent, which the Committee considers to be consistent with our mandated goal of price stability. Overall consumer price inflation has been close to zero over the past year, in large part because the big drop in crude oil prices since last summer has pushed down prices for gasoline and other consumer energy products. Price inflation excluding the volatile categories of energy and food prices, or so-called core inflation, is often a better indicator of future overall inflation. But it too is running below our 2 percent objective and has been over most of the recovery. The recent low level of core inflation--1.2 percent over the past 12 months--partly reflects the appreciation of the foreign exchange value of the U.S. dollar during the second half of



last year, as global financial markets seemed to judge that our economy was relatively stronger than those of many of our trading partners. The stronger dollar has pushed down the prices of imported goods, and that, in turn, has put downward pressure on core inflation. In addition, the plunge in oil prices may have had some indirect effects in holding down the prices of non-energy items in core inflation, as producers passed on to their customers some of the cost savings from lower energy prices. In all, however, these downward pressures seem to be abating, and the effects of these transitory factors are expected to fall out of measures of inflation by early next year.

Very low inflation may not sound like a real problem to many people. However, persistently low price inflation, which can tend to slow the pace of wage increases over time, can weaken the economy by, for example, making it more difficult for households and firms to pay off their debts. A persistent, very low inflation environment also tends to result in chronically low short-term interest rates. This type of situation would leave less scope for the FOMC to respond with its conventional monetary policy tool--namely, a cut in the federal funds rate--to counteract a weakening in the economy.

### **The Outlook for the Economy**

Let me turn now to where I think the economy is headed over the next several years. The latest estimates show that both real GDP and industrial production actually edged down in the first quarter of this year. Some of this weakness appears to be the result of factors that I expect will be only transitory, such as the unusually harsh winter weather in some regions of the country and the West Coast port labor dispute that briefly restrained international trade and caused disruptions in manufacturing supply chains. Also, statistical noise or measurement issues may have played some role. This is not the

first time in recent years that real GDP has been reported to decline, or grow unusually slowly, in the first quarter of the year. There is a healthy debate among economists--many within the Federal Reserve System--about some of the technical factors that may lie behind this pattern.<sup>4</sup> Nevertheless, at least a couple of other more persistent factors also likely weighed on economic output and industrial production in the first quarter. In particular, the higher foreign exchange value of the dollar that I mentioned, as well as weak growth in some foreign economies, has restrained the demand for U.S. exports. Moreover, lower crude oil prices have significantly depressed business investment in the domestic energy sector. Indeed, industrial production continued to decline somewhat in April and May. We expect the drag on domestic economic activity from these factors to ease over the course of this year, as the value of the dollar and crude oil prices stabilize, and I anticipate moderate economic growth, on balance, for this year as a whole. As always, however, the economic outlook is uncertain. Notably, although the economic recovery in the euro area appears to have gained a firmer footing, the situation in Greece remains unresolved.

Looking further ahead, I think that many of the fundamental factors underlying U.S. economic activity are solid and should lead to some pickup in the pace of economic

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<sup>4</sup> See Charles E. Gilbert, Norman J. Morin, Andrew D. Paciorek, and Claudia R. Sahm (2015), "Residual Seasonality in GDP," FEDS Notes (Washington: Board of Governors of the Federal Reserve System, May 14), [www.federalreserve.gov/econresdata/notes/feds-notes/2015/residual-seasonality-in-gdp-20150514.html](http://www.federalreserve.gov/econresdata/notes/feds-notes/2015/residual-seasonality-in-gdp-20150514.html); Glenn D. Rudebusch, Daniel Wilson, and Tim Mahedy (2015), "The Puzzle of Weak First-Quarter GDP Growth," FRBSF Economic Letter 2015-16 (San Francisco: Federal Reserve Bank of San Francisco, May), [www.frbsf.org/economic-research/publications/economic-letter/2015/may/weak-first-quarter-gdp-residual-seasonality-adjustment/el2015-16.pdf](http://www.frbsf.org/economic-research/publications/economic-letter/2015/may/weak-first-quarter-gdp-residual-seasonality-adjustment/el2015-16.pdf); Tom Stark (2015), "First Quarters in the National Income and Product Accounts," Research Rap--Special Report (Philadelphia: Federal Reserve Bank of Philadelphia, May), [https://www.philadelphiafed.org/-/media/research-and-data/publications/research-rap/2015/first\\_quarters\\_national\\_income\\_product\\_accounts.pdf](https://www.philadelphiafed.org/-/media/research-and-data/publications/research-rap/2015/first_quarters_national_income_product_accounts.pdf); and Jan Groen and Patrick Russo (2015), "The Myth of First-Quarter Residual Seasonality," *Liberty Street Economics* (blog), Federal Reserve Bank of New York, June 8, <http://libertystreeteconomics.newyorkfed.org/2015/06/the-myth-of-first-quarter-residual-seasonality.html>.

growth in the coming years. In particular, I anticipate that employment will continue to expand and the unemployment rate will decline further.

An improving job market should, in turn, help support a faster pace of household spending growth. Additional jobs and potentially faster wage growth bolster household incomes, and lower energy prices mean consumers have more money to spend on other goods and services. In addition, growing employment and wages should make consumers more comfortable in spending a greater portion of their incomes than they have been in the aftermath of the Great Recession. Moreover, increases in house values and stock market prices, along with reductions in debt in recent years, have pushed up households' net worth, which also should support more spending. Finally, interest rates faced by borrowers remain low, reflecting the FOMC's highly accommodative monetary policies. Indeed, recent encouraging data about retail sales and light motor vehicle purchases in the beginning of the second quarter could be an indication that the pace of consumer spending is picking up.

Another positive factor for the outlook is that the drag on economic growth in recent years from changes in federal fiscal policies appears to have waned. Temporary fiscal stimulus measures supported economic output during the recession and early in the recovery, but those stimulus measures have since expired, and additional policy actions were taken to reduce the federal budget deficit. By 2011, these changes in fiscal policies were holding back economic growth. However, the effects of those fiscal policy actions now seem to be mostly behind us.<sup>5</sup>

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<sup>5</sup> The Congressional Budget Office estimates that current federal fiscal policies will have little effect on economic growth this year, but that earlier fiscal policy actions reduced the rate of real GDP growth roughly 1-1/2 percentage points in 2013 and about 1/4 percentage point in 2014 relative to what it would

There are a couple of factors, however, that I expect could restrain economic growth. First, business owners and managers remain cautious and have not substantially increased their capital expenditures despite the solid fundamentals and brighter prospects for consumer spending. Businesses are holding large amounts of cash on their balance sheets, which may suggest that greater risk aversion is playing a role. Indeed, some economic analysis suggests that uncertainty about the strength of the recovery and about government economic policies could be contributing to the restraint in business investment.<sup>6</sup>

A second factor that could restrain economic growth regards housing. While national home prices have been rising for a few years and home sales have improved recently, residential construction has remained quite soft. Many households still find it difficult to obtain mortgage credit, but, more generally, the weak job market and slow wage gains in recent years appear to have induced people to double-up on housing. For example, many young adults continue to live with their parents. Population growth is creating a need for more housing, whether to rent or to own, and I do expect that continuing job and wage gains will encourage more people to form new households. Nevertheless, activity in the housing sector seems likely to improve only gradually.

Regarding inflation, as I mentioned earlier, the recent effects of lower prices for crude oil and for imports on overall inflation are expected to wane during this year. Combined with further tightening in labor and product markets, I expect inflation will move toward the FOMC's 2 percent objective over the next few years. Importantly, a

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have been otherwise. See Congressional Budget Office, *The Budget and Economic Outlook: 2015 to 2025* (Washington: CBO, January), p. 32, <https://www.cbo.gov/publication/49892>.

<sup>6</sup> A recent survey of this research is presented by Nicholas Bloom (2014), "Fluctuations in Uncertainty," *Journal of Economic Perspectives*, vol. 28 (Spring), pp. 153-76.

number of different surveys indicate that longer-term inflation expectations have remained stable even as recent readings on inflation have fallen. If inflation expectations had not remained stable, I would be more concerned because consumer and business expectations about inflation can become self-fulfilling.

### **Implications for Monetary Policy**

My own outlook for the economy and inflation is broadly consistent with the central tendency of the projections submitted by FOMC participants at the time of our June meeting. Based on my outlook, I expect that it will be appropriate at some point later this year to take the first step to raise the federal funds rate and thus begin normalizing monetary policy. But I want to emphasize that the course of the economy and inflation remains highly uncertain, and unanticipated developments could delay or accelerate this first step. We will be watching carefully to see if there is continued improvement in labor market conditions, and we will need to be reasonably confident that inflation will move back to 2 percent in the next few years.

Let me also stress that this initial increase in the federal funds rate, whenever it occurs, will by itself have only a very small effect on the overall level of monetary accommodation provided by the Federal Reserve. Because there are some factors, which I mentioned earlier, that continue to restrain the economic expansion, I currently anticipate that the appropriate pace of normalization will be gradual, and that monetary policy will need to be highly supportive of economic activity for quite some time. The projections of most of my FOMC colleagues indicate that they have similar expectations for the likely path of the federal funds rate. But, again, both the course of the economy and inflation are uncertain. If progress toward our employment and inflation goals is

more rapid than expected, it may be appropriate to remove monetary policy accommodation more quickly. However, if progress toward our goals is slower than anticipated, then the Committee may move more slowly in normalizing policy.

### **Long-Run Economic Growth**

Before I conclude, let me very briefly place my discussion of the economic outlook into a longer-term context. The Federal Reserve contributes to the nation's economic performance in part by using monetary policy to help achieve our mandated goals of maximum employment and price stability. But success in promoting these objectives does not, by itself, ensure a strong pace of long-run economic growth or substantial improvements in future living standards. The most important factor determining continued advances in living standards is productivity growth, defined as the rate of increase in how much a worker can produce in an hour of work. Over time, sustained increases in productivity are necessary to support rising household incomes.

Here the recent data have been disappointing. The growth rate of output per hour worked in the business sector has averaged about 1-1/4 percent per year since the recession began in late 2007 and has been essentially flat over the past year. In contrast, annual productivity gains averaged 2-3/4 percent over the decade preceding the Great Recession. I mentioned earlier the sluggish pace of wage gains in recent years, and while I do think that this is evidence of some persisting labor market slack, it also may reflect, at least in part, fairly weak productivity growth.

There are many unanswered questions about what has slowed productivity growth in recent years and about the prospects for productivity growth in the longer run. But we do know that productivity ultimately depends on many factors, including our workforce's

knowledge and skills along with the quantity and quality of the capital equipment, technology, and infrastructure that they have to work with. As a general principle, the American people would be well served by the active pursuit of effective policies to support longer-run growth in productivity. Policies to strengthen education and training, to encourage entrepreneurship and innovation, and to promote capital investment, both public and private, could all potentially be of great benefit in improving future living standards in our nation.

Thank you, again, to the City Club for inviting me to Cleveland and for the opportunity to speak to you today.