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Economic Outlook and Monetary Policy

Remarks by

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The will-they-or-won't-they drumbeat has grown louder of late. To remove the suspense, I do not intend to make any calendar-based statements here today. Rather, I would like to give you a sense of the considerations that weigh on both sides of that debate and lay out the case for watching and waiting.<sup>1</sup>

## **The Outlook**

Domestic real activity has proven reassuringly resilient. Most notably, the labor market has continued to improve this year, pushing the economy closer to full employment. While monthly nonfarm payroll employment growth looks to have slowed over the past three months to a 167,000 monthly pace, so far this year it has averaged about 200,000. With these gains more than sufficient to absorb trend growth in the labor force, they have led to gradual increases in resource utilization. At 5.1 percent in September, the unemployment rate has declined ½ percentage point since December. Alternative broader gauges of unemployment--which include individuals who are marginally attached to the labor force and employees working part-time for economic reasons--have also shown steady improvement this year.

Even so, a variety of evidence suggests there may be some distance to go to achieve full employment. Although the unemployment rate is near longer-run norms, other measures of labor utilization are not. The labor force participation rate remains materially below the pre-recession trend, even after adjusting for demographics.<sup>2</sup> And

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<sup>1</sup> These remarks represent my own views, which do not necessarily represent those of the Federal Reserve Board or the Federal Open Market Committee.

<sup>2</sup> Much of the decline in recent years is due to the aging of the baby boom cohort. But even holding demographics constant, the participation rate is considerably lower now than before the recession, suggesting it is cyclically depressed. Aaronson and others (2014) find that demographics can explain only about half of the decline in the participation rate since the end of 2007.

Thus, it may be a while further before the participation rate fully reacts to the full amount of improvement in labor market conditions that we have seen thus far, since wage growth has remained low,

the share of employees working part time for economic reasons remains a full percentage point above the pre-recession level of around 3 percent, despite considerable recent improvement. Even if there has been some trend increase in part-time work, it seems unlikely to account for all of the difference between current levels and pre-recession levels.<sup>3</sup>

Perhaps the most striking evidence in support of continued labor market slack is the absence of any acceleration in wages and prices. Our main gauges of wage inflation suggest that labor compensation is increasing at a pace of about 2 to 2-1/4 percent, little different from the rate of increase over the past several years. Indeed, the lack of wage acceleration is likely one of the key reasons that many Federal Open Market Committee (FOMC) participants have revised down their estimates of the longer-run level of the unemployment rate. Most recently, a majority of participants moved their estimates below 5 percent.<sup>4</sup> By comparison, in September 2012, the central tendency of estimates of the longer-run unemployment rate ranged from 5.2 to 6.0 percent.

More broadly, domestic real activity appears likely to continue to grow at a moderate pace. Domestic final sales, which exclude net exports and the volatile category of inventory investment, increased at an annual rate of 2-3/4 percent in the first half of

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and the decision to participate in the labor force may respond with a lag to cyclical improvements. See Aaronson and others (2014) and Erceg and Levin (2014).

<sup>3</sup> Changes in the structure of labor demand, such as a shift toward occupations or industries characterized by flexible and part-time hours, may have led to an increase in the equilibrium level of part-time work. For more on this issue, see Cajner and others (2014) and Valletta and van der List (2015). If workers combine two or more part-time jobs to arrive at a full-time workweek, part-time employment could be elevated with average weekly hours at normal levels. But the logistical costs of multiple job holding make such an outcome unlikely, and in recent years elevated part-time employment has not coincided with an increase in official estimates of multiple job holding.

<sup>4</sup> See “Figure 3.B, Distribution of Participants’ Projections for the Unemployment Rate, 2015-18 and over the Longer Run,” in the Summary of Economic Projections, addendum to the minutes of the September 2015 FOMC meeting, released on October 8, 2015, and available at [www.federalreserve.gov/monetarypolicy/files/fomcminutes20150917.pdf](http://www.federalreserve.gov/monetarypolicy/files/fomcminutes20150917.pdf).

the year, and recent indicators suggest a similar pace in the second half. Perhaps most notable, personal consumption expenditures are estimated to have increased at an annual rate of a little over 3 percent in the three months ending in August, and auto sales moved up to a strong 18.1 million unit annualized pace in September. Thus, even though equity prices are down this year, continued job growth, lower gas prices, rising house prices and some loosening in consumer credit look likely to support consumer spending over the second half of the year.

Moreover, domestic investment also looks to be increasing at a moderate pace despite the drag from the energy sector. New orders and shipments of nondefense capital goods have turned up recently, pointing to positive equipment investment going forward, and investment in nonresidential buildings looks to have risen noticeably in the middle of the year. While investment in energy-related structures will likely move lower over the second half of the year in response to the most recent step-down in oil prices, the decline should be smaller than the sharp decline in the first half.

Importantly, recent data suggest that the gradual recovery in housing continues. Single-family building permits were close to an annual rate of 700,000 units in August, up nearly 5 percent from the fourth quarter of last year. The improvement in single-family housing is welcome after having been somewhat slow to materialize. Even so, current levels remain below what would be suggested by fundamentals, such as population growth.

While private consumption and investment thus appear to be on reassuringly solid trajectories, growth in government expenditures on goods and services is likely to remain tepid. Combined purchases at the federal, state, and local levels rose at an annual rate of

only 1-1/4 percent in the first half of the year, and modest growth in revenue at the state and local level suggest continued limited gains going forward. In addition, spending restrictions in the Budget Control Act and the winding down of defense spending related to Afghanistan and Iraq have led to restraint at the federal level, although there is some uncertainty on the federal budget outlook.

In contrast to the considerable progress in the labor market, progress on the second leg of our dual mandate has been elusive. To be clear, I do not view the improvement in the labor market as a sufficient statistic for judging the outlook for inflation. A variety of econometric estimates would suggest that the classic Phillips curve influence of resource utilization on inflation is, at best, very weak at the moment. The fact that wages have not accelerated is significant, but more so as an indicator that labor market slack is still present and that workers' bargaining power likely remains weak.

Overall inflation has been subdued, running persistently below our 2 percent target. The personal consumption expenditures (PCE) price index increased only 0.3 percent over the 12 months ending in August. Much of the weakness in this index can be explained by the drop in oil and energy prices over the past year. Assuming energy prices stabilize going forward, as futures markets suggest, then energy should be a neutral or perhaps even a small positive influence on inflation next year.

But inflation has been stubbornly low, even excluding energy prices. Over the 12 months ending in August, core PCE prices, which exclude the often volatile categories of food and energy, increased 1.3 percent, and the 12-month change in core prices has been around 1-1/4 to 1-1/2 percent since the beginning of 2013.

The persistence of the weakness in core price inflation deserves attention. For the post-recession period as a whole, low levels of resource utilization surely accounted for a substantial part of the weakness. But resource utilization has increased dramatically since 2009, and core price inflation has remained quite low.

A sizable decline in import prices over the past year has also contributed. As a result of the sharp increase in the dollar over the past year or so, prices for non-oil imports fell at an annual rate of a little over 4 percent in the first half of the year and look to decline a further 2 percent at an annual rate over the second half. Estimates suggest the dollar's rise will hold down core inflation between 1/4 and 1/2 percentage point this year, restraint that would wane if the dollar stabilized going forward.

However, recent weakness is not completely explained by import prices. Services prices excluding energy, which are generally relatively little affected by changes in the dollar, have also shown no sign of acceleration in recent years. Instead, inflation in this category has moved lower over the past year. In August, the 12-month change in non-energy services prices was 2 percent, 1/4 percentage point lower than the pace of increase from 2012 through the middle of 2014.

The outlook for inflation is critical for purposes of assessing progress toward our 2 percent goal, since monetary policy operates with a lag. In this regard, the gravitational force of long-term inflation expectations is critically important. Although the story on this front is mostly reassuring, it warrants monitoring. Projections from the Survey of Professional Forecasters suggest that longer-run inflation expectations--which appear to be most relevant for predicting future inflation--have remained at 2 percent since the end of 2012. Household surveys, such as University of Michigan Surveys of Consumers,

suggest that households' longer-run inflation expectations have remained in a narrow range throughout the crisis and the recovery, although they have stayed in the lower end of that range over the past year. In contrast, market-based measures of inflation compensation, such as inflation swaps and the difference between nominal and inflation-indexed Treasury bond yields, have declined noticeably over the past year and a half at longer-term horizons. Of course, factors other than inflation expectations, such as changes in liquidity premiums and inflation risk premiums, may be at play.

Although the balance of evidence thus suggests that long-term inflation expectations are likely to have remained fairly steady, the risks to the near-term outlook for inflation appear to be tilted to the downside, given the persistently low level of core inflation and the recent decline in longer-run inflation compensation, as well as the deflationary cross currents emanating from abroad--a subject to which I now turn.

Over the past 15 months, U.S. monetary policy deliberations have been taking place against a backdrop of progressively gloomier projections of global demand. The International Monetary Fund (IMF) has marked down 2015 emerging market and world growth repeatedly since April 2014.

In the second half of 2014, persistently weak aggregate demand in Japan and the Euro Area led to heightened deflationary pressures. The policy response to these pressures and the anticipated divergence between the policy trajectory in these economies and the United States contributed to a 10 percent appreciation in the dollar in inflation-adjusted terms through the spring of this year, pushing down net exports and restraining activity in the United States. Net exports subtracted nearly 1 percentage point from the

annual rate of U.S. gross domestic product (GDP) growth in the first part of the year, and the most recent trade data suggest another substantial subtraction in the third quarter.

More recently, weakness in foreign demand has extended to emerging market economies, which now account for about half of world output and have been an important source of growth for more than the past decade. Growing recognition of this weakness pushed the dollar up further to 15 percent above its level last summer, and has contributed to a more general tightening of financial conditions in the past few months.

Much of the focus has been on China, whose large size and double-digit growth rate put it at the center of a powerful global commodity super-cycle over the past decade. Consequently, the challenges China faces today are raising questions about emerging market growth prospects more broadly. Most immediately, China's buildup of past property, and more-recent stock market, bubbles together with a steep run-up in business debt levels and questions about the policy stance and the outlook have raised concerns about downside risks.

In weighing the implications for the U.S. outlook, it would be misleading to focus narrowly on the direct effect of U.S.-Chinese bilateral trade alone. Many commodity-exporting countries that have depended heavily on Chinese demand are adjusting with difficulty to the recent sharp commodity price declines. After increasing at an average rate of nearly 5-1/2 percent over the period from 2003 through 2011, GDP growth in emerging market commodity exporters is projected to be only 3-1/2 percent this year. Projected growth going forward has also been marked down materially. Moreover, more developed economies, such as Mexico and Canada, our most important trading partners,



have also been affected, with Canadian GDP declining in the first two quarters of the year.<sup>5</sup>

In addition, many non-commodity-producing East Asian economies are closely tied to China through trade and investment. Because of these ties, and for other idiosyncratic reasons, growth in East Asian economies has been weak so far this year. Growth in emerging Asia economies outside of China that are important destinations of U.S. exports slipped to 2-1/2 percent in the first half of the year, well below a trend rate of close to 5 percent.

Downgrades to foreign growth affect the U.S. outlook through several channels. First, weak growth abroad reduces demand for U.S. exports. Second, the expected divergence in U.S. growth increases demand for U.S. assets, putting upward pressure on the dollar, which, in turn, weighs on net exports. The estimated effect of dollar appreciation on net exports has been shown to be substantial and to persist for several years.<sup>6</sup> Weak demand weighs on global commodity prices, which, together with the effects on the dollar, restrains U.S. inflation. Finally, the anticipation of weaker global growth can make market participants more attuned to downside risks, which can reduce prices for risky assets, both abroad and in the United States--as we saw in late August--with attendant effects on consumption and investment.

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<sup>5</sup> For more detail on the recent experiences and likely prospects of commodity exporters, see “Where Are Commodity Exporters Headed? Output Growth in the Aftermath of the Commodity Boom,” chapter 2 of the International Monetary Fund’s (IMF, 2015) *World Economic Outlook*, available at [www.imf.org/external/pubs/ft/weo/2015/02/pdf/c2.pdf](http://www.imf.org/external/pubs/ft/weo/2015/02/pdf/c2.pdf).

<sup>6</sup> Looking across a broad set of countries, the IMF (2015) estimates that a 10 percent appreciation in the real exchange rate will cause an eventual 1.5 percentage point reduction in the contribution of net exports to real GDP, with effects lasting for several years (see chapter 3, “Exchange Rates and Trade Flows: Disconnected?” available at [www.imf.org/external/pubs/ft/weo/2015/02/pdf/c3.pdf](http://www.imf.org/external/pubs/ft/weo/2015/02/pdf/c3.pdf)).

Over the past year, a feedback loop has transmitted market expectations of policy divergence between the United States and our major trade partners into financial tightening in the U.S. through exchange rate and financial market channels. Thus, even as liftoff is coming into clearer view ahead, by some estimates, the substantial financial tightening that has already taken place has been comparable in its effect to the equivalent of a couple of rate increases.

Looking ahead, one of the biggest sources of known uncertainty to the U.S. outlook is whether this foreign weakness fades or intensifies. A plausible baseline scenario might include a soft landing in China and growth in other emerging markets moving gradually back up to underlying trends. Of course, it is possible that a recovery in emerging market growth occurs sooner than in the baseline, such that the U.S. economy moves modestly more quickly toward our goals.

However, demand in emerging markets could also fall short of such a baseline. China is only part-way through challenging economic adjustments and financial market reforms, including reform of its exchange rate regime, debt deleveraging, and rebalancing of its economy toward more consumer-driven growth. During this process, market participants may have less accuracy in forecasting developments in China relative to many other major economies due to less clarity regarding the macroeconomic data and the policy framework. A more negative assessment of underlying Chinese growth fundamentals or its exchange rate regime would likely affect other important economies in the region, as well as commodity-producing economies, pushing global demand down further. In turn, expectations of additional weakness in global demand could have

important effects on the exchange rate of the dollar, the valuation of risky assets in the United States, and U.S. inflation, moving the economy further from our goals.

### **Policy Considerations**

There is a risk that the intensification of international cross currents could weigh more heavily on U.S. demand directly, or that the anticipation of a sharper divergence in U.S. policy could impose restraint through additional tightening of financial conditions. For these reasons, I view the risks to the economic outlook as tilted to the downside. The downside risks make a strong case for continuing to carefully nurture the U.S. recovery--and argue against prematurely taking away the support that has been so critical to its vitality.

These risks matter more than usual because the ability to provide additional accommodation if downside risks materialize is, in practice, more constrained than the ability to remove accommodation more rapidly if upside risks materialize. The asymmetry in risk management stems from the combination of the likely low current level of the neutral real interest rate and the effective lower bound. Let me take each in turn.

First, casual empiricism would suggest that we are experiencing a period of unusually low rates not only in the United States but also at the global level. Ten-year sovereign bond yields in G-7 economies excluding Japan currently range from just above 1/2 percent to just above 2 percent--well below the average range of 4 1/2 to 5 percent in

the decade before the financial crisis.<sup>7</sup> This observation receives substantial support from a number of rigorous empirical papers over the past year that have estimated the longer-run equilibrium federal funds rate to be lower now than previously.<sup>8</sup> The projection of a relatively low neutral rate over the next few years also receives some weight in the September 2015 Summary of Economic Projections. Most FOMC participants lowered their estimate of the appropriate target level for the federal funds rate in the long run, and a majority of participants now forecast a level no higher than 3.62 percent--down from 4.12 percent in September 2012.<sup>9</sup> A lower equilibrium funds rate implies a higher probability of policy being constrained by a lower bound for nominal interest rates.

Second, the ability of policymakers to react to unexpected shocks using conventional tools remains highly asymmetric in the neighborhood of an effective lower bound. From the perspective of risk management, in today's circumstances, we have considerably greater latitude to adjust the path of policy in response to inflation that exceeds current forecasts than we have to provide additional accommodation in response to additional adverse shocks.

Consider two possible scenarios. First, many observers have suggested that the economy will soon begin to strain available resources without some monetary tightening.

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<sup>7</sup> In Japan, the level is currently around 0.3 percent, down from an average of 1.5 percent in the decade before the crisis.

<sup>8</sup> Building on the work of Laubach and Williams (2003), both Hamilton, Harris, Hatzius, and West (2015) and Kiley (2015), for example, have recently constructed alternative estimates of the longer-run equilibrium federal funds rate. While these papers differ in their estimates and acknowledge a considerable amount of uncertainty, they all weigh in on the side of a relatively low equilibrium federal funds rate over the next few years.

<sup>9</sup> See "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, 2015-18 and over the Longer Run," in the Summary of Economic Projections, addendum to the minutes of the September 2015 FOMC meeting, released October 8, 2015, [www.federalreserve.gov/monetarypolicy/files/fomcminutes20150917.pdf](http://www.federalreserve.gov/monetarypolicy/files/fomcminutes20150917.pdf).

Because monetary policy acts with a lag, in this scenario, high rates of resource utilization may lead to a large buildup of inflationary pressures, a rise in inflation expectations and persistent inflation in excess of our 2 percent target. However, we have well-tested tools to address such a situation and plenty of policy room in which to use them. Moreover, the persistently deflationary international environment, the gradual pace of increases in U.S. resource utilization, the estimated small effect of resource utilization on inflation, the likely low level of neutral interest rates, and the persistence of inflation below our 2 percent target suggests this risk remains modest. Financial markets appear to agree, as five-year inflation compensation is well below 2 percent.

Now, take the alternative risk: that the underlying momentum of the domestic economy is not strong enough to resist the deflationary pull of the international environment. A further step-down in global demand growth and a further strengthening in the dollar could increase the already sizable negative effect of the global environment on U.S. demand, pushing U.S. growth back to, or below, potential. Progress toward full employment and 2 percent inflation would stall or reverse. With limited ability to ease policy, it would be more difficult to move the economy back on track.

Indeed, many central banks in advanced economies have tightened policy since the financial crisis, prompted by improving domestic activity. In these cases, the tightening was reversed as the outlook evolved. Given the current uncertainty, we should put some weight on the risk of following this pattern. Indeed, market participants put the probability of returning to the zero lower bound within two years of liftoff at 20 percent.<sup>10</sup>

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<sup>10</sup> See the July 2015 “Responses to Survey of Market Participants,” from the Federal Reserve Bank of New York, available at <http://www.newyorkfed.org/markets/survey/2015/mp-July-result.pdf>.

To be fair, the past few years have demonstrated the capacity and will of central banks in many jurisdictions to deploy unconventional monetary policy tools, including quantitative and credit easing, forward guidance, and negative rates. That said, resorting to such tools is not without costs and uncertainties.

We should not take the continued strength of domestic demand growth for granted. Although the outlook for domestic demand is good, global forces are weighing on net exports and inflation, and the risks from abroad appear tilted to the downside. Our economy has made good progress toward full employment, but sluggish wage growth suggests there is some room to go, and inflation has remained persistently below our target. With equilibrium real interest rates likely to remain low for some time and policy options that are more limited if conditions deteriorate than if they accelerate, risk-management considerations counsel a stance of waiting to see if the risks to the outlook diminish.

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