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"Prospects for Returning to More Conventional Monetary Policy"

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President & Chief Executive Officer
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Remarks at Colby College

Waterville, Maine
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Good evening. It is a pleasure to be in Maine, and to be speaking here at my alma mater.

At the outset, let me note as I always do that the views I will express are my own, not necessarily those of my colleagues at the Federal Reserve's Board of Governors or on the Federal Open Market Committee (the FOMC).

Before commenting on the national economy, allow me to say that I have been very impressed by the actions of Colby College and President Green in contributing to economic resurgence here in Waterville, Maine. So-called "anchor" institutions are critically important to the development of small cities, and an economically vibrant Waterville can pay large dividends for all of central Maine.

The recent announcement[1] that Collaborative Consulting will open operations in Waterville is an important initial step in returning jobs to an area of the state heavily impacted by retrenchment in lumber and manufacturing industries over the past 50 years. The collaborative work of state and local government, local business leaders, and anchor institutions (like a Colby College) represents one of the key ingredients that Boston Fed research by Kodrzycki and Muñoz has indicated can lead to rejuvenated cities.[2] And progress in small and mid-sized "post manufacturing" cities is vital to the economic success of so many Americans, given the large share of the population that lives in and around them.

Turning to the national economy, in December the FOMC raised short-term rates for the first time since the financial crisis, by a quarter of a point. That decision reflected further improvement in a range of recent labor market indicators, confirming that underutilization of labor resources has diminished – and the Committee's expectation that inflation will return to 2 percent, the inflation target set by the Federal Reserve, over the medium term.[3]

While labor markets have continued to improve gradually, headwinds generated from abroad have created more volatile financial markets and concerns that U.S. domestic growth may be impeded by these headwinds and inflation may not move as quickly to the inflation target.

The FOMC has made clear in the statements released after its meetings that future increases in interest rates will depend, in part, on "actual and expected progress toward" our inflation goal. My focus today will be the recent inflation data and the prospects of a return to the 2 percent target level for inflation.

While most observers expect that the appreciation of the dollar and the fall in oil prices will eventually stabilize, recent global events may make it less likely that the 2 percent inflation target will be achieved as quickly as had been projected in recent forecasts by private economists or by Federal Reserve policymakers. In my own view, if inflation is slower to return to target, monetary policy normalization should be unhurried. A more gradual approach is an appropriate response to headwinds from abroad that slow exports, and financial volatility that raises the cost of funds to many firms.[4] Of course, my view could change if we were to experience a more rapid abatement of headwinds, or much stronger domestic economic growth than I am currently anticipating.

Rather than expecting some sort of precise forward guidance, it is better for observers to recognize that monetary policy will be responsive to incoming economic data. Monetary policy will adjust when the accumulated data alter policymakers' combined outlook. For example, data coming in much stronger than forecast would result in interest rates going up more quickly than projections and, in contrast, data much weaker than forecast would result in interest rates going up more slowly than projections. It is important to view the interest rate projections of Fed policymakers found in the Summary of Economic Projections (or SEP) not as a promise, but rather as a projection of the path of rates *if* the economy evolves as expected. As incoming data alter those expectations, those projections can, and should, change.

Recent Data

Figure 1 shows the movement of stock prices since the beginning of this year. Clearly, stock markets around the globe have had a very disappointing start to the new year. Stock market prices in major developed countries have fallen, with European and Japanese stock markets declining by more than 10 percent. Particularly notable is the decline in Japan, despite the fact that monetary policy there has become more accommodative. Moreover, the country is an oil importer and, as such, should enjoy a net benefit from significantly lower energy prices.

With energy prices having declined quite significantly of late, measures of total inflation in most developed economies are quite low, with many hovering around zero. However, even without food and energy prices, *core* inflation rates remain well below 2 percent in many industrial economies, as **Figure 2** shows. While core PCE inflation in the United States is 1.4 percent, well below the inflation target of 2 percent, it is nonetheless higher than in Japan, Europe, or the U.K.

Figure 3 shows how far oil prices have fallen. The current price of oil is near the lows that occurred during the Great Recession. While the core inflation measure removes the direct impact of lower food and energy prices, there are still indirect effects because energy prices are an important input to many final goods. The declines to date in energy costs are likely to bring about continued temporary downward pressure on core inflation, at least through the spring of this year.

My assessment is that the energy price decline likely reflects a combination of supply and demand factors. The introduction of improved technology in oil extraction has greatly increased supply. In addition, the slowdown in global demand has likely contributed additional downward pressure on energy prices. However, other commodity prices have also experienced significant declines. **Figure 4** provides a broad non-energy commodity index and **Figure 5** provides an agricultural commodity index.[5] The decline in many commodities outside of energy is one reason that some analysts have been concerned with a possible broader decline in the global economy.[6]

Figure 6 illustrates another temporary restraint on U.S. inflation. The dollar has appreciated sharply over the past 18 months, as reflected in the trade-weighted currency exchange index.[7] Of course, the appreciation of the U.S. dollar poses a challenge to export-dependent businesses. The appreciation of the dollar makes U.S. exports more expensive to our trading partners and their exported goods cheaper for us. But the dollar appreciation also arises because global trading partners are experiencing weaker economic growth, requiring further monetary accommodation, at the same time that the United States has experienced relatively strong growth and has just begun to raise short-term rates. The higher-valued dollar makes imported goods cheaper, reducing U.S. inflation, as it raises the cost of U.S.-produced goods to foreign buyers. Exchange rate movements, much like energy price shocks, are likely to only temporarily depress core inflation; but still, these temporary factors make it unlikely that we will experience significant increases in total or core inflation in the near term.

Furthermore, there is one way that these temporary downward pressures on reported inflation could pose more permanent impediments to reaching the 2 percent inflation goal – if inflation *expectations* were to change as households and firms viewed the prospects for future inflation differently. **Figure 7** provides a relatively new measure from the Federal Reserve Bank of New York of consumers' expected inflation rate one and three years ahead. The survey does show a gradual but clear downward trend in inflation expectations over the past several years. This suggests we cannot take for granted that regular, persistent, but seemingly temporary shocks to inflation will not have a larger and more lasting impact.

Inflation Forecasts

Figure 8 provides the SEP forecasts for core inflation each December for the past four years. The forecasts all follow a similar pattern. At the time the forecast is made, core inflation is well below the 2 percent target. Over the course of the three-year forecast, inflation is projected to gradually increase and to generally fall just a bit short of the 2 percent target. However, **Figure 9** shows that the forecasts for a persistent drift up in core inflation have not been realized in actual inflation outcomes.

One interpretation of this pattern is that FOMC participants have been persistently surprised by transitory shocks to oil prices and the dollar, both of which have tended to depress inflation in recent years. However, a more troubling alternative would be that consistently missing on the inflation target reflects a change in the inflation process – for example, if inflation expectations were becoming less well anchored. Declines in surveys and market measures of inflation expectations would then imply a more serious impediment to achieving the 2 percent inflation target.

Figure 10 shows that inflation across spending components has varied quite a bit. For example, the housing component of the PCE index has risen more than 2 percent over the past year, while durable and non-durable goods prices have fallen. While this reflects relative supply and demand factors – as well as sensitivity to exchange rates – one might expect that a stabilization of the exchange rate would relieve some downward pressures in industries facing significant price competition from imports.

Another factor that would raise confidence that inflation will pick up as transitory factors abate, would be the continuing tightening of labor markets. The unemployment rate is currently at 4.9 percent. If U.S. economic growth induced additional tightening of labor markets, one might expect to see wages and salaries picking up in industries where demand is particularly strong. **Figure 11** shows that average hourly earnings and wages and salaries for private workers have been slowly increasing.[8] While the increases are more modest than those seen in previous recoveries, the gradual upward trend, were it to continue, would make me more confident of reaching the 2 percent inflation target.

Figure 12 provides wages and salaries by occupational grouping. No occupational group yet shows evidence of sufficient tightness in labor markets to require significantly higher wages and salaries. In sum, there is not much evidence of significant bottlenecks by occupational grouping, but overall there is some drifting up of wages and salaries more generally.

Concluding Observations

At the December meeting of the FOMC when rates were raised by a quarter of a percentage point, the Committee released its projections, which generally expected that the economy would grow a little faster than 2 percent, as shown in **Figure 13**. However, actual growth in 2015 (measured from the fourth quarter of 2014 to the fourth quarter of 2015) was 1.8 percent and fell just below the SEP forecast range shown in **Figure 13**, as fourth quarter growth was only 0.7 percent. The slowdown among some global trading partners, the decline in global stock prices, and the strong U.S. dollar could result in slower growth going forward than was expected at the time of that December meeting. While it is likely that much of the fourth-quarter weakness is due to temporary factors – for example, a modest inventory adjustment – if more pronounced global weakness were to materialize and be transmitted to the U.S., I personally believe there would be little need to raise rates until the economy was growing closer to its potential rate.

However, even with growth at or above potential, the outlook for actual and expected inflation remains uncertain. **Figure 14** shows the most recent SEP median forecast for the federal funds rate. The median forecast was for the federal funds rate to increase by a percentage point over the course of 2016. However, the SEP forecasts are made based on information available at that time. If the economy comes in significantly weaker (or stronger) than was expected at the time of the SEP forecast, or if we see noticeably less (or more) progress on inflation than was expected, that precise interest rate path would no longer be appropriate, in my view.

Since the December publication of the Summary of Economic Projections, we have seen oil prices decline and global stock indices become more volatile – and more generally a lack of inflationary pressures and the presence of global headwinds that make future economic growth somewhat more uncertain. Should these conditions persist, and slow progress on attaining the

Fed's dual mandate, I believe the normalization of monetary policy should be unhurried, and wait for economic data to improve.

Thank you.

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[1] For more about the announcement, see http://watervillemainstreet.org/collaborative-consulting-opening-a-delivery-center-in-downtown-waterville and also http://www.bostonglobe.com/metro/2016/02/13/lesson-rebuilding/iYS3dJTVGubRYOrYKMXPGO/story.html.

[2] See http://www.bostonfed.org/workingcities/about/research.htm#resurgent for an overview and links to research, and http://www.bostonfed.org/economic/ppdp/2013/ppdp1303.htm for the specific work by Kodrzycki and Muñoz.

[3] See the Dec. 16, 2015 press release here: http://www.federalreserve.gov/newsevents/press/monetary/20151216a.htm.

[4] Currently a 1 percentage point total increase in 2016 appears as the median path for interest rates in the December Summary of Economic Projections (the SEP) of the Federal Reserve's policymakers. But the path of interest rates could be steeper or more gradual, depending on the incoming data.

[5] As a broad index, the S&P GSCI Non-Energy Commodity Price Index does include agricultural commodities, so there is some overlap between the indices.

[6] While **Figure 4** shows a decline in the Non-Energy Commodities Price Index on a monthly basis through January, daily figures show a rise in the index beginning on January 12th. Although the increase has leveled off in early February, on a daily basis the index is now above its monthly average for December. The Agricultural Commodities Price Index pictured in **Figure 5** drifted up slightly in mid-January on a daily basis, but has since continued its downward trend and in early February is below the monthly average for January.

[7] While **Figure 6** shows the dollar's sharp appreciation, daily figures for the index show that the dollar has depreciated slightly since January 21st but remains above the monthly average for December shown in **Figure 6**.

[8] The sharp uptick in the first quarter of 2015 (2.8 percent) may at least in part be attributable to incentive pay. When incentive paid occupations are excluded the increase is a smaller 2.1 percent. (This attribution should be viewed with caution, however, as the BLS notes that the indices excluding incentive paid occupations are not strictly comparable with the other series.)