Janet L Yellen: Challenges confronting monetary policy

Speech by Ms Janet L Yellen, Vice Chair of the Board of Governors of the Federal Reserve System, at the 2013 National Association for Business Economics Policy Conference, Washington DC, 4 March 2013.

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Thank you. I'm delighted to address the National Association for Business Economics (NABE), a group that has done so much to promote understanding of the economy and the appropriate role of policy.

My topic today is the challenges confronting monetary policy in what has been an unusually weak recovery from a severe recession. I will discuss the Federal Reserve's ongoing efforts in these circumstances to speed the U.S. economy's return to maximum employment in a context of price stability.[1]

As you know, the Federal Open Market Committee (FOMC) has recently taken new steps to achieve this objective. In September, the Committee approved a new program of agency-guaranteed mortgage-backed securities (MBS) purchases, pledging to continue the program – contingent on favorable ongoing evaluations of its efficacy and costs – until there has been a substantial improvement in the outlook for the labor market.[2] Most recently, in December the Committee announced that it would purchase longer-term Treasury securities after completion of the maturity extension program. At the same time, it revamped its forward guidance for the federal funds rate, explicitly linking the path of that rate to quantitative measures of economic performance.[3]

My goal today is to explain these policies and why I consider them appropriate under current conditions. With respect to the asset purchase program, I will discuss several economic indicators that I plan to consider in evaluating the outlook for the labor market and then offer my perspective at present on the program's efficacy and costs, an assessment I will continue updating in light of experience.

The outlook for the labor market and inflation

The Committee's recent actions are shaped by the fact that the labor market is still far from healed from the trauma of the Great Recession. Despite some welcome improvement, employment remains well below its pre-recession peak, reflecting an economy that is still operating far short of its potential. At 7.9 percent in January, the unemployment rate has declined from its recent peak of 10 percent in October 2009. But that's still higher than unemployment ever reached in the 24 years prior to the recent recession and well above the 5.2 to 6 percent that is the central tendency of FOMC participants' estimates of the longer-run normal rate of unemployment. With economic activity constrained by fiscal consolidation, the lingering effects from the financial crisis, and the added headwinds of Europe's recession and debt problems, most FOMC participants reported in December that they expected only a

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[1] The views expressed here are my own and not necessarily those of my colleagues in the Federal Reserve System. I am indebted to members of the Board staff – Stephanie Aaronson, Thomas Laubach, John Maggs, Edward Nelson, Devin Saiki, and William Wascher – who contributed to the preparation of these remarks.

[2] See Board of Governors (2012a).

[3] See Board of Governors (2012b).

gradual decline in unemployment over the next two years, to about 7 percent by the end of 2014.[4]

The official estimate of 12 million currently unemployed does not include 800,000 more discouraged workers who say they have given up looking for work.[5] In addition, nearly 8 million people, or 5.6 percent of the workforce, say they are working part time even though they would prefer full-time jobs. A broader measure of underemployment that includes these and others who want a job stands at 14.4 percent, nearly double the 7.9 percent "headline" rate that is most commonly reported in the media.[6]

The large shortfall of employment relative to its maximum level has imposed huge burdens on all too many American households and represents a substantial social cost. In addition, prolonged economic weakness could harm the economy's productive potential for years to come. The long-term unemployed can see their skills erode, making these workers less attractive to employers. If these jobless workers were to become less employable, the natural rate of unemployment might rise or, to the extent that they leave the labor force, we could see a persistently lower rate of labor force participation. In addition, the slow recovery has depressed the pace of capital accumulation, and it may also have hindered new business formation and innovation, developments that would have an adverse effect on structural productivity.

In contrast to the large gap between actual and maximum employment, inflation, apart from fluctuations due to energy and other commodity prices, has been running for some time now a little below the rate of 2 percent per year that the Committee judges to be consistent with the Federal Reserve's dual mandate. The Committee anticipates that inflation will continue to run at or below 2 percent over the medium term. Moreover, expectations for inflation over the next 5 to 10 years remain well anchored, according to surveys of households and professional forecasters.

With employment so far from its maximum level and with inflation running below the Committee's 2 percent objective, I believe it's appropriate for progress in the labor market to take center stage in the conduct of monetary policy. Let me therefore turn to the FOMC's recent actions and describe how I see them promoting this important goal.

Forward guidance for the federal funds rate

I'll begin with the Committee's forward guidance for the federal funds rate. The FOMC has employed such forward guidance since 2003 but has relied more heavily on it since December 2008, when the target for the federal funds rate was reduced to its effective lower bound. In current circumstances, forward guidance can lower private-sector expectations regarding the future path of short-term rates, thereby reducing longer-term interest rates on a wide range of debt instruments and also raising asset prices, leading to more accommodative financial conditions. In addition, given the FOMC's stated intention to sell

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4 In the December 2012 Summary of Economic Projections (SEP), the central tendency of FOMC participants' projections for the unemployment rate in the final quarter of 2013 and 2014 was 7.4 to 7.7 percent and 6.8 to 7.3 percent, respectively. The central tendency omits the three lowest and three highest projections. The SEP is an addendum to the FOMC minutes and is available at Board of Governors (2013).

5 The most widely reported estimate of those in the labor force who are unemployed – 12.3 million in January, rounded to 12 million, from the Bureau of Labor Statistics (BLS) – is seasonally adjusted. (Without seasonal adjustment, the actual estimate of unemployed in January was 13.2 million.) The BLS does not seasonally adjust its estimate of discouraged workers who have left the labor force, an estimate that was 804,000 in January. For more on the employment situation in January, see Bureau of Labor Statistics (2013).

6 In my view, and as I've argued elsewhere (Yellen, 2013), the evidence indicates that elevated unemployment and the disappointingly slow improvement in the labor market are primarily the result of weak aggregate demand and not an increase in structural unemployment.

assets only after the federal funds rate target is increased, any outward shift in the expected date of liftoff for the federal funds rate suggests that the Federal Reserve will be holding a large stock of assets on its balance sheet longer, which should work to further increase accommodation.[7]

Starting in March 2009, the FOMC's postmeeting statements noted that "economic conditions are likely to warrant exceptionally low levels of the federal funds rate for an extended period," and in November of the same year added "low rates of resource utilization, subdued inflation trends, and stable inflation expectations" as justification for this stance."[8] In August 2011, the Committee substituted "at least through mid-2013" for the words "for an extended period."[9] This date was moved further into the future several times, most recently last September, when it was shifted to mid-2015.[10] Also in September, the Committee changed the language related to that commitment, dropping the reference to "low rates of resource utilization and a subdued outlook for inflation." Instead, it emphasized that "a highly accommodative stance of monetary policy will remain appropriate for a considerable time after the economic recovery strengthens," clarifying the Committee's intention to continue to provide support well into the recovery.[11]

Finally, last December, the Committee recast its forward guidance for the federal funds rate by specifying a set of quantitative economic conditions that would warrant holding the federal funds rate at the effective lower bound. Specifically, the Committee anticipates that exceptionally low levels for the federal funds rate will be appropriate "at least as long as the unemployment rate remains above 6–1/2 percent, inflation between one and two years ahead is projected to be no more than a half percentage point above the Committee's 2 percent longer-run goal, and longer-term inflation expectations continue to be well anchored."[12]

An important objective of these changes in forward guidance is to enhance the public's understanding of the Committee's policy strategy and its "reaction function" – namely, how the FOMC anticipates varying its federal funds rate target in response to evolving economic developments. For example, the Committee's initial, calendar-based guidance did not clearly convey the rationale for the specified date. In particular, when the Committee extended the calendar date, the public was left to infer whether the change reflected a deterioration in the Committee's economic outlook or, instead, a decision to increase policy accommodation.

In my view, the language now incorporated into the statement affirmatively conveys the Committee's determination to keep monetary policy highly accommodative until well into the recovery. And the specific numbers that were selected as thresholds for a possible change in the federal funds rate target should confirm that the FOMC expects to hold that target lower for longer than would be typical during a normal economic recovery. This improved guidance should help the public to accurately adjust their expectations for the federal funds rate in response to new financial and economic information, which should make policy more effective.[13] In addition, I hope that improved guidance will help to boost confidence in the

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7 Empirical studies of the Committee's date-based forward guidance suggest that changes in that guidance generated an appreciable effect on longer-term yields. See, for example, Swanson and Williams (2012) and Woodford (2012).

8 See Board of Governors (2009a, 2009b).

9 See Board of Governors (2011a).

10 See Board of Governors (2012a).

11 See Board of Governors (2012a).

12 See Board of Governors (2012b).

13 The new guidance should serve as an automatic stabilizer in the face of shifts in the outlook. For example, weaker economic data, suggesting that the thresholds will be reached later than previously anticipated, should

outlook and bolster households' unusually depressed expectations for income gains, which in turn will spur a faster recovery.

A considerable body of research suggests that, in normal times, the evolution of the federal funds rate target can be reasonably well described by some variant of the widely known Taylor rule.[14] Rules of this type have been shown to work quite well as guidelines for policy under normal conditions, and they are familiar to market participants, helping them judge how short-term rates are likely to respond to changing economic conditions.

The current situation, however, is abnormal in two important and related ways. First, in the aftermath of the financial crisis, there has been an unusually large and persistent shortfall in aggregate demand. Second, use of the federal funds rate has been constrained by the effective lower bound so that monetary policy has been unable to provide as much accommodation as conventional policy rules suggest would be appropriate, given the weakness in aggregate demand. I've previously argued that, in such circumstances, optimal policy prescriptions for the federal funds rate's path diverge notably from those of standard rules.[15] For example, David Reifschneider and John Williams have shown that when policy is constrained by the effective lower bound, policymakers can achieve superior economic outcomes by committing to keep the federal funds rate lower for longer than would be called for by the interest rate rules that serve as reasonably reliable guides for monetary policy in more normal times.[16] Committing to keep the federal funds rate lower for longer helps bring down longer-term interest rates immediately and thereby helps compensate for the inability of policymakers to lower short-term rates as much as simple rules would call for.

I view the Committee's current rate guidance as embodying exactly such a "lower for longer" commitment. In normal times, the FOMC would be expected to tighten monetary policy before unemployment fell as low as 6–1/2 percent. Under the new thresholds guidance, the public is informed that tightening is unlikely as long as unemployment remains above 6–1/2 percent and inflation one to two years out is projected to be no more than a half percentage point above the FOMC's 2 percent longer-run goal.[17] The evidence suggests that the evolution I've described in the Committee's forward guidance, particularly the new thresholds, *has* shifted the market's view of how forceful the FOMC intends to be in supporting the recovery. In the Federal Reserve Bank of New York's Survey of Primary Dealers, for example, participants have repeatedly revised downward the unemployment rate at which they anticipate that tightening will first occur.[18]

I mentioned that the FOMC's new forward guidance offers considerable insight into the Committee's likely reaction function, but I should note that the guidance it provides is not complete. For example, the Committee has not specified exactly how it intends to vary the federal funds rate after liftoff from the effective lower bound, although it has stated that "when the Committee decides to begin to remove policy accommodation, it will take a balanced approach."[19] This language is consistent with optimal policy prescriptions that call for lower-

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lead market participants to push out the expected timing of liftoff, automatically promoting lower longer-term rates and an easing of financial conditions. See, for example, Yellen (2012b).

[14] See, for example, Clarida, *Galí*, and Gertler (2000) and Rudebusch (2006).

[15] See, for example, Yellen (2012a, 2012b).

[16] See Reifschneider and Williams (2000).

[17] Setting the threshold above the unemployment rate's longer-run normal level recognizes the fact that monetary policy affects real activity and inflation with a lag so that, assuming inflation is near the Committee's long-run target, it will likely be necessary to begin the process of removing accommodation before the longer-run normal rate is reached.

[18] The Survey of Primary Dealers is available on the Federal Reserve Bank of New York's website.

[19] See Board of Governors (2012b).

for-longer considerations to pertain to the path of the federal funds rate both before and after liftoff.

In addition, the guidance specifies thresholds for *possible action,* not triggers that will necessarily prompt an increase in the federal funds rate. The FOMC statement therefore notes that "in determining how long to maintain a highly accommodative stance of monetary policy, the Committee will also consider other information, including additional measures of labor market conditions, indicators of inflation pressures and inflation expectations, and readings on financial developments."[20]

For example, the Committee could decide to defer action even after the unemployment rate has declined below 6–1/2 percent if inflation is running and expected to continue at a rate significantly below the Committee's 2 percent objective. Alternatively, the Committee might judge that the unemployment rate significantly understates the actual degree of labor market slack. A decline in the unemployment rate could, for example, primarily reflect the exit from the labor force of discouraged job seekers. That is an important reason why the Committee will consider a broad range of labor market indicators. I will discuss some of the additional indicators I plan to consider in judging the strength of the labor market in connection with the Committee's current asset purchase program.

The Federal Reserve's asset purchase program

Turning next to that program, the Federal Reserve initiated a new asset purchase program last September, extending it in December, under which the Federal Reserve is currently buying agency-guaranteed MBS at a pace of $40 billion per month and longer-term Treasury securities at a pace of $45 billion per month. As with the guidance for the federal funds rate, the Committee tied the new program to labor market conditions, stating that purchases would continue until there is a substantial improvement in the outlook for the labor market in a context of price stability.[21] The FOMC's earlier large-scale asset purchase programs, in contrast, were fixed in size and carried out on a specified schedule. The Committee has also noted that, in determining the size, pace, and composition of its asset purchases, it would take appropriate account of the likely efficacy and costs of such purchases.

The purpose of the new asset purchase program is to foster a stronger economic recovery, or, put differently, to help the economy attain "escape velocity." By lowering longer-term interest rates, these asset purchases are expected to spur spending, particularly on interest-sensitive purchases such as homes, cars, and other consumer durables. Research on the effects of such asset purchases suggests that what matters for the reaction of longer-term interest rates to a purchase program is the extent to which the program leads market participants to change their expectations concerning the entire path of the Federal Reserve's holdings of longer-term securities.[22] Other things being equal, the greater the effect that a purchase program has on the expected path of the Federal Reserve's securities holdings, the more substantial should be the downward pressure on the term premium in longer-term interest rates.[23] By linking the pace of purchases and how long that pace will be maintained to the outlook for the labor market, the program acts as a sort of automatic stabilizer: As

[20] See Board of Governors (2012b).

[21] The Committee also indicated that it expects the asset purchase program to end well before the target for the federal funds rate is raised.

[22] See Gagnon and others (2011).

[23] Typically, investors demand a higher return as a condition for putting their funds into a longer-term security instead of investing in a series of short-term securities. The difference in expected returns on these two alternative investments is called a term premium.

market perceptions of the prospects for the economy vary, so too should expectations of the pace and duration of asset purchases.

In stating that asset purchases will continue, subject to caveats pertaining to efficacy and costs, until there has been a substantial improvement in the outlook for the labor market, the FOMC established a criterion that differs in three important respects from the forward guidance for the federal funds rate: (1) It is qualitative, not quantitative; (2) it refers to an improvement in the *outlook* for the labor market rather than an improvement in actual labor market conditions; and (3) it requires the Committee not only to consider progress toward its employment goal, but also to evaluate the efficacy and costs of asset purchases on an ongoing basis. The public is, naturally, eager to understand how the FOMC will approach such complex judgments. I cannot, of course, speak for the Committee on this issue, but I can spell out some of the key factors that will guide my conclusions.

A "Substantial improvement in the outlook for the labor market"

The first imperative will be to judge what constitutes a substantial improvement in the outlook for the labor market. Federal Reserve research concludes that the unemployment rate is probably the best single indicator of current labor market conditions. In addition, it is a good predictor of future labor market developments. Since 1978, periods during which the unemployment rate declined 1/2 percentage point or more over two quarters were followed by further declines over the subsequent two quarters about 75 percent of the time.

That said, the unemployment rate also has its limitations. As I noted before, the unemployment rate may decline for reasons other than improved labor demand, such as when workers become discouraged and drop out of the labor force. In addition, while movements in the rate tend to be fairly persistent, recent history provides several cases in which the unemployment rate fell substantially and then stabilized at still-elevated levels. For example, between the fourth quarter of 2010 and the first quarter of 2011, the unemployment rate fell 1/2 percentage point but was then little changed over the next two quarters. Similarly, the unemployment rate fell 3/4 percentage point between the third quarter of 2011 and the first quarter of 2012, only to level off over the subsequent spring and summer.

To judge whether there has been a substantial improvement in the outlook for the labor market, I therefore expect to consider additional labor market indicators along with the overall outlook for economic growth. For example, the pace of payroll employment growth is highly correlated with a diverse set of labor market indicators, and a decline in unemployment is more likely to signal genuine improvement in the labor market when it is combined with a healthy pace of job gains.

The payroll employment data, however, also have shortcomings. In particular, they are subject to substantial revision. When the Labor Department released its annual benchmarking of the establishment survey data last month, it revised up its estimate of employment in December 2012 by 647,000.

In addition, I am likely to supplement the data on employment and unemployment with measures of gross job flows, such as job loss and hiring, which describe the underlying dynamics of the labor market. For instance, layoffs and discharges as a share of total employment have already returned to their pre-recession level, while the hiring rate remains depressed. Therefore, going forward, I would look for an increase in the rate of hiring. Similarly, a pickup in the quit rate, which also remains at a low level, would signal that workers perceive that their chances to be rehired are good – in other words, that labor demand has strengthened.

I also intend to consider my forecast of the overall pace of spending and growth in the economy. A decline in unemployment, when it is not accompanied by sufficiently strong growth, may not indicate a substantial improvement in the labor market outlook. Similarly, a convincing pickup in growth that is expected to be sustained could prompt a determination that the outlook for the labor market had substantially improved even absent any substantial decline at that point in the unemployment rate.

The efficacy of asset purchases

Let me turn next to the efficacy and potential costs of asset purchases, a topic discussed at recent FOMC meetings and that I suspect will be discussed at succeeding meetings as well. I see the currently available evidence as suggesting that our asset purchases have been reasonably efficacious in stimulating spending. There is considerable evidence that these purchases have eased financial conditions, and so have presumably increased interest-sensitive spending.[24] Research suggests that our purchases of mortgage-backed securities pushed down MBS yields and that MBS yields pass through, with a lag, to mortgage rates.[25] Indeed, I see the recent strength in housing and consumer durables, such as motor vehicle purchases, as partly reflecting the effect of reduced borrowing costs. Plausible, albeit uncertain, estimates of the ultimate economic effect of asset purchases can be obtained from simulations of the Board's FRB/US model. Such simulations suggest that a hypothetical program involving $500 billion in longer-term asset purchases would serve to lower the unemployment rate by close to 1/4 percentage point within three years while keeping inflation close to the Committee's 2 percent objective.

One issue on which there has been considerable debate is whether low interest rates are doing as much to promote economic growth since the financial crisis as they would have before the financial crisis – whether the interest rate channel of transmission for monetary policy has been attenuated. I agree with those who think this channel has been partially blocked. Individuals who have impaired credit histories, have been unemployed, or hold underwater mortgages are experiencing great difficulty gaining access to credit, whether to buy or refinance a home, finance a small business, or support spending for other needs. Even those with good, but not stellar, credit histories and sufficient income are facing capacity constraints in the mortgage market. However, even if the interest rate channel is less powerful right now than it was before the crisis, asset purchases still work to support economic growth through other channels, including by boosting stock prices and house values. The resulting improvement in household wealth supports greater consumption spending.

The costs of asset purchases

Turning to the potential costs of the Federal Reserve's asset purchases, there are some that definitely need to be monitored over time. At this stage, I do not see any that would cause me to advocate a curtailment of our purchase program.

To address one concern that I have heard, there is no evidence that the Federal Reserve's purchases have impaired the functioning of financial markets, and, while we continue to monitor market function carefully, so long as we pursue our purchases sensibly, I do not expect market functioning to become a problem in the future. Further, I've argued previously, and still judge, that the FOMC has the tools it needs to withdraw accommodation, even if the balance sheet at that time is large. These tools include a new one, approved by the Congress during the financial crisis, which allows the Federal Reserve to pay banks interest on their reserves. A suite of supporting tools, such as reverse repurchase agreements with a

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[24] Empirical studies have drawn on the experience of the Federal Reserve's large-scale asset purchases in recent years, as well as from earlier episodes in the United States and from the experience with asset purchases in the United Kingdom. See, for example, D'Amico and King (forthcoming), D'Amico and others (2012), Gagnon and others (2011), Hamilton and Wu (2012), Joyce and others (2011), Krishnamurthy and Vissing-Jørgensen (2011), and Swanson (2011).

[25] See Hancock and Passmore (2012).

wide range of counterparties and the Term Deposit Facility, are routinely tested to make sure that the Federal Reserve is prepared to use them and that they will work as planned.

Two additional costs have been discussed at recent meetings of the FOMC. First, the expansion of the balance sheet has implications for the Federal Reserve's earnings from its asset holdings and, hence, for its remittances to the Treasury. Second, some have raised the possibility that the Committee's policies could have negative consequences for financial stability.

With respect to the Federal Reserve's remittances, balance sheet operations are intended to support economic growth and job creation in a context of price stability and not to maximize Federal Reserve income. There is a possibility that the Federal Reserve's earnings from its assets and the remittances of those earnings to the Treasury will decline later in the decade, perhaps even ceasing entirely for some period. It is important to note, however, that any losses that could conceivably occur would not impair the Federal Reserve's conduct of monetary policy.[26] Further, even if remittances to the Treasury ceased for a time, it is highly likely that average annual remittances over the period affected by our asset purchases will be higher than the pre-crisis norms.

Though our expanded portfolio of longer-term securities has in recent years translated into substantial earnings and remittances to the Treasury, the Federal Reserve has, to be sure, increased its exposure to interest rate risk by lengthening the average maturity of its securities holdings. As the economic recovery strengthens and monetary policy normalizes, the Federal Reserve's net interest income will likely decline. In particular, the Federal Reserve's interest expenses will increase as short-term interest rates rise, while reserve balances initially remain sizable. In addition, policy normalization may well involve significant sales of the Federal Reserve's agency securities holdings, and losses could be incurred in these sales. A recent study by the Board staff considered the effect of a number of scenarios on Federal Reserve income, based on assumptions about the course of balance sheet normalization that are consistent with the exit strategy principles adopted at the June 2011 FOMC meeting.[27]

The projections resulting from this exercise imply that Federal Reserve remittances to the Treasury will likely decline for a time. In some scenarios, they decline to zero. Once the Federal Reserve's portfolio is normalized, however, earnings are projected to return to their long-run trend. The study supports the conclusion that the Federal Reserve's purchase programs will very likely prove to have been a net plus for cumulative income and remittances to the Treasury over the period from 2008 through 2025, by which time it is assumed that the balance sheet has been normalized.[28]

Focusing only on the ebb and flow of the Federal Reserve's remittances to the Treasury, however, is not, in my view, the appropriate way to evaluate the effect of these purchases on the government's finances. More germane is the overall effect of the program on federal finances. If the purchases provide even a modest boost to economic activity, increased tax payments would swamp any reduction in remittances. By depressing longer-term interest

[26] See Carpenter and others (2013).

[27] See Carpenter and others (2013) for the Board study; the exit strategy principles are in Board of Governors (2011b).

[28] The extent of realized capital losses on sales of Federal Reserve assets depends on the precise securities sales policy that the Committee eventually decides to undertake. An increase in longer-term interest rates would lower the market value of the securities in the System Open Market Account (SOMA) portfolio. But the Federal Reserve would continue to receive interest income on those securities for as long as they remained in the SOMA portfolio, and securities held to maturity could roll off the portfolio without the Federal Reserve realizing losses on them. While the authors of the Board staff study used particular assumptions about future securities sales that are consistent with the exit strategy principles outlined by the Committee in June 2011, other strategies for sales that are equally consistent might lead to different results.

rates, the purchases also hold down the Treasury's debt service costs. These effects can be quantified through simulations of the Board's FRB/US model. In the simulation I described earlier, a hypothetical program involving $500 billion of asset purchases would reduce the ratio of federal debt to gross domestic product (GDP) by about 1.5 percentage points by late 2018. The lower debt-to-GDP ratio mainly reflects stronger tax revenue as a result of more-robust economic activity.

Finally, let me comment on the possibility that our asset purchase program could threaten financial stability by promoting excessive risk-taking, a significant concern that I and my colleagues take very seriously. To put this concern in context, though, remember that during the most intense phase of the financial crisis, risk aversion surged. Even in the aftermath of the crisis, businesses, banks, and investors have been exceptionally cautious, presumably reflecting their concern about future business conditions, uncertainty about economic policy, and the perception of pronounced tail risks relating, for example, to stresses in global financial markets. I see one purpose of the Committee's accommodative policies as promoting a return to prudent risk-taking. Indeed, the return to more normal levels of risk-taking and the associated normalization of credit markets have been vital to recovery from the Great Recession.

Of course, risk-taking can go too far, thereby threatening future economic performance, and a low interest rate environment has the potential to induce investors to take on too much leverage and reach too aggressively for yield. At this stage, there are some signs that investors are reaching for yield, but I do not now see pervasive evidence of trends such as rapid credit growth, a marked buildup in leverage, or significant asset bubbles that would clearly threaten financial stability.[29] That said, such trends need to be carefully monitored and addressed, and the Federal Reserve has invested considerable resources to establish new surveillance programs to assess risks in the financial system. In the aftermath of the crisis, regulators here and around the world are also implementing a broad range of reforms to mitigate systemic risk.[30] With respect to the large financial institutions that it supervises, the Federal Reserve is using a variety of supervisory tools to assess their exposure to, and proper management of, interest rate risk.

To the extent that investors are reaching for yield, I see the low interest rate environment and not the FOMC's asset purchases, per se, as a contributing factor. It is true that asset purchases put downward pressure on the term premium component of longer-term rates, and that discontinuing purchases would likely cause term premiums to rise. But ending asset purchases before observing a substantial improvement in the labor market might also create expectations that the amount of accommodation provided would not be sufficient to sustain the improvement in the economy. This weakening in the economic outlook might bring down the expected path of the federal funds rate, with the result that longer-term interest rates might not rise appreciably, on net. Moreover, a weakening of the economic environment could also create significant financial stability risks. That said, financial stability concerns, to my mind, are the most important potential cost associated with the current stance of monetary policy.

Conclusion

In these remarks, I have reviewed recent FOMC policy actions – actions I have supported because I believe they will help foster a stronger recovery and keep inflation close to the Committee's longer-run target. I recognize that the Federal Reserve's highly accommodative

[29] In a recent speech, Governor Jeremy Stein (2013) discussed several areas in which a noticeable increase in risk-taking behavior has emerged.

[30] See, for example, a speech on financial stability regulation by Governor Daniel Tarullo (2012).

policy entails some costs and risks. It will be important both to monitor them and to continue strengthening our financial system.

However, insufficiently forceful action to achieve our dual mandate also entails costs and risks. There is the high cost that unemployed workers and their families are paying in this disappointingly slow recovery. There is the risk of longer-term damage to the labor market and the economy's productive capacity. At present, I view the balance of risks as still calling for a highly accommodative monetary policy to support a stronger recovery and more-rapid growth in employment.

Thank you for inviting me to speak to you today at NABE's spring conference.

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