# Lael Brainard: Transitions in the outlook and monetary policy

Speech by Ms Lael Brainard, Member of the Board of Governors of the Federal Reserve System, at the John F Kennedy School of Government, Harvard University, Cambridge, Massachusetts, 1 March 2017

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*These remarks represent my own views, which do not necessarily represent those of the Federal Reserve Board or the Federal Open Market Committee.*

The economy appears to be at a transition. We are closing in on full employment, inflation is moving gradually toward our target, foreign growth is on more solid footing, and risks to the outlook are as close to balanced as they have been in some time. Assuming continued progress, it will likely be appropriate soon to remove additional accommodation, continuing on a gradual path.

As normalization of the federal funds rate gets further under way, monetary policy too is approaching a transition, prompting increased focus on the balance sheet. How the federal funds rate and the balance sheet should be adjusted individually and in combination depends on the degree to which they are substitutes, their relative precision, and the degree to which their effects on the economy are well understood.

Let me start with the outlook and then turn to policy.

## Progress at Home and Abroad

Over the past several quarters, we have seen improvement in inflation and activity both at home and abroad following a period when the drag on domestic activity from abroad was considerable. Between the middle of 2014 and 2016, a combination of notable fragilities and risks in large foreign economies, elevated sensitivity of the dollar to policy divergence, a sharp decline in oil prices, and financial markets' heightened sensitivity to these downside risks slowed progress in the U.S. economy and the adjustment of monetary policy to an extent few had anticipated. After being an important constraint in the past few years, the external environment currently appears more benign than it has been for some time, even though risks remain.

Near-term risks to the United States from abroad appear to have diminished. Recoveries are gaining traction in China, Europe, and Japan in part reflecting greater confidence in their respective policy environments. The improvement in the global risk outlook was also helped by the continued economic progress and the gradual pace of monetary policy adjustment in the United States last year.

In recent quarters, market participants appear more confident that China has the will and capacity to maintain its exchange rate regime, while achieving its growth targets, although there is a tension with high credit growth that will eventually need to be addressed. Early last year, China's gross domestic product (GDP) growth, which had averaged nearly 8 percent over the previous five years, was only a little above an annual rate of 5 percent in the first quarter, according to official data, and many observers believe that actual growth was weaker. Relatively large discrete declines in the renminbi against the dollar and a surge in private-sector investment outflows led to considerable volatility in foreign exchange markets and financial markets more broadly.

In response, Chinese authorities boosted the supply of credit, ramped up fiscal stimulus, initiated new communications regarding the exchange rate, and clamped down on capital outflows. These actions appear to have stabilized growth and calmed fears of financial instability stemming from a sudden large devaluation in the renminbi. GDP growth rebounded to an average annual pace of over 7 percent in the final three quarters of the year. The exchange value of the renminbi has remained relatively constant against the central bank's designated basket of currencies, and it has depreciated against the dollar at a more gradual pace. Capital outflows, while still significant, have moderated.

In Europe, the recovery has proven to be increasingly resilient. Monetary policy has continued to provide crucial support. As a result, several challenges—including referendums in the United Kingdom and Italy and liquidity and capital stresses faced by German and Italian banks—have so far been navigated without significant damage to growth, financial stability, or inflation expectations. Fiscal policy has ceased being a drag on demand growth and, in some cases, has turned moderately expansionary. Overall euro-area GDP increased at an annual rate of 1-3/4 percent last year, sufficiently in excess of potential output growth to bring the unemployment rate down nearly 1 percentage point. Despite some instances of heightened volatility, financial markets have functioned reasonably well, and risk spreads have stayed contained, although uncertainty about upcoming elections has likely led to some increase in French and Italian sovereign spreads in recent months. Fears of disinflation also appear to have abated: Measures of inflation compensation based on 5-to-10-year-ahead inflation swaps, which fell to 1-1/4 percent in the middle of last year, have recently moved up to 1-3/4 percent.

Activity in Japan has also picked up recently, with GDP increasing 1-1/2 percent last year—noticeably above the estimated rate of potential growth—and the unemployment rate declining 1/4 percentage point to 3 percent, as monetary policy has remained supportive.

Of course, concerns regarding the medium to longer run remain. In China, the price of near-term stability has been an increase in leverage, particularly in the corporate sector. China's overall debt-GDP ratio is elevated for an emerging market economy, especially considering that Chinese growth is likely to slow noticeably in coming years. In Japan, core consumer price inflation is close to zero—well below the central bank's 2 percent target—and scope for additional monetary policy accommodation is limited, leaving the economy vulnerable to adverse demand shocks. In the euro area, growth and inflation may remain low for some time, which could pose challenges for banks with low capital or high amounts of nonperforming loans and for highly-indebted sovereigns. Political events in Europe also raise some uncertainty. Going forward, it will be important to continue to monitor these and other foreign developments carefully.

Here at home, the economy is at a transition. The past few months have seen continued progress in the labor market. Monthly gains in payroll employment have maintained a pace sufficient to continue eroding labor market slack, and wage growth appears to be moving higher on balance. Compensation per hour in the business sector, the most comprehensive measure of wages, increased at a 3 percent pace the past two years, noticeably above the pace earlier in the recovery.

We appear to be closing in on full employment. The unemployment rate—after remaining relatively flat from the third quarter of 2015 to the third quarter of 2016—fell 1/4 percentage point last quarter to 4-3/4 percent. In addition, the labor force participation rate has been about flat, on net, over the past 2-1/2 years, which indicates considerable ongoing cyclical improvement, given the declining demographic trend. Even so, there may be some room for further improvement. The prime-age employment-to-population ratio remains depressed relative to pre-crisis levels; the share of employees working part time who would prefer full-time work remains elevated; and some measures of wage growth, such as the employment cost index, have increased relatively little in recent years.

Most recently, we are also seeing welcome signs of progress on the second leg of our dual mandate after a protracted period of shortfalls from the FOMC target of 2 percent inflation. Recent months have seen a step-up in longer-run inflation compensation, which had dropped to worrisomely low levels last year raising concerns about a softening of inflation expectations to the downside. Both market- and some survey-based measures of inflation expectations remain somewhat low, but there has been some movement in the right direction in the past few months. Inflation has moved up lately as the effect of past increases in the dollar and declines in energy prices have faded. The 12-month change in headline personal consumption expenditures (PCE) prices was 1.9 percent in January, although this partly reflects a temporary boost from energy prices. Core PCE inflation—which strips out volatile food and energy prices and is a good gauge of future inflation—has also increased. At 1.7 percent in January, the 12-month change is 0.1 percentage point higher than a year ago. Still, core inflation has been below our 2 percent target for almost all of the past eight years, and further progress is necessary to reach and sustain our symmetric inflation goal.

Recent indicators of aggregate spending suggest we will continue to edge closer to our goals in the months ahead. Consumption growth has been encouraging, supported by continued job gains, rising wealth, and greater confidence. Business investment changed little the past two years, but there are currently signs of renewed growth. The contrast with the situation a year ago is sharp. Then, risk spreads on corporate bonds had risen noticeably—often a precursor to downturns—measures of business sentiment were relatively depressed, and corporate profits had declined over 10 percent. In recent quarters, the environment has become more favorable. Risk spreads have moved back down to more normal levels, business sentiment has rebounded, economic profits look to have turned up, and new orders for capital goods are moving higher. The partial rebound in oil prices has also given a boost to drilling activity. However, some crosscurrents could weigh on aggregate demand this year. The recent increases in longer-term interest rates could restrain housing activity as well as other interest-sensitive areas of demand, and some further pickup in the dollar could weigh on net exports and business investment.

Recent months have seen an increase in the upside risks to domestic demand. Sentiment has increased along with equity prices, which are up around 10 percent since October. Increased optimism could lead to faster growth in consumption and business investment, although the spending data, thus far, do not suggest a noticeable acceleration. Some of the increase in sentiment and changes in asset prices could be tied to expectations of more expansive fiscal policy, another upside risk. In addition, the progress that we have made over the past year, with the economy closer to meeting full employment and inflation objectives, has contributed to the favorable shift in the balance of risks. The increase in upside risks to domestic demand and the diminution of foreign risks together suggest that risks to the outlook are more balanced today than they had been for the preceding two years.

Nonetheless, the neutral real rate of interest—or the level of the real federal funds rate that is consistent with output growing close to its potential rate with full employment and stable inflation—is expected to remain low both in the near term and in the longer run, and inflation is only slowly recovering from a protracted period of low levels. The nominal neutral interest rate—which adjusts the real neutral rate for the level of inflation—is likely to remain below its historical average even once it reaches its new longer-run normal level. The lower rate environment means there will be less room to cut the federal funds rate, so that if the economy experiences adverse shocks similar in severity and frequency to those in the past the likelihood of returning to and operating near the effective lower bound will remain elevated relative to historical experience. Prudent risk management suggests that policy should take into account the asymmetry in risks posed by the greater likelihood of the economy being at the effective lower bound, where conventional policy is constrained.

## What about the Balance Sheet?

Given the progress we have seen and the positive momentum in the incoming data, continued gradual removal of accommodation is likely to be appropriate. But unlike in previous tightening cycles, the Federal Open Market Committee currently has two tools to remove accommodation:

the balance sheet as well as the federal funds rate.

In December 2015, the Committee indicated that it would continue to reinvest principal payments until normalization of the level of the federal funds rate is “well under way."[1] The decision to rely solely on the federal funds rate to remove accommodation initially until normalization is well under way serves an important purpose, in my view.[2] With asymmetry in the scope for conventional monetary policy to respond to shocks, there is a benefit to enabling the federal funds rate to rise more quickly than would be possible with a shrinking balance sheet and sooner reach a level that allows for significant reductions if economic conditions deteriorate.[3]

Even so, recognizing that the median of the Committee projections places the long-run value of the federal funds rate around 3 percent—a very low level by historical standards—some could judge normalization to be well under way before too long. Thus, monetary policy too may be approaching a transition.

Once the short-term rate is comfortably distant from its effective lower bound, there are broadly two types of policy strategies that could be contemplated. Many central banks around the world may contemplate similar choices in the coming years, while the Bank of Japan has already grappled with these issues in the past.[4] One type of “complementarity” strategy might actively deploy the balance sheet as an independent second tool, complementary to the short-term rate. Under this strategy, both tools would be actively used to help achieve the Committee’s goals. This strategy would seek to take advantage of the ways in which the balance sheet might affect certain aspects of the economy or financial markets differently than the short-term rate. Any differences in effects might derive from the fact that the balance sheet more directly, though not necessarily more precisely, affects term premiums on longer-term securities, while the short-term rate more directly affects money-market rates.

Although it may be tempting, in theory, to operate with the balance sheet as a complementary, additional tool to the federal funds rate, we have virtually no experience with how such an approach would work in practice away from the effective lower bound. For that reason, one might instead prefer a “subordination” strategy that would prioritize the federal funds rate as the sole active tool away from the effective lower bound, effectively subordinating the balance sheet. Once federal funds normalization meets the test of being well under way, triggering an end to the current reinvestment policy, the balance sheet would be set on autopilot, shrinking in a gradual, predictable way until a “new normal” has been reached, and then increasing in line with trend increases in the demand for currency thereafter.[5] Under this strategy, the balance sheet might be used as an active tool only if adverse shocks push the economy back to the effective lower bound.

The case for the subordination strategy is straightforward and compelling. This strategy recognizes that the two policy tools are broadly similar in the ways they affect the economy by indirectly changing the level of interest rates used to finance purchases by households and businesses. These interest rate changes also have effects on asset prices, and thereby on household wealth, as well as on the exchange value of the dollar and, thereby, on net exports and core import prices.[6] However, relative to balance sheet policies, the influence of the short-term rate is far better understood and extensively tested: There have been several decades and many business cycles over which to measure and analyze how the federal funds rate affects financial markets and real activity. In contrast, experience using the balance sheet as an active tool has been very limited and largely confined to a highly unusual period around the Global Financial Crisis, when short-term interest rates were constrained by the zero lower bound. Predictability, parsimony, precision, and clarity of communications all would seem to argue in favor of focusing policy on a single active tool that is most familiar. In short, it makes sense to focus policy on the tool whose effects are better understood by both policymakers and the public in circumstances where the tools are largely substitutes for one another.

Even with this subordination strategy, however, there may be limited circumstances in which the balance sheet might be employed in a manner that is supportive of the short-term rate. Most obviously, during the period when the balance sheet is running down, if the economy encounters adverse shocks, it may be appropriate to commence the reinvestment of principal payments again in order to preserve conventional policy space if the federal funds rate were to drop below some threshold level, perhaps similar to the "well under way" threshold.

More broadly, although the two tools can achieve roughly similar effects, they are different, and we cannot rule out that there may be special circumstances in which these differences may be particularly valuable. In particular, these differences may be an important consideration in circumstances when the transmission of changes in the short-term rate to long-term rates and other financial market variables and the real economy is impeded. In addition to directly affecting longer-term interest rates, changes to the balance sheet could serve to reinforce policy communication associated with the short-term rate. Some observers believe that such signaling was an important contributor to the effect of the balance sheet on the economy during and after the Global Financial Crisis.[7] Thus, the subordination strategy will likely be appropriate in most circumstances, but we cannot completely rule out special circumstances in which the complementary use of both tools may prove compelling.

Assuming that a subordination strategy is adopted, and the balance sheet is set to shrink passively and predictably once reinvestment ceases or is phased out, there is some uncertainty around the size of the balance sheet when it returns to normal, which the Committee has described as "no larger than necessary for the efficient and effective implementation of monetary policy."

There are good reasons to expect a normalized balance sheet to be considerably smaller than its current size but larger than its pre-crisis level. Most obviously, trend growth in the demand for currency gradually pushes up the size of the balance sheet over time, but there are also other reasons to expect the post-crisis new normal to be larger than pre-crisis levels. The structural demand for reserves may be considerably larger now than prior to the financial crisis because of a number of changes, including new regulations that favor safe liquid assets and changes in financial institutions' attitudes toward risk.[8] If the demand curve for reserve balances has shifted out, then a greater supply of reserves will be needed to attain a given interest rate target. Moreover, the supply of reserves will need to be set far enough above the structural level of demand to accommodate unexpected shocks to the demand and supply of reserves. To accomplish this, the Committee could choose to implement policy by adjusting the supply of reserves to offset such shocks. Or, the Committee could decide to maintain the current floor system, in which a buffer of reserves, sufficient to accommodate any sizable shocks to reserves demand and supply, is maintained, thereby obviating the need for high-frequency adjustments to the supply of reserves. The Committee's normalization principles suggest that any buffer would be the minimum amount needed to efficiently and effectively implement policy.[9]

Because of changes in structural and short-term factors since the crisis, it is difficult to know with any precision how low reserves can be allowed to drop while still maintaining effective interest rate control. Thus, as the balance sheet gradually declines, it will be important to carefully monitor money markets for indications that any further reduction in the supply of reserves will begin to put upward pressure on money market rates. At that point, the amount of reserves will likely be close to the minimum amount necessary to satisfy demand at the target rate.[10]

## Conclusion

To conclude, recent developments suggest that the macro economy may be at a transition. With full employment within reach, signs of progress on our inflation mandate, and a favorable shift in the balance of risks at home and abroad, it will likely be appropriate for the Committee to continue gradually removing monetary accommodation. As the federal funds rate continues to move higher toward its expected longer-run level, a transition in balance sheet policy will also be warranted. These transitions in the economy and monetary policy are positive reflections of the fact that the economy is gradually drawing closer to our policy goals. How the Committee should adjust the size and composition of the balance sheet to accomplish its goals and what level the balance sheet should be in normal times are important subjects that I look forward to discussing with my colleagues.

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1 See, for example, Board of Governors of the Federal Reserve System (2017), "Federal Reserve Issues FOMC Statement," press release, February 1. This approach is consistent with the Committee's Policy Normalization Principles and Plans, available on the Board's website at www.federalreserve.gov/newsevents/press/monetary/20140917c.htm.

2 This is the rationale in Lael Brainard (2015), "Normalizing Monetary Policy When the Neutral Interest Rate is Low," speech delivered at the Stanford Institute for Economic Policy Research, Stanford, Calif., December 1.

3 The Bank of England has stated that it is unlikely that it will reduce the size of its balance sheet until the Bank Rate has reached a level of around 2 percent; see Bank of England (2015), *Inflation Report (PDF)* (London: BOE, November), p. 34.

4 In 2006, the Bank of Japan reduced the size of its balance sheet by allowing short-term security holdings to run off and without relying on asset sales; see Kazuo Ueda (2010), "The Bank of Japan's Experience with Non-Traditional Monetary Policy (PDF) ," paper presented at "Revisiting Monetary Policy in a Low Inflation Environment," a conference held at the Federal Reserve Bank of Boston, October 16.

5 The Committee has indicated that it intends to reduce the Federal Reserve's securities holdings in a gradual and predictable manner primarily by ceasing to reinvest repayments of principal on securities held in the System Open Market Account; see Federal Open Market Committee, Policy Normalization Principles and Plans, in note 2.

6 There may be differences in the specific ways changes in short-term rates and the balance sheet transmit to different asset prices and the exchange rate, although estimates are limited and lack precision.

7 See, for example, Michael Woodford (2012), "Methods of Policy Accommodation at the Interest-Rate Lower Bound (PDF) ," paper presented at "The Changing Policy Landscape," a symposium sponsored by the Federal Reserve Bank of Kansas City, held in Jackson Hole, Wyo., August 30-September 1.

8 In addition, the Federal Reserve now remunerates reserve balances held by depository institutions.

9 For a discussion of floor systems and other frameworks for implementing monetary policy, see the November FOMC minutes, available at Board of Governors of the Federal Reserve System (2016), "Minutes of the Federal Open Market Committee, November 1-2, 2016," press release, November 23.

10 Some experts have made financial stability arguments in favor of maintaining a level of reserves that is somewhat larger than needed for monetary control alone. In the past, the demand for safe short-term assets has sometimes been met by an increased supply of private-sector short-term debt, which has been associated with increased leverage and maturity and liquidity transformation. Some argue that a greater supply of safe short-term public debt could help prevent these potentially destabilizing developments from occurring. See Robin Greenwood, Samuel G. Hanson, and Jeremy C. Stein (2016), "The Federal Reserve's Balance Sheet as a Financial-Stability Tool (PDF) ," paper presented at "Designing Resilient Monetary Policy Frameworks for the Future," a symposium sponsored by the Federal Reserve Bank of Kansas City, held in Jackson Hole, Wyo., August 25–27, and Ben S. Bernanke (2017), "Shrinking the Fed's Balance Sheet ," *Ben Bernanke's Blog*, January 26.