April 22, 2013

Changing the Pace of Asset Purchases[1]

Executive summary

The Committee has indicated that it may adjust the pace of its asset purchases in response to changes in the economic outlook or in its assessment of the efficacy and costs of purchases. This note discusses several issues to consider when contemplating such an adjustment. The main conclusions are:

- The main effect of asset purchases on financial conditions reflects the expected size and composition of the Federal Reserve's securities portfolio over time. Accordingly, the macroeconomic effects of a change in the pace of purchases will depend importantly on how the change influences investors' expectations of the evolution of the overall size and composition of the Federal Reserve's securities holdings.
- A change in the pace of purchases could be motivated by the evolution of actual and expected labor market conditions and inflation over time, or by a re-assessment of the efficacy, benefits, and costs of additional purchases. How the Committee communicates the reasons for the change will play a major role in determining how investors assess the implications of the change for the future path of the Federal Reserve's balance sheet and for the Committee's future responses to changing economic conditions.
- Because the public has little prior experience on which to base an inference about the meaning or implications of a change in the pace of purchases, such a change could cause market participants to revise their understanding of the stopping rule for asset purchases or of the Committee's broader policy intentions, and thus could lead to an appreciable change in broader financial conditions. Clear and explicit communication about the Committee's reasons for making a change, and about its future policy intentions, should reduce but may not avoid an unintended change in financial conditions.
- If the Committee were to decrease the pace of purchases because a substantial improvement in the outlook for the labor market appeared to be in train but had not yet been achieved, it might want to state explicitly that the pace would be reduced again (or that purchases would end) if the expected improvement continued, and also state that purchases would continue (and possibly be stepped up) if future economic information were to be disappointing.
- If the Committee were to decrease the pace of purchases in response to an assessment of the efficacy and costs of asset purchases that led it conclude that the benefits of further purchases no longer outweighed the costs, it might want to clearly communicate that the change in asset purchases does not indicate a decision to reduce policy accommodation, and that the Committee is making compensating changes in its other policy tools. Such communication could help avoid giving the impression that the Committee is not as strongly committed to its economic objectives as had been thought, and thus help avoid an undesired tightening of financial conditions.

[1] Seth Carpenter, James Egelhof, William English, Steve Friedman, Lorie Logan, Steve Meyer, Bill Nelson, Simon Potter, Dave Reifschneider, and Robert Tetlow.

The first section of this note discusses some general communication challenges that will arise when adjusting the pace of purchases. The second section discusses three distinct reasons the FOMC may want to adjust the pace of purchases: the evolution of actual or projected economic conditions, the Committee's assessment of costs and efficacy, and indications that the pace of purchases is beginning to impair market functioning. The third section discusses the potential need and scope for adjusting other policy instruments when changing the pace of purchases. The final section provides some illustrative language that the Committee might choose to use in its post-meeting statement if it were to decide to reduce the pace of purchases in the context of strong, moderate, or weak growth in economic activity and employment.

Stocks, Flows, and Signals

Research carried out in the Federal Reserve and elsewhere supports the view that the effect of asset purchases on term premiums and hence on broader financial conditions depends on investors' expectations of how the quantity and composition of longer-term securities held in the System Open Market Account (SOMA) will evolve over time. Under this view, a change in the pace of asset purchases or sales will have meaningful effects on financial conditions, real activity, and inflation through the term premium channel only if it materially alters investors' expectations about the peak level of SOMA securities holdings, the length of time holdings will remain elevated, or how the FOMC will adjust the size and composition of the SOMA in response to changing economic conditions.[2]

Market reactions to changes in earlier LSAP programs suggest that flow adjustments also have the potential to influence the public's assessment of the likely course of the federal funds rate and to affect the credibility of the Committee's forward guidance more generally.[3] In particular, a reduction in the pace of purchases might be interpreted by financial market participants and others as signaling the Committee's intention to implement a less accommodative policy than previously anticipated. Such an interpretation might well be correct if the pace of recovery had picked up appreciably. In that case, however, the expected total size of purchases likely would already have fallen in reaction to the incoming data; if so the change in pace itself would have little additional effect on expectations. But if the Committee were to reduce the pace of purchases when investors had not already seen an improvement in the outlook, the public might infer that the FOMC has a different stopping rule or different policy intentions than previously thought. In that case, investors' expectations about the total amount of purchases would likely be pared back, the anticipated date of the first increase in the Committee's target for the federal funds rate might move closer, and the expected path for the federal funds rate after liftoff could steepen, thereby tightening financial conditions.

The consequences of such a misinterpretation could be pronounced in the current environment, in which short-term interest rates are constrained by the zero-lower-bound and the conduct of

[2] MBS purchases also impact financial and economic conditions by reducing mortgage spreads. See, for example, Krishnamurthy and Vissing-Jørgensen (2011), Hancock and Passmore (2012), and Wright (2012). Some of the reduction in MBS yields may be related to the pace at which the purchases are settled, because a greater flow of settlements increase the scarcity of newly produced mortgages eligible for delivery in the "to be announced" market.

[3] See Bauer and Rudebusch (2012) for evidence that the Committee's previous asset purchase programs led to a marked flattening of the expected funds rate path. This finding is supported by statements made by market participants at the time that the earlier LSAP programs made the FOMC's forward rate guidance more credible.

monetary policy relies in large part on managing expectations. The risk of misunderstanding arises because there is little history on which the public could base assessments about the implications of changes in the flow rate for the likely future paths of the portfolio and the funds rate, or for the ways in which the Committee might adjust these paths in response to changing economic conditions. The gap in recent months between market participants' expectations for the expansion of the portfolio and many Committee participants' judgments about how long to continue asset purchases illustrates the challenges associated with communicating the Committee's thinking about the flow-based purchase program and suggests a material chance of future misunderstandings. Moreover, FOMC participants might be concerned that the public could view a cessation of purchases prior to the achievement of a substantial improvement in the outlook for labor market conditions as a breach of the Committee's commitment to support a stronger economic recovery, and that the public might come to doubt all of the FOMC's statements about future monetary policy, including the threshold-based forward guidance. Consequently, as discussed in the next section, if the FOMC were to reduce or taper the flow of purchases in response to concerns about efficacy or "stock" costs (and not because a substantial improvement in labor market conditions is under way), it might wish to make other aspects of policy more accommodative in order to keep the overall stance of policy unchanged.

Another communication challenge is that market participants could interpret a decision to stop purchases, for any reason, as the first step in tightening policy rather than as an end to ramping up policy accommodation. If so, they might respond to an announcement that the Committee is ending purchases by moving closer their expected timing for policy tightening, although that shift might be mitigated by the threshold-based forward guidance. The Committee might want to lean against an inappropriate shift in expectations for policy tightening not only by clearly communicating the reasons for a change in the flow of purchases and its intentions for future policy, but also by continuing purchases at a low level for a time rather than stopping abruptly.

Reasons to Change the Pace of Purchases

As discussed above, clearly communicating the reason for a change in the pace of purchases is likely to be critical to generating the desired expectational effects. This section discusses three different motivations for adjusting the flow: the evolution of actual or projected economic conditions; concerns about costs and efficacy; and indications that a reduction in the pace of purchases is necessary to avoid disrupting financial markets. The third motivation could lead the Committee to change the composition of purchases as well as, or instead of, the pace.

Evolution of actual or projected economic conditions

The Committee has said in its recent post-meeting statements that it will continue its asset purchases until the outlook for the labor market has improved substantially in a context of price stability, and that it will take into account the likely efficacy and costs of asset purchases in determining the size, pace, and composition of its purchases. This guidance would seem to indicate that the principal objective of the flow-based asset purchase program is to improve the employment situation, provided that projected inflation does not appreciably exceed the Committee's 2 percent goal. Additional purchases would presumably not be required once the labor market objective is achieved. Accordingly, if the incoming data suggest that a substantial improvement in labor market conditions is in train, then the Committee might judge that it will be appropriate to end asset purchases in the not-too-distant future, conditional on the recovery continuing as anticipated. If so, the Committee could decide that it will simply stop purchases, without tapering, once the outlook for labor market conditions has improved sufficiently.

Experience with past asset purchase programs suggests that if market participants understand, well in advance, when purchases will cease, then tapering purchases is not necessary to avoid market strains. But clearly communicating, *ex ante*, the specific circumstances that will bring the flow-based purchase program to an end could be difficult if Committee members did not share a common view about the precise values of various labor market indicators that would lead them to conclude that there has been a substantial improvement in the outlook for the labor market. Agreeing to reduce the pace of purchases to signal their approaching end might be easier than agreeing, in advance, on the specific conditions that will bring the program to a close. Such a reduction would be consistent with the indication in the March FOMC statement that the Committee would take into account the extent of progress toward its economic objectives when determining the size, pace, and composition of purchases. If market participants had a view of the economic outlook and of the Committee's stopping rule that was consistent with the Committee's actions, then slowing the pace of purchases would have little effect on term premiums or interest rates because the change would have been anticipated.[4]

Conversely, the Committee might judge that the economic situation is not improving as rapidly as desired, and that the labor market objective is likely to be met later than previously believed. If so, policymakers might choose to increase the pace of purchases to signal that purchases will continue longer and cumulate to a larger total than previously thought. Such a step might lead market participants to revise up their expectation of the total amount of securities the Committee will buy over time, easing financial conditions, or it might simply confirm a change in expectations that already occurred. Of course, the Committee has other ways to signal to market participants that they should revise up their expectations for future purchases; for example, the FOMC could use the post-meeting statement to convey its view that progress towards the substantial improvement in the labor market outlook was less significant than it had expected.

The Committee's recent post-meeting statements suggest that it might end its asset purchases before it sees a substantial improvement in the outlook for the labor market if incoming information suggests that inflation is likely to rise above levels that policymakers judge consistent with their dual mandate.[5] In principle, if market participants understand that the

[4]There remains a wide diversity of views, among market participants, about the conditions that will prevail at the time purchases end. The diversity indicates that investors do not have a clear understanding of the Committee's stopping rule for asset purchases. An announcement that the Committee was slowing the pace of purchases for economic reasons might lead investors to adjust their expectations in the appropriate direction, particularly if the change in the flow rate of purchases were accompanied by language in the Committee's statement indicating that the FOMC has seen some, but not yet a substantial, improvement in the outlook for labor market conditions. Alternatively, the Committee could announce that it anticipates ending its purchases at some particular time, or when some well-defined and observable economic outcome is achieved, and thus make the signal from a change in the pace of purchases redundant.

[5] In particular, recent FOMC statements indicate that the Committee will purchase securities at the announced pace to support a stronger economic recovery and "to help ensure that inflation, over time, is at the rate most consistent with its dual mandate." Recent statements also say that the Committee will continue asset purchases until a substantial improvement in the outlook for the labor market "is achieved in a context of price stability."

Committee would stop its asset purchases in response to an undesirably large increase in projected inflation, and if incoming information suggests an increasing risk of too-high inflation, then they should correctly anticipate that the Committee will stop its purchases. If so, interest rates would adjust in anticipation of an announcement that the Committee will buy fewer securities than previously expected, and actually ending the purchases in short order would have little additional effect on financial conditions. But if market participants are unsure about the Committee's likely response to indicators of rising inflation pressures, then reducing the pace of purchases in response to indications of rising inflation may tighten financial conditions. Such a tightening could help to underscore policymakers' commitment to low and stable inflation and thus help to stabilize inflation expectations.[6] Scaling back or ending purchases might seem particularly warranted if the current flow-based purchase program was itself seen by market participants as likely to undermine price stability, perhaps by making them doubt the FOMC's ability to remove accommodation sufficiently quickly at the appropriate time.[7]

Costs and efficacy

The Committee might decide to end its asset purchase program, or reduce the pace of purchases, because it had concluded that the program's marginal costs were, or were likely to soon become, greater than its marginal benefits. For instance, the Committee might conclude that further purchases of longer-term securities would unduly complicate the eventual normalization of monetary policy or pose an unacceptably high risk of substantial future capital losses that could undermine Federal Reserve independence. Or policymakers might judge that sizable further purchases would lead to imbalances that could undermine financial stability. Alternatively, the Committee could conclude that further asset purchases would be less effective than it had thought, making the cost-benefit calculus of the program unattractive. In any of these cases, the Committee might decide to stop purchases sooner than it originally envisioned, and decide to slow the pace of purchases to signal that purchases are likely to end soon.

Conversely, the Committee could determine that asset purchases are less costly than it had thought, and so decide to increase the flow of purchases and ultimately acquire a larger portfolio. For instance, the Committee might conclude that, by flattening the yield curve, the purchases reduce the incentive for financial institutions to engage in maturity transformation and, instead, provide an incentive for the institutions to fund themselves using long-term debt. Relatedly, if the Committee were to determine that very low interest rates are causing undesirable financial imbalances, it might want to increase the pace of purchases and acquire a larger stock of assets, thereby providing stimulus that would enable an earlier liftoff of the federal funds rate.

Finally if the Committee were uncertain about the efficacy and costs of its asset holdings, then it could decide to slow but not stop its purchases as it approaches its labor market objective and as the cost of falling short of the objective declines. Just as a driver may slow in a fog, the FOMC might wish to slow the expansion of the SOMA portfolio while collecting more information

[6] Symmetrically, if actual inflation were to decline and measures of expected inflation were to drift lower, the Committee might wish to increase the pace of purchases and perhaps also signal that it will continue purchases for longer than previously expected.

[7] As discussed below, if the unmoored inflation expectations owe specifically to the LSAP, the Committee might wish to provide policy accommodation through other, less inflationary, means.

about the economy, efficacy and costs, and other factors. In this case, to avoid a larger-than-warranted tightening of financial conditions, the Committee may need to provide a clear signal that even though the pace of purchases was lower, purchases were expected to continue, perhaps longer than had been previously anticipated.

Market functioning

The pace of purchases can have direct implications for market functioning. In the past, rapid purchases have led to some reports of possible deterioration in market liquidity and increasing difficulty in settling transactions promptly. If the Committee sees its asset purchases beginning to strain market functioning, or threatening to do so, it may wish to slow the pace of purchases while simultaneously signaling that its stopping rule for asset purchases has not changed, implying that it ultimately plans to purchase the same total quantity of securities. Alternatively, the Committee could change the mix of its asset purchases, or shift the duration of its purchases, if it wished to leave the overall stance of policy about unchanged.

Compensating Policy Changes

Depending on the reason for a change in the pace of asset purchases, the Committee might want to make compensating adjustments to its other policy tools, including forward guidance about the federal funds rate and perhaps also forward guidance about the balance sheet. In general, a change in the pace of purchases that is meant to produce a change in the overall stance of policy need not be accompanied by a change in other policy tools. But if the Committee thought that the overall stance of policy was about right, and nonetheless saw a need to reduce the pace of purchases and the maximum amount expected to be purchased because of concerns about efficacy or costs, then it likely would want to make offsetting changes to other policy tools.

If the Committee decided to reduce the pace of purchases to signal their imminent end because the outlook for the labor market was improving as desired, then no adjustments to other monetary policy tools would be called for if the public correctly understood the signal. Nonetheless, policymakers might worry that the public would misunderstand the signal and thus worry about the effect of slowing the pace of purchases on financial conditions. For example, if the market correctly interprets the slowing as signaling an end to asset purchases, but mistakenly believes that the Committee has also decided to reduce its securities holdings sooner or more aggressively than previously thought or that an increase in the federal funds rate is closer than previously anticipated, financial conditions could tighten substantially more than intended. As a result, clear communication about the Committee’s intentions would be important.

For example, if the Committee were to slow its purchases when a substantial improvement in the labor market outlook appeared to be in train but had not yet been achieved, it might choose to indicate that the reduction could be reversed if incoming information disappointed. Indeed, the Committee could opt to reduce the pace of purchases rather than simply announcing that an end to purchases was imminent in part to emphasize that it was willing to make timely adjustments to the pace in reaction to economic developments, including potentially raising the pace if the outlook deteriorated again. Such an indication could, by increasing the “automatic stabilizer” effect of asset purchases, bolster consumer and business confidence.

Alternatively, if the Committee were to conclude that the marginal costs of additional purchases—including inflation risks associated specifically with a larger balance sheet—are sufficiently high, it might wish to stop purchases sooner than it previously had intended and the public had anticipated. Doing so would result in a tightening in financial conditions. Depending on circumstances and communication, the decision might be interpreted as establishing an upper bound to the balance sheet; market participants might view a further expansion of the balance sheet as being ruled out even if adverse shocks were to hit the economy. Such an inference would likely reduce or eliminate the automatic stabilizing effect of the flow-based asset purchase program. To offset the resulting negative impact on business and household confidence, the Committee might want to emphasize that its existing holdings of longer-term securities and its forward guidance for the federal funds rate would continue providing a large amount of monetary stimulus even with no additional asset purchases. It might also wish to emphasize that purchases would be reevaluated on an ongoing basis, and that a deteriorating economic outlook could shift the cost-benefit tradeoff toward conducting more purchases.

Scaling back asset purchases for "stock" cost reasons would tighten financial conditions and so imply a slower recovery. With threshold-based forward guidance in place, the public presumably would expect short-term interest rates to remain near zero somewhat longer, partly offsetting the tightening in financial conditions. If the Committee wanted to offset more of the tightening, it could indicate that it will maintain an elevated balance sheet longer than previously anticipated, signal a more patient approach to normalizing the federal funds rate after liftoff, or lower the threshold for the unemployment rate in its forward guidance.[8] It might also be able to extend the duration of its purchases of Treasury securities to help offset the reduction in accommodation that would result from lower total purchases. Most of these policy actions, however, entail promising that the FOMC will be even more accommodative than otherwise years into the future. Such promises may not be very effective substitutes for the monetary stimulus resulting from asset purchases, which are tangible and arguably more credible.

Adjusting the unemployment threshold could pose a substantial communication challenge, given that doing so would demonstrate that the FOMC saw the threshold as a choice variable. That approach would seem to conflict with the Committee's statement, in the December minutes, that quantitative thresholds have the advantage of helping the public to infer how the FOMC will react to changing economic circumstances; such inferences would become more difficult if the thresholds were mutable. Moreover, changing the unemployment threshold could lead the public to question the Committee's commitment to thresholds in general. The FOMC could instead seek to provide offsetting accommodation by issuing new guidance about the likely speed at which the funds rate will rise after liftoff, or by releasing more information about its post-crossing reaction function. In a range of models, providing information about the policy reaction function after liftoff can have a meaningful effect on current financial conditions; however, the Committee might judge that such long-range guidance would not be very credible, given the prospect of changes in the Committee's membership.[9] In considering potential guidance about

[8] Theory suggests that raising the inflation threshold could provide greater accommodation if market participants expected the current inflation threshold to be crossed before the unemployment threshold is reached.
[9] These issues were discussed in a memorandum sent to the Committee in September 2011. See "Approaches to Clarifying the Conditionality in the Committee's Forward Guidance," by Brian Doyle, Spence Hilton, Michael

its post-threshold policy, the FOMC would need to assess how providing such guidance might restrain its future latitude to adopt the policies that it subsequently judges most appropriate in light of the outlook and balance of risks, along with the potential cost of restraining its future flexibility relative to the potential benefit of a more rapid return to the dual mandate objectives.

Finally, if the Committee wished to provide additional accommodation, it could change its exit strategy and announce that it will hold a large, long-duration balance sheet even longer than implied by the exit principles and strategy that it released in June 2011. Such an approach could have the advantage of reducing some of the concerns about market functioning, financial stability, and fiscal costs that are raised by the prospect of selling longer-term securities.[10] The resulting increase in accommodation likely would be quite modest, however. Staff estimates suggest that allowing MBS to mature and roll off rather than selling MBS over several years would reduce the 10-year Treasury yield by only 5 to 10 basis points relative to what it would be if the public were confident that MBS would be sold. However, effects on MBS yields would be larger, and such an announcement could reduce market participants' concerns that asset sales would disrupt market functioning and lead to a sizable jump in MBS yields.

Illustrative statement language

In the following pages, we provide illustrative language for the policy paragraphs of the Committee's post-meeting statement (paragraphs 3, 4, and 5) for three scenarios. In each case, the illustrative language indicates that the Committee is reducing the pace of its purchases, but the reasons for the reduction and the implications for future purchases differ across the cases. In the first case, growth in economic activity and employment is fairly strong during coming months, and the Committee subsequently decides to reduce the pace of purchases and to signal that it would end purchases in a few months if labor market conditions continue to show solid improvement. In the second case, growth in output and employment remains moderate in months, and the Committee subsequently decides to reduce the pace of purchases but does not necessarily anticipate stopping purchases in the near term. In the third case, the Committee judges that the costs of further asset purchases have increased relative to the benefits and so reduces the pace of asset purchases even though output and employment are growing at disappointing rates. The Committee has discussed a range of costs; for purposes of this third illustration, we focus on just one. In particular, we assume the FOMC concludes that the growing size of the balance sheet will pose risks to the Committee's ability to exit smoothly at the appropriate time but, in light of disappointing growth, policymakers adjust a number of other tools to offset at least some of the reduction in accommodation that results from smaller total asset purchases. The illustrative language for this scenario would have to be adjusted if the Committee were more concerned about risks to financial stability or to the stability of inflation expectations than about risks to its ability to exit smoothly.

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[10] Exit strategy issues were discussed in a memorandum to the Committee on March 5, 2013. See "Exit Strategy Considerations," by Katherine Femia, Jane Ihrig, John Kandrac, Beth Klee, Christian Miller, and Julie Remache.

Strong growth in economic activity and employment in coming months

3. ~~To support a stronger economic recovery and to help ensure that inflation, over time, is at the rate most consistent with its dual mandate,~~ **In light of [ongoing improvement in the outlook for the labor market | progress toward its economic objectives] since the Committee began its current asset purchase program last September,** the Committee decided to **increase its holdings of longer-term securities less quickly. In particular, the Committee will** ~~continue purchasing~~ **purchase** additional agency mortgage-backed securities at a pace of **[$30]** billion per month and longer-term Treasury securities at a pace of **[$30]** billion per month. The Committee is maintaining its existing policy of reinvesting principal payments from its holdings of agency debt and agency mortgage-backed securities in agency mortgage-backed securities and of rolling over maturing Treasury securities at auction. Taken together, these actions should ~~maintain~~ **continue to put** downward pressure on longer-term interest rates, support mortgage markets, and help to ~~make~~ **keep** broader financial conditions ~~more~~ **highly** accommodative.

4. The Committee will closely monitor incoming information on economic and financial developments in coming months. The Committee will continue its purchases of Treasury and agency mortgage-backed securities, and employ its other policy tools as appropriate, until the outlook for the labor market has improved substantially in a context of price stability. **The Committee is prepared to make further adjustments in the pace of its purchases to maintain appropriate policy accommodation as the outlook for the labor market or inflation changes.** In determining the size, pace, and composition of its asset purchases, the Committee will continue to take appropriate account of the likely efficacy and costs of such purchases as well as the extent of progress toward its economic objectives.

5. **The Committee reaffirmed its expectation that,** to support continued progress toward maximum employment and price stability, ~~the Committee expects that~~ a highly accommodative stance of monetary policy will remain appropriate for a considerable time after the asset purchase program ends and the economic recovery strengthens. In particular, the Committee decided to keep the target range for the federal funds rate at 0 to ¼ percent and currently anticipates that this exceptionally low range for the federal funds rate will be appropriate at least as long as the unemployment rate remains above 6½ 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. 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. When the Committee decides to begin to remove policy accommodation, it will take a balanced approach consistent with its longer-run goals of maximum employment and inflation of 2 percent.

Moderate growth in economic activity and employment growth in coming months

3. ~~To support a stronger economic recovery and to help ensure that inflation, over time, is at the rate most consistent with its dual mandate, the Committee decided to~~ **Labor market conditions and the outlook for the labor market have continued to improve gradually even though fiscal policy changes are temporarily restraining economic growth. In light of the improvement since last September, the Committee decided to expand its asset holdings somewhat less quickly. In particular, the Committee will** ~~continue purchasing~~ **purchase** additional agency mortgage-backed securities at a pace of **[$30]** billion per month and longer-term Treasury securities at a pace of **[$30]** billion per month. The Committee is maintaining its existing policy of reinvesting principal payments from its holdings of agency debt and agency mortgage-backed securities in agency mortgage-backed securities and of rolling over maturing Treasury securities at auction. Taken together, these actions **will increase the Committee's holdings of longer-term securities by [$60] billion per month and** should ~~maintain~~ **sustain** downward pressure on longer-term interest rates, support mortgage markets, and help to ~~make~~ **keep** broader financial conditions ~~more~~ **highly** accommodative.

4. The Committee will closely monitor incoming information on economic and financial developments in coming months. The Committee **seeks further progress toward its economic objectives and consequently** will continue its purchases of Treasury and agency mortgage-backed securities, and employ its other policy tools as appropriate, until the outlook for the labor market has improved substantially in a context of price stability. **The Committee is prepared to increase or reduce the pace of its purchases to maintain appropriate policy accommodation as the outlook for the labor market or inflation changes.** In determining the size, pace, and composition of its asset purchases, the Committee will continue to take appropriate account of the likely efficacy and costs of such purchases as well as the extent of progress toward its economic objectives.

5. **The Committee reaffirmed its expectation that,** to support continued progress toward maximum employment and price stability, ~~the Committee expects that~~ a highly accommodative stance of monetary policy will remain appropriate for a considerable time after the asset purchase program ends and the economic recovery strengthens. In particular, the Committee decided to keep the target range for the federal funds rate at 0 to ¼ percent and currently anticipates that this exceptionally low range for the federal funds rate will be appropriate at least as long as the unemployment rate remains above 6½ 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. 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. When the Committee decides to begin

to remove policy accommodation, it will take a balanced approach consistent with its longer-run goals of maximum employment and inflation of 2 percent.

Modest growth in output and employment in coming months, but increasing concerns about costs of asset purchases

3. **The Federal Reserve remains committed to providing a highly accommodative monetary policy** to support a stronger economic recovery and to help ensure that inflation, over time, is at the rate most consistent with its dual mandate. **In light of the Committee's updated assessment of the efficacy and costs of its asset purchases, [particularly its concern that continuing purchases at their recent pace could ultimately complicate the eventual normalization of monetary policy,] the Committee decided to slow the pace at which it is purchasing longer-term securities and, at the same time, to adjust other policy tools to maintain a highly accommodative stance of monetary policy.**

4. **In particular**, the Committee ~~decided to continue purchasing~~ **will purchase** additional agency mortgage-backed securities at a pace of **[$30]** billion per month and longer-term Treasury securities at a pace of **[$30]** billion per month. The Committee is maintaining its existing policy of reinvesting principal payments from its holdings of agency debt and agency mortgage-backed securities in agency mortgage-backed securities and of rolling over maturing Treasury securities at auction, **and now intends to maintain this reinvestment and rollover policy at least until an increase in the target for the federal funds rate becomes appropriate**. **In addition, the Committee no longer intends to sell its holdings of [agency mortgage-backed | longer-term] securities to speed the normalization of the size and composition of the SOMA portfolio.** Taken together, these actions should maintain downward pressure on longer-term interest rates, support mortgage markets, and help to make broader financial conditions more accommodative. ~~The Committee will closely monitor incoming information on economic and financial developments in coming months.~~ The Committee will continue its purchases of Treasury and agency mortgage-backed securities~~, and employ its other policy tools as appropriate, until the outlook for the labor market has improved substantially in a context of price stability~~ **as long as the benefits of doing so exceed the costs**. In determining the size, pace, and composition of its asset purchases, the Committee will continue to take appropriate account of the likely efficacy and costs of such purchases as well as the extent of progress toward its economic objectives.

5. **Moreover,** to support continued progress toward maximum employment and price stability, the Committee ~~expects that~~ **intends to maintain** a highly accommodative stance of monetary policy ~~will remain appropriate~~ for a ~~considerable~~ **longer** time after the asset purchase program ends and the economic recovery strengthens **than it previously anticipated**. In particular, the Committee decided to keep the target range for the federal funds rate at 0 to ¼ percent and ~~currently anticipates that~~ **now intends to retain** this exceptionally low range for the federal funds rate ~~will be appropriate~~ at least as long as the unemployment rate remains above **[6]** 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. 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. When the Committee decides to begin to remove policy accommodation, it will take a balanced approach consistent with its longer-run goals of maximum employment and inflation of 2 percent.

6. **In a related move, the Board of Governors lowered the interest rate the Federal Reserve pays on required and excess reserve balances to [10 basis points | zero]. This action should reduce short-term interest rates and help to maintain downward pressure on interest rates more generally.**

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