THE FEDERAL RESERVE SYSTEM

Date: March 3, 2017

To: Federal Open Market Committee

From: Thomas Laubach and Simon Potter

Subject: Background Memos for FOMC Discussion of Reinvestment Issues

Attached are two staff memos intended as background for the Committee's discussion of reinvestment strategies at the upcoming meeting. The discussion below includes a brief summary of some the key issues raised by these memos. In addition, we have included a short list of questions that policymakers may wish to address in their discussion of these issues at the meeting. The staff plans to provide two additional notes to research directors next week that discuss some of the technical aspects of the interaction between interest rate developments and so-called convexity hedging issues in mortgage markets.

Summary of Staff Memos

The attached memos focus on two important dimensions of the issues associated with reinvestment strategy. The first memo focuses on broad macroeconomic considerations associated with the timing of the decision to cease reinvestment. The second memo reviews several options that policymakers might consider in deciding exactly how they wish to phase out reinvestment.

(i) *The Macroeconomic Effects of State-Contingent Ending of Reinvestment:* FOMC statements have noted that the Committee will continue its current policy of reinvestments until the process of normalizing the level of the federal funds rate is "well under way." The first memo examines the macroeconomic implications of alternative criteria that the Committee might employ as triggers for the beginning of the cessation of reinvestment.

Along the modal path, the differences in macroeconomic effects across alternative funds rate triggers for the cessation of reinvestments are small. In stochastic simulations, the analysis suggests that there may be some modest differences across strategies in tail events. In particular, maintaining reinvestments for a longer period generally results in slightly improved outcomes in scenarios that could lead to a return trip to the zero lower bound.

(ii) *Changing the FOMC's Reinvestment Policy: Approaches and Considerations:* The second memo discusses four illustrative options to help frame the Committee's discussion of possible approaches to ceasing reinvestment. One option envisions an approach to balance sheet normalization in which the Committee simply ceases all

reinvestments of Treasury securities and agency MBS. At nearly the other end of the spectrum, another option envisions continued reinvestment of all Treasury securities while allowing agency MBS to run off. Two other options are variants on an intermediate case in which the FOMC reinvests portions of maturing securities for a time to mitigate potential risks to market functioning and to smooth the runoff of the SOMA portfolio over time. There are many possible variations on these strategies and the staff would expect to return to the Committee at later meetings with a more detailed discussion of reinvestment options based on the views expressed by policymakers at this meeting.

The memo explores the implications of the illustrative options for the Federal Reserve's balance sheet and income over time, for term premiums, and for macroeconomic outcomes. The option featuring continued reinvestments of all maturing Treasury securities results in a notably longer time to normalize the size of the balance sheet relative to other strategies, and also is associated with somewhat higher risks for Federal Reserve remittances. But for the most part, the differences across the illustrative options in terms of market and macro effects are modest, particularly along the modal path for the economy. The memo notes that the potential market effects of the runoff of agency MBS are more difficult to assess.

The time to normalize the size of the balance sheet depends importantly on policymakers' views about the long-run size and composition of the balance sheet. For example, if policymakers intended to run a floor system in the longer run, the balance sheet may be substantially larger than in the pre-crisis period. Moreover, trend growth in currency boosts the size of the balance sheet over time as well; indeed, the level of currency outstanding has nearly doubled since early 2007. The appendix to the memo provides a range of estimates about the potential quantity of reserves that might be associated with a floor-type system. Most of the estimates are in a range of $500 billion to $1 trillion, still much smaller than the current level of reserves of about $2.2 trillion. Given that the Committee has not yet taken decisions regarding its desired longer-run implementation framework, the memo discusses the implications of the various options under several assumptions about the longer-run balance sheet size, including the assumption of a system with just $100 billion in reserves. The staff would expect to return to the Committee at a later meeting with a more detailed memo regarding the considerations for the size of the longer-run balance sheet.

Questions for Discussion

The questions for discussion at the upcoming meeting are listed on the last page of this note and focus broadly on the issues raised by the staff memos. The first question asks for your views on the factors that should determine when to begin redemptions. For example, in developing the "well under way" language in recent FOMC statements, policymakers judged that it would be appropriate to maintain the size of the balance sheet for some time in order to allow a more rapid rise in the target range for the federal funds rate than would otherwise be the case. This was viewed as providing a measure of flexibility to address future adverse economic shocks that could result in a return trip to the zero lower bound. On the other hand, policymakers may see these potential benefits of waiting to cease reinvestments as having declined if the risks surrounding the economic outlook are now more balanced than in the past or if they judge the level of the federal funds rate as now appropriately well above the zero lower bound. Moreover, policymakers may see a variety of costs associated with maintaining a large balance sheet and would want to weigh these costs against the potential benefits of maintaining a large balance sheet for longer.

The second question asks for your views on the four illustrative options for ceasing reinvestments discussed in the second memo. As noted in the memo, the differences across most of these options for various criteria such as market effects and the Federal Reserve's balance sheet are fairly modest. Policymakers' views about the options may hinge partly on the balance of benefits and costs they associate with maintaining a very large balance sheet and also whether they see particular benefits and costs associated with the speed of the normalization of the balance sheet once that process is under way.

The final question asks broadly for your views about the substance and approach to communications issues associated with reinvestment. In terms of the substance, policymakers will need to communicate how and when the Committee will begin the process of normalizing the size and composition of the balance sheet. A related issue is whether policymakers may wish to communicate about the types of decision criteria that the Committee might employ in guiding a decision to restart reinvestments for a time. For example, policymakers could wish to suggest that reinvestments could be restarted at some future date in response to adverse shocks that were large enough to require a significant cut in the target range for the federal funds rate.

In addition to these key substantive issues, policymakers may wish to consider the overall approach they will want to follow in communicating on this topic. Certainly the minutes of the current meeting will be an important first step in conveying more information to the public about the Committee's views on these issues. As the FOMC moves toward a consensus view on various aspects of the approach to reinvestments, policymakers could consider developing a statement that represents the shared view of the Committee about its reinvestment strategy. This approach, for example, would be similar to that adopted in the Committee's deliberations on policy normalization.

Apart from the minutes, the FOMC will eventually need to revise its statement language concerning reinvestments. At present, the statement notes that reinvestments will be continued until the process of normalizing the level of the federal funds rate is "well under way." Over time, that language could be revised to signal that the date for ceasing reinvestments is drawing closer. Policymakers may wish to consider a range of issues about how and when to incorporate such changes in statement language.

Questions for Discussion

Following staff briefings at the upcoming FOMC meeting, participants will have an opportunity to ask questions and then, during a go-round, to offer their own views on issues associated with reinvestment strategy. During this discussion, policymakers may wish to comment on the questions listed below.

(1) What are your views about the factors that should influence the timing of a change to reinvestments? What are your views about the principles that should guide a possible restarting of reinvestments at some point in the future?

(2) What are your views regarding the four illustrative options for reinvestments discussed in the staff memo? Are there variations on these basic approaches (or entirely different options) that you believe should be considered?

(3) What changes in FOMC statements, minutes, and other communications may be appropriate to provide guidance about the likely timing and other aspects of a change in reinvestment policy? When should such changes in communications be implemented?