Forward Guidance

Presented to the Stanford Institute for Economic Policy Research's (SIEPR) Annual Meeting

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Charles I. Plosser

President and CEO
Federal Reserve Bank of Philadelphia

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Introduction

The last five years have been an extraordinary time for central banking and monetary theory. The collapse in housing values, the ensuing financial crisis, and the slow economic recovery have challenged economic policymakers. To meet these challenges, central banks have pushed the limits of traditional economic theories and have experimented with untested tools and novel instruments.

In December 2008, the Federal Open Market Committee, or FOMC, lowered the fed funds rate, its primary policy instrument, to essentially zero. Having reached this zero lower bound, the Fed has turned to unconventional policy tools in an attempt to provide further monetary accommodation. One of these unconventional tools has been large-scale purchases of longer maturity assets, such as Treasury securities and mortgage-backed securities. These purchases – sometimes referred to as quantitative easing, or QE – have increased the size of the Fed's balance sheet and significantly changed its composition.

Another unconventional tool used by the FOMC has been "forward guidance." Instead of being an overt policy action, forward guidance is communication about future policy actions – the likely future path of the policy rate or monetary policy more generally. In my remarks today, I will discuss the rationale for using forward guidance and how it is intended to affect the economy. I will then turn to how the Federal Reserve has implemented this tool, and I will conclude with suggestions on how we might enhance its effectiveness.

Of course, my views are my own and not necessarily those of the Federal Reserve or my colleagues on the FOMC.

Forward Guidance in Theory

At one level, forward guidance is just another step toward increased transparency and improved communication in policymaking. Viewed in this light, it can be an important element of sound central banking, as I have discussed on many occasions. Appropriately employed, forward guidance can help the public form more accurate expectations about the future path of monetary policy and thus help promote stability in financial markets and the economy.

Economists have come to understand that expectations play an important role in the economy. Expectations about future business conditions, income or wages, inflation, and government tax and spending policies all influence decisions made today by consumers and businesses. For example, it is my view that unclear expectations, or uncertainty, about the future course of federal tax rates and spending plans has had a significant dampening effect on the U.S. economy over the last two years. Having a better understanding of the “rules of the game,” so to speak, would reduce uncertainty about fiscal policy and allow consumers and businesses to make more informed decisions.

The same is true of monetary policy. When the public has a better understanding of the anticipated path of monetary policy, households and businesses can make better decisions about spending, investment, and employment.

Over the past 20 years, the Fed has been on a journey toward increased transparency to help the public anticipate the Fed’s policy responses to economic developments. Of course, this is only feasible if policymakers’ actions are somewhat predictable. This is one reason I and others have long advocated that policymakers follow a systematic approach to policy – one guided by clear and easily understood rules.

In normal times, such policy rules, or reaction functions, indicate how the policy instrument is set in response to economic developments, such as movements in inflation, employment, or output. In the U.S., this could take the form of an interest-rate rule, in which the Fed’s policy rate – the federal funds rate – is adjusted in response to economic conditions. In fact, almost all of the mainstream economic models assume that policymakers behave in a rule-like manner that is well understood by the public. For example, if economic activity was growing rapidly and inflation was expected to rise above some goal, the rule would prescribe raising the fed funds rate. On the other hand, if economic activity was falling and inflation was slowing, such a rule would tell policymakers to lower the fed funds rate. One of the most well-known rules of this type was suggested by John Taylor, but there are many variations. All the variations describe how policy is expected to vary with economic conditions. So adopting a rule can be an effective way of providing forward guidance, since it makes future policy actions more predictable.

But in a period like today, when the rate is near zero, policymakers cannot directly lower the policy rate further, even if economic conditions and the policy rule called for such a step. What can a policymaker do when the interest-rate rule says to lower rates in response to economic developments, but the rate is already constrained by the zero lower bound on interest rates?

It turns out that in a number of models, when policymakers are confronted with the zero lower bound, it can be desirable, and in some cases optimal, for the central bank to commit to keeping the policy rate lower for longer than would otherwise be prescribed under its traditional policy rule. That is, it may be desirable and beneficial to offer forward guidance that promises to make monetary policy "too easy" well into the future. By affecting the public's expectations about the *future* path of policy, this forward guidance can impact the *current* economy.

There are two channels through which such a commitment could work. The first channel is through influencing the public's expectations of inflation. A credible commitment to keep the policy rate more accommodative than it otherwise would be for some period of time in the future, before bringing inflation back to the central bank's long-term objective, would tend to temporarily raise inflation expectations. When the nominal interest rate is near zero, higher inflation expectations will tend to push real interest rates lower. This would typically induce consumers to save less and spend more today, thus stimulating current consumption and aggregate demand. This channel of temporarily higher inflation expectations has been stressed, for example, by Gauti Eggertsson and Michael Woodford in their influential 2003 paper.[*]

A second but related channel through which forward guidance could work is by influencing the public's expectations about future economic prospects. A credible commitment to keep the short-term policy rate lower than normal should lead the public to expect a pickup in growth and higher income in the future. Since better economic times are coming, households and businesses need not save as much for a rainy day and can increase their consumption and spending today, thus boosting current aggregate demand. In this case, forward guidance to keep rates lower for longer can boost the economy in the short run, in part because the central bank is promising to make things better in the longer term.

Note, however, that the central bank's ability to influence the public's belief about the future path of policy and the economy depends critically on the bank's commitment to that policy path and the credibility of that commitment in the eyes of the public. The public must believe that even after the economy begins to strengthen, the central bank will hold rates lower than it otherwise might have found desirable to do had it not been at the zero bound in the past.

[*] See Gauti Eggertsson and Michael Woodford, "The Zero Bound on Interest Rates and Optimal Monetary Policy," *Brookings Papers on Economic Activity* 1 (2003), pp. 139-211.

Thus, monetary policy can potentially affect the economy not only through its current policy actions but also through the public's expectations of future policy actions. The theory is clear: If the public does not believe that the central bank will remain committed to this strategy, then current expectations will not change and the policy will not deliver the economic stimulus sought. Moreover, if forward guidance subsequently proves to be an unreliable predictor of the policy actually adopted, it can contribute to instability, result in unintended consequences, and undermine the central bank's credibility. Thus, such attempts at managing expectations through forward guidance should be used with some caution.

Forward Guidance in Practice

The use of forward guidance is not new, but its quantitative impact is difficult to establish. You may recall that the FOMC used forward guidance in August 2003 when it perceived that deflation was a risk. In its policy statement, the FOMC indicated that monetary policy accommodation could be maintained for a "considerable period." At the time, the markets had been anticipating a faster pace of tightening, and the language helped to align market expectations with that of policymakers. Five months later, in January 2004, when the deflation risk had subsided, the FOMC changed the guidance and noted that it believed it could "be patient in removing its policy accommodation." Then in May 2004, just four months later, the FOMC indicated that accommodation could "be removed at a pace that is likely to be measured." That measured pace began at the next meeting when the FOMC raised the fed funds rate by 25 basis points and then did so at each meeting through June 2006, bringing the rate up from 1 percent to 5.25 percent.

In the most recent business cycle, the FOMC reintroduced forward guidance in December 2008, saying that it anticipated that economic conditions were "likely to warrant exceptionally low levels of the federal funds rate for some time." In March 2009, the Committee replaced "for some time" with "an extended period." This lasted until August 2011 when the FOMC changed the "extended period" language to a calendar date, specifically indicating that rates would remain low "at least through mid-2013." The Committee then amended that target date twice last year – first to "late 2014" in January and then to "mid-2015" in September.

In December 2012, the FOMC moved away from forward guidance based on a calendar date to forward guidance framed in terms of economic conditions. The Committee indicated that it anticipates that the low policy rate would be appropriate at least as long as the unemployment rate remains above 6.5 percent, the outlook for inflation one to two years ahead remains at or below 2.5 percent, and longer-term inflation expectations remain well anchored. The FOMC also indicated, as it did in September, that accommodative policy will "remain appropriate for a considerable time after the economic recovery strengthens."

Some of you may know that I was not a supporter of the calendar-date forward guidance because it didn't convey any information about the FOMC's reaction function. Policy should depend on the evolution of the economy, not on the calendar. While the new threshold formulation is a step in the right direction, it, too, does not go as far as a policy rule would in providing information on policymakers' reaction function. The threshold formulation concentrates only on a particular pair of points: the 6.5 percent unemployment rate and the 2.5 percent inflation outlook. But it does not provide guidance about how the policy interest rate will evolve after the threshold is reached. Also, it doesn't help answer the question, how will policy respond to other combinations of inflation and unemployment? Thus, neither the calendar date nor the threshold form of forward guidance constitute the systematic approach to monetary policy that I prefer.

Practical Challenges in the Use of Forward Guidance

As I have argued, forward guidance as a tool of monetary policy has gained attention and traction in our current economic situation because, in some models, it can help alleviate the constraint of the zero lower bound on the nominal policy rate. However, just because it works well in some models does not mean it works well in practice. In fact, in some scenarios, forward guidance could have the opposite effect than intended.

In theory, the effectiveness of forward guidance to provide accommodation at the zero bound depends on the central bank's ability to make a commitment and the credibility of that commitment in the eyes of the public. There are reasons to be skeptical about both points. First, forward guidance requires the central bank to commit future policymakers to follow a course that may stretch far into the future. Yet, policymakers often prefer discretion over commitment or rules, arguing that they must be able to respond "appropriately" to economic shocks as they arise. Thus, there is an inevitable tension between the desire for discretion and the desire to commit to a policy path.

Second, optimal forward guidance requires policymakers to commit to making policy in a way that is different from what policymakers would want to do when the time comes. Economists would say that policymakers are trying to commit to a policy that is not time-consistent. Put another way, former Fed Chairman William McChesney Martin used to say that monetary policy's job "is to take away the punch bowl just when the party is getting good." Yet, these models tell us that at the zero lower bound, forward guidance should convey the opposite. That is, it should promise that monetary policy will not remove the punch bowl but allow the party to continue until very late in the evening to ensure that everyone has a good time. But what will make the public believe that policymakers in the future will deviate from past practices in this way? And will policymakers or the public be willing to tolerate the future inflation when it comes and believe that it is only temporary?

Of course, in the theoretical economic models, this time inconsistency is not an issue because the models assume that policymakers are fully committed to the pre-announced policy path and that the public believes policymakers will follow through with their stated intentions. That is, there is no option to deviate from the announced path.

But in practice, credibility is imperfect and some might say fragile. If the public doubts that policymakers will follow the pre-announced policy path, then forward guidance will not have the desired effects and it may even have counterproductive consequences.

Not only must there be a credible commitment to the policy but the public must fully understand the message policymakers are sending in the guidance. This can be a tricky communications problem.

In normal times, a central bank tends to earn a reputation through its actions. Of course, I would prefer that monetary policymakers be more transparent and adopt a systematic policy rule as a guide to policy. However, even if policymakers choose not to be so explicit, the actions a central bank takes over time can enhance the public's understanding of how the institution is likely to set policy. This helps make the central bank's policy choices at least somewhat predictable. Even if the central bank doesn't necessarily tell the public how it will behave through a policy rule, the public learns how it does, in fact, behave by its actions.

It is easy to think of examples. The German Bundesbank earned a reputation for keeping inflation low over many decades following episodes of hyperinflation. The Swiss National Bank similarly earned a reputation for low inflation over many decades. The Fed earned its reputation for price stability over three decades following the high inflation of the 1970s. Such reputations are hard won but can be easily lost. Following nearly two decades of low inflation in the 1950s and early 1960s, the Fed lost its reputation in the late 60s and early 70s, resulting in double-digit inflation. The cost of restoring that reputation was the wrenching recession of the early 1980s.

The models that advocate forward guidance as a policy tool at the zero bound assume that the public fully understands the policy rule that the central bank had been following, will understand when a new policy path is announced, and will believe that the central bank is fully committed to implementing that new policy.

But managing the public's expectations of monetary policy is a difficult task, especially when the policy is far from what the central bank has implemented in the past. This opens the door for the public to misunderstand the message the central bank is sending.

For example, when a central bank says it wants to keep rates low for a very long time, the public might interpret this as a statement that the central bank thinks the economic outlook is very poor, rather than the message the central bank wants to send, namely, that policymakers will ensure that the economy improves by keeping policy more accommodative than normal. Such a misunderstanding, of course, would undermine the channels through which such a commitment to low rates is supposed to work. Rather than encouraging the public to bring spending forward and reduce current saving, this misinterpretation could encourage more saving today to prepare for what the public believes are hard times to come. Thus, rather than alleviating the problems of the zero bound, the forward guidance may exacerbate these problems, leaving the economy trapped at the zero bound and caught in a Japanese-style lost decade of modest deflation and low growth. Indeed, some have argued that when the Fed first introduced calendar-date forward guidance, the public interpreted the step as signaling that the FOMC's economic outlook had worsened.

Similarly, forward guidance may risk unanchoring longer-term inflation expectations. One channel through which forward guidance works is by temporarily raising inflation expectations. But this must be done without undermining the credibility of the central bank's commitment to longer-term price stability. In our theoretical economic models, this is easily accomplished because the central bank is assumed to have perfect credibility, so this risk is not present. However, in practice, with imperfect credibility, allowing inflation to deliberately deviate from the central bank's longer-term goal runs the risk that inflation expectations will become unanchored. If that happens, whatever credibility the central bank had previously accrued could quickly vanish. As policymakers worked to reestablish their reputation, inflation, employment, and output would all suffer. I note that the FOMC's threshold forward guidance may help partially mitigate the risk of destabilizing inflation expectations. But it is only partial insurance, since the inflation threshold is formulated in terms of the central bank's *outlook* for inflation, which may be slow to deviate from the central bank's target until inflation and inflation expectations have already moved higher.

Thus, while our models suggest that forward guidance is a useful policy tool, we must remain humble about its expected benefits in the real world of imperfect commitment, imperfect credibility, and difficult-to-manage expectations.

Expectations are important, but in my view, policymakers have only a limited ability to manage those expectations. We have to understand those limitations. I believe the best course is to be clearer about what our reaction function will be to changes in key economic variables. I also believe we need to let the public know that monetary policy can't control or mitigate every shock to our economy. What it can, and should, do is to react to economic conditions in a systematic and predictable manner.

Can We Improve Our Current Forward Guidance?

In that context, we should ask ourselves whether there are better ways to express forward guidance. I believe that we could make our forward guidance more effective and improve policymaking more generally if we were more explicit about our policy reaction function in normal times. Why would this help?

As I discussed earlier, the Fed's current forward guidance is formulated in terms of thresholds for unemployment and inflation. But these are thresholds, not triggers. The FOMC has not made a commitment to act once a threshold is reached, nor has it indicated how policy will evolve after a threshold is reached. Instead, the FOMC has indicated that it expects to keep the stance of policy highly accommodative for a considerable time after the economic recovery strengthens. While this gives some indication that the Committee does not expect to tighten policy quickly after the thresholds are reached, the Committee is silent on how policy will actually be conducted.

This vagueness runs counter to the theory that supports the use of this explicit form of forward guidance in the first place. In order for forward guidance to be effective at the zero bound, the public must understand how the central bank intends to conduct policy in the future and also that this conduct differs from the typical way policy is set. This required understanding underscores the usefulness of systematic policymaking not only at the zero bound but also in normal times. The public must have a good understanding of how we conduct policy more generally – our traditional monetary policy reaction function – in order to understand the difference implied by our forward guidance at the zero bound. The more clearly we can articulate a reaction function that serves us well in normal times, the more effective will be our forward guidance efforts at the zero bound and, for that matter, at other times when deviations from normal policy might be called for. Thus, I have long been an advocate of systematic policymaking and increased transparency – in good times and in bad times.

Although my FOMC colleagues are not ready to choose a particular policy rule or reaction function to govern policy, we continue to explore the efficacy of monetary policy rules as guides to policy, as indicated in the minutes of the July 31-August 1, 2012 FOMC meeting. I believe we should continue to identify simple rules that work across a variety of economic models and try to communicate more information about the Fed's policy reaction function. We could improve policy transparency and communications by identifying the key economic variables on which we base our policy decisions and then frame the rationale for any change in policy around changes in these key variables. If the Fed is systematic about how it sets policy in normal times, the public will form more accurate judgments about the likely course of policy. This will not only improve the efficacy of monetary policy in normal times by reducing uncertainty and promoting stability, it will also increase the efficacy of forward guidance in extraordinary times, like the ones we find ourselves in today.