Commentary: Monetary Policy After the Fall

John B. Taylor

Charles Bean and his colleagues at the Bank of England take the right approach to evaluating proposals for monetary policy going forward. They empirically examine policy leading up to and during the crisis and then draw several important policy conclusions. I agree with some of the conclusions, but not others.

I agree that low policy rates played a role in the housing boom and the search for yield and thereby the crisis, but I disagree that it was only a modest role without implications for future policy. I agree that the unorthodox policies have no role in normal times, but I disagree that these policies were always successful in the crisis. I agree that inflation targets should not be raised, but I disagree that we need new policy instruments, such as discretionary countercyclical capital buffers, to ward off financial crises in the future.

In this commentary, I will focus on the disagreements because understanding them is crucial for deciding where monetary policy should be going in the decade ahead.

A Framework that Worked

Let me begin with my views on what monetary policy should be in the decade ahead. I start from the position that we had a good

monetary framework that worked well for many years before the crisis. Let's call it the "framework that worked." The theory underlying this framework is embodied in models now sitting at many central banks. Volker Wieland (2009) and his colleagues at the University of Frankfurt are performing a valuable public service by assembling these models in an online database to encourage transparency, model comparisons, and policy robustness research. An earlier representative list of models is found in Taylor (1999). Though the models differ in some ways, they are all dynamic and stochastic, and the impact of monetary policy is surprisingly similar in the different models, as shown in Taylor and Wieland (2009).

The framework is based on some key principles. First, it incorporates inflexibilities, usually price and wage rigidities, that make monetary policy effective, or as Robert Lucas (2007) puts it, "can make bad monetary policy so dangerous." Second, monetary policy is evaluated as a policy rule. One of the reasons that policy rules come into play in this framework is that expectations are usually rational, so "forward-looking optimizing behavior" might be another way to characterize this second principle. However, the rational expectations assumption does not necessarily imply a focus on policy rules, as discussed in Taylor and Williams (2010), so "policy rules" may be a more appropriate way to describe this second principle. By the term policy rule I include both rules for the policy instruments and rules based on the first-order conditions of an optimization problem. The two types of rules are closely related, as laid out transparently by the Norges Bank in their monetary policy reports.

Along with this monetary framework goes an approach to monetary policy in which the central bank adjusts the supply of money to bring about systematic changes in the short-term interest rate. The central bank's strategy, or rule, for adjusting the money supply, and thus the interest rate, depends on economic conditions. In general, the interest rate rises by a certain amount when inflation increases above its target, and the interest rate falls by a certain amount when the economy goes into a recession. The so-called Taylor rule is an example of how interest rates are changed in this framework.

Empirical research and economic history has shown that such an approach has worked well in the real world. Performance was good when policy was close to the rule, as in the 1980s and 1990s, as shown for example by Bernanke (2004). Performance was poor when policy was far away from the policy rule, as in the Great Inflation of the 1970s, as shown for example by Judd and Trehan (1995). Meltzer (2010, p. 1255) reviews the evidence across the span of the history of the Federal Reserve and comes to this same conclusion. Rarely in economics is there so much empirical and theoretical evidence in support of a particular policy framework. See Taylor (2010a) for more details.

Empirical work on monetary policy leading up to and during the recent crisis shows that monetary policy deviated from this rules-based framework, and that has been a major factor in the crisis. Interest rates were held below what a policy rules framework suggests worked in the past, as I showed at the annual Jackson Hole conference three years ago (Taylor, 2007). Then, after the crisis started, policymakers engaged in many discretionary credit operations. Some helped halt the panic in the fall of 2008, but others brought on the panic in the first place, as I described more fully in my review of the crisis in Taylor (2008).

The policy implication of this research for monetary policy in the future is thus very simple: Get back to the rules-based policy framework that was working before the crisis (Taylor, 2010b) and develop an exit plan to do so (Taylor, 2009a, 2009b). I recognize that the legacy effects of recent policy make an exit plan very difficult to carry out now, but I argue in Taylor (2010d) that the exit will be easier if the plan is designed as a policy rule.

Large or Modest Impacts of Low Policy Rates?

Now, where does the Bean et al. paper come out differently? The paper argues that the low policy rates were a factor in the crisis, but only a "modest" factor, apparently not large enough or damaging enough to suggest that such deviations from policy rules should be avoided in the future if we want to avoid crises. As stated in the paper, "although monetary policy may have played a role in fuelling the

credit/house-price boom that preceded the crisis, it is rather more Rosencrantz than Hamlet."

Their conclusion differs from mine for several reasons. First, they do not take account of much empirical work completed since the 2007 Jackson Hole conference. For example, Jarocinski and Smets (2008) of the European Central Bank estimated a vector auto regression (VAR) for the United States and found evidence that "monetary policy has significant effects on housing investment and house prices and that easy monetary policy designed to stave off perceived risks of deflation in 2002-04 has contributed to the boom in the housing market in 2004 and 2005." In a more recent study focusing directly on deviations from policy rules, Kahn (2010) of the Federal Reserve Bank of Kansas City finds that "when the Taylor rule deviations are excluded from the forecasting equation, the bubble in housing prices looks more like a bump." And in yet a third approach that looks at all the Organization for Economic Cooperation and Development (OECD) countries, Rüdiger Ahrend (2010) finds, based on empirical work with his colleagues at the OECD (Ahrend et al., 2008), that "'below Taylor' episodes have generally been associated with the build-up of financial imbalances in housing markets." Ahrend's work also addresses one of the Bean et al. counterarguments to this view: The different directions in housing prices in Spain and Germany are explained by Taylor rule deviations even though they are both part of the euro.

Bean et al. also estimate their own seven-variable VAR. They find that policy rule deviations had an effect on housing prices: 46 percent of the price increase in the United Kingdom and 26 percent in the United States, which leads the authors to say the effect is modest. But I do not find these numbers to be so modest. Recall the bust in house prices since the peak of the boom was about 30 percent in the United States. And according to their impulse response functions, the impact of the policy rule deviations on housing is significantly different from zero, and the largest impact of monetary policy of all the variables in the VAR is on housing prices. They also find that monetary policy during 2002-2005 was loose relative to estimated policy rules in both the United States and the United Kingdom.

In sum, when combined with the other papers mentioned above, I think the effects of low rates are significant and quite large.

Bean et al. also refer to Bernanke's (2010) American Economic Association speech of last January, which showed that if you change the Taylor rule—putting in expectations of inflation rather than the actual inflation rate—there is not such a big deviation. As Bean et al. say, "Bernanke finds that merely substituting Greenbook inflation forecasts for actual inflation in an otherwise standard Taylor rule eliminates much of the discrepancy with the target federal funds rate." As I argued in my reply (Taylor, 2010c) to Bernanke last January, I think that it is inappropriate to put in forecasts in this way. That is not how the Taylor rule was derived, and there are problems with using forecasts, including that they are not objective and/or accurate.

Unorthodox Policies: How Effective as Monetary Instruments?

Another point of disagreement with Bean and his colleagues is over so-called unorthodox programs. Of the many unorthodox programs, they focus on asset-purchase programs in the United Kingdom and the United States. They refer to the work of others and conclude that "the bottom line from these studies is the clear indication that asset purchases can be an effective monetary instrument." Bean et al. base their conclusion solely on "announcement effect" studies such as by Gagnon et al. (2010), which I think can be quite misleading. In contrast, I have looked at the programs themselves—the amount purchased and the timing—not just the announcement effect.

For example, consider the impact of the Fed's mortgage-backed securities (MBS) purchase program, which at $1.25 trillion is the largest single unorthodox program. My assessment of that program, based on Stroebel and Taylor (2009), is that the MBS program had a rather small and uncertain effect on mortgage rates once we control for prepayment risk and default risk. If so, such a program is not an effective monetary instrument. Charts 1 and 2, drawn from Stroebel and Taylor (2009), illustrate the reason for the result. They show that the major movements up and down in either the swap Option Adjusted Spread (OAS) or the Treasury OAS—mortgage yield

Chart 1
Treasury OAS: Predicted, Actual, and Residual

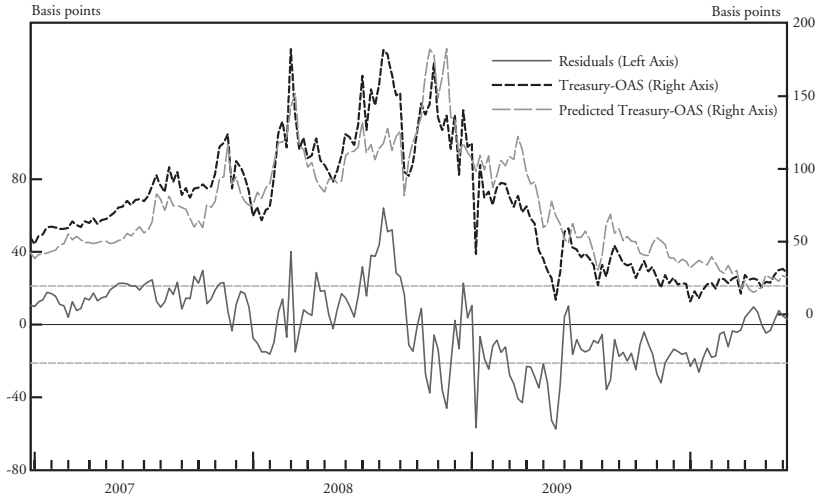
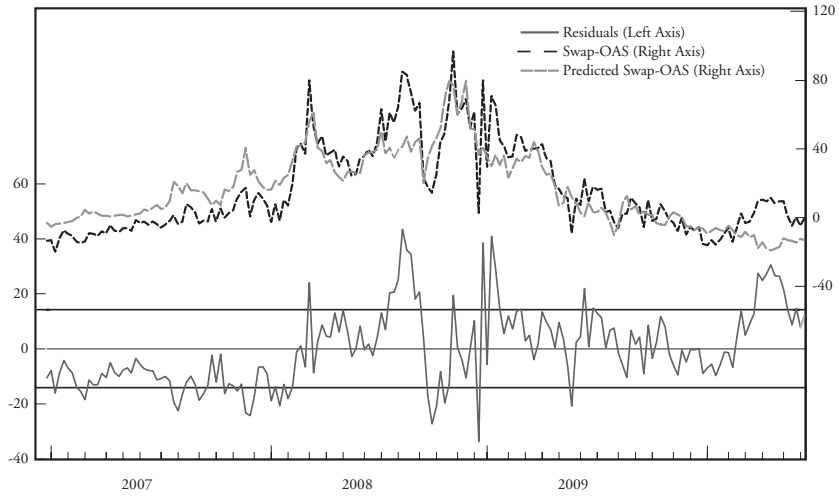


Chart 2
Swap OAS: Predicted, Actual, and Residual



spreads that control for prepayment risk—are explained by changes in default risk.

Charts 3 and 4 show how misleading it can be to judge the effectiveness of asset-purchase programs by looking at announcement effects. The initial announcement of the MBS program on Nov. 25, 2008, had a noticeable effect on both Treasury OAS and swap OAS, but the effects soon disappeared, especially for the Treasury OAS. The March 18, 2008, announcement effect of the extension of the program, also shown in Charts 3 and 4, has the wrong sign, but it too was soon reversed. The March announcement was accompanied by an announcement to buy longer-term Treasuries, which may explain the reverse effect.

Regarding the rest of the unorthodox programs, I think it is useful to divide them into: (1) those occurring during the period between the flare-up of the crisis in August 2007 and the panic in late September 2008 and (2) those occurring during the panic itself from late September through October 2008.

My assessment of the extraordinary measures taken in the year before the panic is that they did not work, and that some were harmful. The Term Auction Facility (TAF) did little to reduce tension in the interbank markets during this period, as I interpret research reported at that time by Taylor and Williams (2008a, 2008b, 2009), and it drew attention away from counterparty risks in the banking system. The extraordinary bailout measures, which began with Bear Stearns, were the most harmful in my view. The Bear Sterns actions led many to believe that the Fed's balance sheet would again be available in the case that another similar institution failed. But the Fed closed its balance sheet in the case of Lehman Brothers, and then reopened it again in the case of AIG. It was then closed off again for such bailouts, and the TARP was proposed. Event studies reported in Taylor (2008) show that the rollout of the TARP coincided with the severe panic. So, I have to disagree with the view that all the unorthodox interventions worked.

The panic period is the most complex to analyze because the Fed's main measures during this period—those designed to deal with

Chart 3
Announcement Effects: Treasury OAS

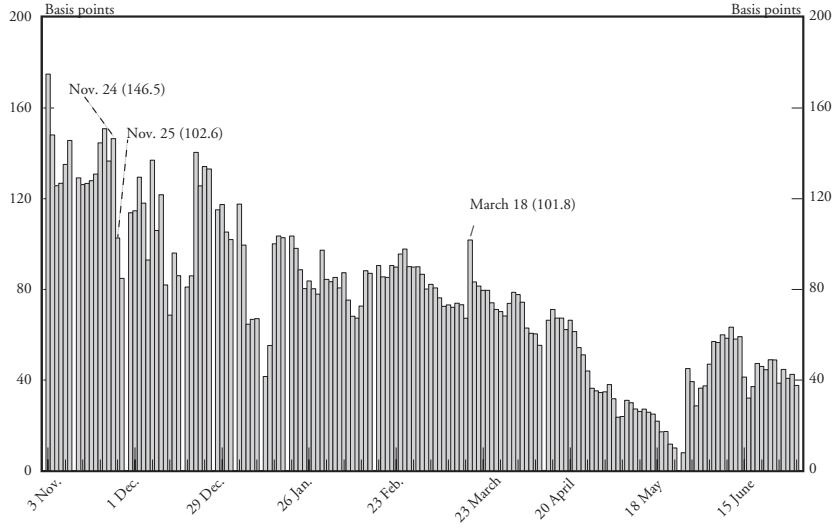
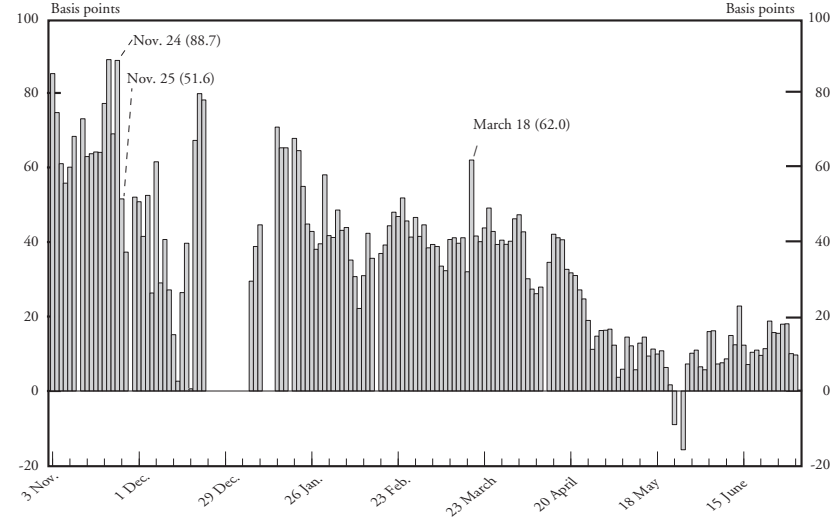


Chart 4
Announcement Effects: Swap OAS



problems in the money market mutual fund and the commercial paper markets—were intertwined with the FDIC bank debt guarantees and the clarification that the TARP would be used for equity injections, which was a major reason for the halt in the panic. In any case, a detailed examination of micro data by Duygan-Bumpt et al. (2010) shows that the Fed's asset-backed commercial paper money market mutual fund liquidity facility (AMLF) was effective. And I have argued that the Federal Reserve should also be given credit for rebuilding confidence by quickly starting up these complex programs from scratch in a turbulent period and for working closely with central banks abroad in setting up swap lines.

Additional Discretionary Tools

The final and most innovative part of the paper is the evaluation of proposals for "pro-cyclical capital buffers," which would work along with the interest rate instrument of monetary policy to cool credit or asset-price booms. Although I welcome the modeling work and the simulations, the motivation for using such instruments is lacking. Yes, capital requirements should be higher and commensurate with the risk that a financial institution takes, and effective supervision and regulation is essential. However, the rationale for discretionary changes in capital requirements to attenuate booms is based on the view that simply keeping the interest rate instrument from deviating from the policy rule that worked would not have prevented the worst of the housing bubble (and earlier bubbles). If one believes that low policy rates were only a "modest" factor in the boom, then one is drawn to these alternatives. But the stylized nature of the model and the instrument in this part of the paper illustrates how far we are from a monetary framework to evaluate such policies.

Conclusion

There is much in this paper to admire and agree with, but the parts I disagree with are a concern to me. I worry that the conclusions will take monetary policy in the wrong direction to a highly discretionary policy in which large deviations from proven policy rules would be regularly tolerated, in which unproven pro-cyclical capital buffers would be manipulated along with interest rates, and in

which unorthodox policies would be called on simply because they are thought (incorrectly in my view) to work.

In contrast, I argued that there is a perfectly good framework for monetary policy in the decade ahead. It is the framework that worked in much of the 1980s and 1990s in the United States without large deviations from simple policy rules, without pro-cyclical capital buffers, and without unorthodox policies.

Because the choice between these two alternative views is so stark, it is of paramount importance that empirical work be aimed at trying to reduce current disagreements. Indeed, this is one of the main purposes of statistical work, to reduce disagreement. Posterior opinions ought to be closer together than prior opinions, and if they are not closer, we should be able to explain why. I hope these brief remarks help move us in this direction.

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