# Three Challenges to Central Bank Orthodoxy

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**October 2, 2015**

In a speech to the Shadow Open Market Committee in New York, St. Louis Fed President James Bullard discussed the orthodox view of current monetary policy, which emphasizes that the FOMC's objectives are close to being met while monetary policy settings remain far from normal, along with three challenges to that view, which relate to strict inflation targeting, low real interest rates and globalization. He concluded that the U.S. economy will likely experience better outcomes if the monetary policy orthodoxy is preserved as the guiding principle.

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Related article in Federal Reserve Bank of St. Louis *Review* and *Business Economics*, October 2015, *50*(4), pp. 191-99.

**Full text of remarks:**

Three Challenges to Central Bank Orthodoxy[1]
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Shadow Open Market Committee
New York, N.Y.
Oct. 2, 2015

A Crossroads

The current monetary policy debate in the U.S. is at a crossroads. Since 2007-2009, the Federal Open Market Committee (FOMC) has pursued a very aggressive monetary policy strategy. This strategy has been associated with a significantly improved labor market, moderate growth, and inflation relatively close to target, net of a large oil price shock.

A key question now is how to think about monetary policy going forward.

The FOMC has long suggested that the appropriate exit strategy from the highly accommodative monetary policy following the 2007-2009 recession would be slow and

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*"Rationally, let it be said in a whisper, experience is certainly worth more than theory."*
Amerigo Vespucci

gradual, and would proceed in several well-defined steps. In the first step, the Committee tapered and then ended its quantitative easing (QE) program during 2014. In the second step, the Committee waited for further improvement in labor markets and signaled that the policy rate would soon move off the zero lower bound, albeit in small increments that would leave substantial monetary policy accommodation in place. In the third step, still in the future, the Committee would begin to gradually shrink the balance sheet, most likely through an end to reinvestments. The fourth step, well in the future, would see the balance sheet closer to pre-crisis levels and the policy rate more consistent with the Committee view of its longer-term level.

The liftoff of the policy rate from near zero might be viewed by some as a momentous event, since the Committee has not changed this element of monetary policy since December 2008, nearly seven years ago. Still, it would be a relatively minor part of the normalization story I have outlined. It is, after all, just one portion of a long-running recovery process from the events of 2007-2009. Eventually, one would surely expect to see nominal interest rates at more normal levels to be consistent with a pre-crisis equilibrium in which inflation is at target and labor markets are functioning well.

On the eve of policy rate normalization, however, the general view outlined above is being challenged from several directions. In this talk, I will provide my own characterization of some of these challenges in what I hope is an easy-to-digest format.

I will describe four broad categories of thinking about current U.S. monetary policy. None of these four broad themes are strictly identified with any one individual or organization, but instead represent threads of argument one often hears in financial market commentary, academia, and policymaking circles. Of these four approaches, the first will be what I think is a "classic" interpretation of current events based on traditional ideas of successful central banking practice. This is the central banking orthodoxy referenced in the title of this talk. The other three approaches are mildly heretical. Each claims that an aspect of the orthodoxy is clearly deficient in the current policy environment. Each has some appeal, but also important drawbacks. Each departs from the classic view by arguing that "this time is different."

My conclusion will be that each challenge to orthodoxy is interesting and potentially helpful, but ultimately has one or more drawbacks that make the orthodox view my favored basis for near- and medium-term monetary policy decisions.

I will begin by first describing my version of central banking orthodoxy. This part of the talk will be familiar to those who have followed recent speeches of mine on the state of

monetary policy.[2] I will then move on to the three challenges to this orthodoxy that I wish to discuss. These challenges are: (1) A weakening Phillips curve relationship that can lead to arguments for a more intense focus on inflation relative to the orthodox view; (2) very low real interest rates that can undermine the part of the orthodox view that claims monetary policy is very accommodative today; and (3) citation of ongoing globalization as a possible reason to heed foreign economic developments distinctly and separately when making domestic monetary policy decisions. I will explain all of these challenges to orthodoxy as I proceed through these arguments.

## A Simple Description of Central Banking Orthodoxy

What I am calling the "classic" or "traditional" way to view current U.S. monetary policy emphasizes the cumulative success that has been achieved so far with respect to Committee goals. The Committee has clear objectives associated with labor market performance and inflation. Regarding inflation, the Committee set an official target of 2 percent beginning in 2012. Concerning labor market performance, the Committee, through its most recent Summary of Economic Projections (SEP), has indicated that an unemployment rate of around 4.9 percent is likely to be consistent with longer-run equilibrium.[3] The value of the longer-run unemployment rate has drifted down recently—it was 5.6 percent within the last few years.[4]

Is the Committee achieving these objectives? The classic view emphasizes that indeed, these Committee objectives are close to being met.

The unemployment rate is currently 5.1 percent and has been on a downward trend. Given the large amount of uncertainty around the concept of a long-run or natural rate of unemployment, the current 5.1 percent value is statistically indistinguishable from the Committee's statement of the likely long-run level. In the last two expansions, unemployment fell well into the 4 percent range, and, barring a major recessionary shock, unemployment is likely to fall to similar levels in the quarters and years ahead. This is likely regardless of the date of liftoff, because monetary policy will remain exceptionally accommodative even after normalization begins. In short, the Committee has already hit its objective on this dimension.[5] In addition, labor markets are likely to continue to improve going forward, barring a major negative shock.

Many have argued that other dimensions of labor market performance should be considered in the current environment. I think this is fair, since labor markets were severely disrupted in 2007-2009. Indicators such as job openings and initial unemployment insurance claims look very good, while other indicators like part time for economic reasons and long-term unemployment seem not

as good. One way to get a handle on this issue is to consider a labor market conditions index. Such an index can be constructed by combining many different indicators of labor market performance into a single index number, and then taking that index number as a better and more informed judgment of the state of the labor market than the unemployment rate alone. We have calculated the level of such an index.[6] The current level of the index is well above its average level since 1976. Labor markets might be viewed as even better than normal according to this metric.[7]

What about the inflation side of the mandate? Inflation is certainly low today; in fact, near zero on a year-over-year basis due in part to the very large decline in oil prices beginning in 2014. In addition, recent oil price volatility suggests stabilization of oil and related commodities prices may still be some ways in the future. While the drop in oil prices is a net positive for the U.S. economy, the sharp downward movement does inhibit year-over-year readings on headline inflation. The classic view has an answer for this—it suggests looking through large oil price shocks, either positive or negative.

Accordingly, at this particular juncture, it may be more useful to consider the Dallas Fed's trimmed mean PCE inflation measure. This measure is running at about 1.7 percent year-over-year, about 30 basis points below the FOMC target. This is low, but still reasonably close to target.

The classic view, as I am outlining it here, would then say that unemployment of 5.1 percent and underlying inflation of 1.7 percent constitute values that are exceptionally close to the objectives of the Committee. This is so much so that based on a quadratic objective in deviations of unemployment and inflation from target, today's combination of labor market performance and inflation performance is about as good as it has ever been in the postwar era.[8]

While the metrics concerning Committee objectives are close to normal, the policy settings are not. The Committee has used two tools in the last seven years to conduct monetary policy. One tool has been to set the policy rate to a near-zero value, where it remains today. The Committee's SEP indicates that participants view the longer-run level of the policy rate to be about 3.5 percent, so that the current policy rate is more than 325 basis points lower than the long-run level. The other tool has been quantitative easing. As a result of several rounds of QE, the Fed's balance sheet has increased from a pre-crisis value of about $800 billion to about $4.5 trillion today.

These considerations—objectives met, but policy settings far from normal—suggest a policy path that will return the economy to the well understood pre-crisis equilibrium. Based on central bank orthodoxy, the most prudent course

of action is to begin to normalize the policy rate slowly and gradually, under the interpretation that the Committee will still be providing considerable monetary accommodation to the economy to guard against potential pitfalls and risks as the quarters and years ahead unfold. By adopting this prudent approach to monetary policy strategy, policy tools will eventually be returned to the toolbox, and the Committee may be able to lengthen the expansion longer than it may otherwise extend.

I have set up this simple classic view because I think that, on balance, this view suggests the best path forward for U.S. monetary policy. But there are certainly other views with considerable merit, and I will now turn to a discussion of these alternatives. All of the alternatives depart from an important aspect of the classic view. Again, I would hesitate to associate these alternatives with specific individuals or organizations, as most or all of us (including me at times) appeal to parts of these arguments when discussing contemporary monetary policy.

Strict Inflation Targeting

The classic view I have outlined places heavy emphasis on the attainment of Committee goals with respect to labor market outcomes. A possible challenge to the classic view is that labor markets have been overemphasized, and that it is the low inflation outcomes that are more critical today. This brings us to a second way to think about current U.S. monetary policy strategy and the first of the mildly heretical views. I will provocatively label this view "strict inflation targeting," a term often applied to Taylor-type monetary policy rules that place no weight on real variables like output or unemployment gaps.

How could labor market outcomes be overemphasized? One version of this view is that Phillips curve relationships on which much of modern central banking practice rely have either broken down completely or are badly damaged, meaning that further expansion of the economy and tighter labor markets in the quarters and years ahead are unlikely to lead to more inflation.[9] This being the case, one may wish to pursue substantially more monetary policy accommodation than otherwise—one may, for instance, keep the policy rate near zero longer.

Another version of this story is that the normal Phillips curve relationship remains intact, but the inflation rate itself contains all the information one needs to determine the extent of slack in the economy. That is, one may be able to reverse engineer the degree of slack in the economy by considering the inflation rate alone. One does not really need to know that much about the Phillips curve and its mysteries. The Phillips curve is temporarily dormant—it may or may not reassert itself in the future—and we can watch inflation for signs of life in the inflation-unemployment nexus.

Either way, whether one thinks the Phillips curve has broken down or is merely dormant, a student of the current U.S. economy taking this broad view may tend to cite inflation alone as the key indicator on which monetary policy should rely, and hence I label this view "strict inflation targeting." We could think of an advocate of this view as employing a Taylor-type rule in which the coefficient on the unemployment gap has been set to zero.

In short, in this alternative view, policy rates should be normalized only when inflation threatens. It challenges the classic view by dispensing with or substantially discounting the empirical evidence on labor market improvement as a reason to begin policy normalization.

Since I am not an advocate of the Phillips curve as an organizing principle for monetary economics, the strict inflation targeting approach has some appeal for me. Taken to its logical extreme, one could greatly de-emphasize current data on economic growth and labor market performance, focusing instead on inflation developments alone in considering monetary policy strategy.

Nevertheless, I do see an important drawback with this view. This type of argument might work better if the policy rate was not near zero, but instead was only mildly below its long-run level. But to use this alternative to the classic view to justify a very low policy rate near zero implies a very large elasticity between the policy rate and the inflation gap.[10] One would be saying, in effect, that because a smoothed measure of inflation such as the year-over-year Dallas Fed trimmed mean PCE was somewhat below the inflation target (let's say 50 basis points below), the policy rate itself must be set 325 basis points below its normal value. The flip side would be, in the context of strict inflation targeting, that when a smoothed measure of inflation is 50 basis points above target, the policy rate would need to be set to something like 325 basis points above its normal value, on the order of a 7 percent policy rate. Few would have this kind of sensitivity of the policy rate to inflation developments in mind when interpreting events using this view, but that is the implication of strict inflation targeting in the current environment. Given the natural variation in actual inflation, such a large elasticity would probably be unwise, as it might imply rapid adjustment of the policy rate in response to relatively benign inflation developments, possibly causing additional volatility in the economy. For this reason, I think it may be unwise to follow this particular alternative to the classic view.

Low Real Interest Rates

The classic view as I have formulated it does not say anything about real interest rates. It implicitly assumes that policy can be conducted with a standard Taylor-type policy

rule in which the intercept term represents a constant long-run or normal value for the policy rate. This is indeed the way Taylor-type rules were initially proposed and fit to macroeconomic data. Still, we have to be cognizant of the evidence, and current real interest rates on government debt and related instruments are exceptionally low.[11] Another alternative and mildly heretical way to think about current U.S. monetary policy is to appeal to time-varying real interest rates, and to argue that the intercept term in the Taylor-type rule is exceptionally low in the current era.

To see this, consider a generic Taylor-type monetary policy rule without too many bells and whistles. The rule is stated in linear terms, with inflation gaps and output or unemployment gaps as key arguments. Let us suppose for purposes of discussion that these gaps are zero—inflation is at target and unemployment is at its long-run level, so these terms go away completely. Then the Taylor-type rule simply says that the policy rate should be equal to its long-run or steady state level, often referred to as $r^*$.

And what is this $r^*$? It is simply the sum of the short-term real rate and the inflation target. That is, the Taylor rule collapses to a Fisher relation, stating that the current value of the nominal policy rate is equal to the real rate plus (expected) inflation which is equal to the inflation target at the steady state.

The real interest rate argument is that $r^*$ is actually a very low value in the current macroeconomic environment. Let us suppose that the relevant short-term real interest rate is minus 2 percent. Then, given an inflation target of 2 percent and gaps which are zero, the recommended policy rate from a Taylor-type rule in this class would be zero. This provides an argument rationalizing today's near-zero policy rate. In other words, yes, inflation and unemployment are near target, implying that the policy rate should also be near $r^*$, but $r^*$ is itself zero, so everything is exactly rationalized.

What should we make of this alternative view?

First, this argument as stated is saying that monetary policy is not accommodative right now, contrary to conventional wisdom.[12] Most observers of monetary policy seem to believe (via the orthodox view given earlier) that monetary policy is exceptionally accommodative and that it will continue to be accommodative going forward. This provides one reason why the low real rates view is somewhat heretical. In other contexts, many might say that it is the central bank actions themselves which are driving real interest rates to very low levels.

Second, there are many competing methods for computing the real interest rate. One method would emphasize labor force growth and the pace of technological improvement. Another method would draw on economic theory and use consumption growth rates. Using these and other methods

from the literature suggests that one can reasonably reach a wide variety of conclusions about the appropriate estimate of the real interest rate.[13]

For both of these reasons, the implied level of accommodation and the measurement uncertainty surrounding the estimation of the real interest rate, I think this alternative view suggests an unwise modification to the classic orthodoxy.

Globalization

The classic view as I outlined it did not make reference to events outside U.S. borders. This may be viewed as a shortcoming in an age of globalization. The final challenge to the classic view is to go global.

It may seem obvious that increasing reference to foreign economic events will be part of U.S. monetary policy going forward. But it has not been as popular as one might think, at least in portions of the international monetary policy coordination literature.[14] In models, the ideas are clear. There are many countries with independent monetary policies. Each country is its own New Keynesian economy with its own shocks. Exchange rates are flexible. Monetary policymakers in each country attempt to stabilize their own economies as well as they can by reacting appropriately to the shocks in their own country. A general conclusion from my reading of the literature is that in this situation, there would be little to gain from international monetary policy coordination. Roughly speaking, if policymakers in each country pursue the best domestically oriented stabilization policy available to them, the global equilibrium will be as good, or nearly as good, as the fully optimal outcome that could be attained through an appropriate coordination of monetary policy.

What does this mean in practical terms? "Domestically oriented stabilization policy" means policymaker reaction functions include only domestic variables, and these domestic variables contain all the information needed to pursue optimal policy, regardless of what is occurring in the rest of the world. Alternatively, one could imagine monetary policymakers in each country incorporating, in addition to their own output gaps and inflation gaps, foreign output gaps in their Taylor-type rules as they conduct monetary policy. The policymakers would then be adjusting their own policy rates in reaction to domestic inflation developments, domestic real developments, and, separately and distinctly, foreign real developments. The baseline result from an important class of models is that this situation does not lead to a better global equilibrium, and all countries would be just as well off focusing only on domestic inflation and domestic real developments. Why? The short answer is that it is the job of the foreign central bank to use stabilization policy in reaction to shocks in its own economy. That, in conjunction with the flexible

exchange rate regime, makes it unnecessary for the domestic policymaker to react to foreign shocks.

Of course, this is just one set of models. But as a baseline, I think this provides food for thought concerning globalization and monetary policy. The models I am referring to are "fully globalized" as the economies involved are simply carbon copies of one another with different shocks. Even within this environment of full globalization, the gains from international policy coordination may be small.

There is another angle on the role of foreign developments in domestic monetary policy. This is the literature on so-called global output gaps.[15] This literature argues that the output or resource gap that is most relevant for domestic inflation may actually be a global gap, which is sort of an average of output gaps across countries. In other contexts, I have explored the idea that especially for China and the U.S., which are linked by a managed exchange rate regime, it may be more appropriate to think of the resource gap for the two countries jointly.[16] While this is interesting and I think deserving of further research attention, in truth, the measurement problems are all the more severe in attempting to calculate a global output gap as opposed to simpler domestic resource gaps.

## Conclusion

In this address, I have outlined an interpretation of current events in U.S. monetary policy that I called the orthodox view. This view stresses the currently stark difference between FOMC objectives, which are arguably nearly attained, and FOMC policy tools, which remain on emergency settings. A simple and prudent approach to current policy would be to begin normalizing the policy settings in an effort to extend the length of the expansion and to avoid taking unnecessary risks associated with exceptionally low rates and a large Fed balance sheet. This would be done with the understanding that policy would remain extremely accommodative for several years, even as normalization proceeds, and that this accommodation would help to mitigate remaining risks to the economy during the transition.

These remarks have described what I see as three important challenges to this orthodox view. All challenges have a certain clear appeal, but also important drawbacks. All challenges contain an element of the argument that "this time is different."

The first challenge concerned possible overemphasis on labor market improvement in the orthodox view. One version would be that the empirical Phillips curve relationship is broken, and therefore the Fed can continue a very accommodative policy without worry of pressing inflation concerns. I called this view, somewhat

provocatively, "strict inflation targeting." A key issue with this challenge to orthodoxy is that it is difficult to use this argument to justify the exceptionally low policy rate observed in the U.S. today. Actually trying strict inflation targeting in the current environment would imply an exceptionally sensitive policy reaction function that might destabilize rather than stabilize the economy.

The second challenge concerned the observed low real interest rates on government debt and related instruments in the U.S. and globally versus the orthodox view that real interest rates of this type move very little and only very slowly. Time-varying and low real rates can be used, via a Taylor-type rule, to rationalize the current policy rate setting of zero. An important question for this challenge to orthodoxy is whether the resulting characterization of current policy as neutral instead of accommodative is consistent with Committee statements and financial market interpretations of current monetary policy. In addition, simple alternative measurements of an appropriate real interest rate suggest considerable uncertainty around this concept.

The final challenge deals with global concerns versus the orthodoxy that de-emphasizes international considerations. While it may seem that with increasing globalization, policy in one country has to take increasing account of developments in other countries, some of the literature on international monetary policy coordination in New Keynesian models suggests otherwise. In particular, at least as a baseline concept, the global equilibrium will be close to optimal if each country reacts only to domestic variables and the world is characterized by flexible exchange rates. This provides some food for thought on what globalization does and does not imply for monetary policy strategy.

In sum, while the challenges to orthodoxy presented here are certainly tangible and interesting, I do not think they provide sufficiently robust arguments to guide U.S. monetary policy over the near and medium term. The U.S. economy will likely enjoy better outcomes if the monetary policy orthodoxy I have described is preserved as the guiding principle.

**Endnotes**

[1] The views expressed here are my own and do not necessarily reflect the views of others on the Federal Open Market Committee. I thank my staff for helpful comments. [back to text]

[2] See Bullard (2015). [back to text]

[3] This was the median longer-run value of the September 2015 SEP (see FOMC, 2015). [back to text]

[4] This was the midpoint of the central tendency of the January 2012 SEP (see FOMC, 2012). [back to text]

[5] See Figure 1, below. [back to text]

[6] See Chung et al. (2014). [back to text]

[7] See Figure 2, below. [back to text]

[8] See Bullard (2015). More details can be found in Bullard (2014a). [back to text]

[9] See, for instance, Blanchard et al. (2015). They find that, in their Phillips curve specifications across many countries, the effect of the unemployment gap on inflation is small and often not statistically distinguishable from zero. [back to text]

[10] See Bullard (2014b). [back to text]

[11] However, real returns on capital are not (see Gomme et al., 2011 and 2015). [back to text]

[12] Chair Yellen made this statement at her September 17, 2015, press conference: "The stance of monetary policy will likely remain highly accommodative for quite some time after the initial increase in the federal funds rate in order to support continued progress toward our objectives of maximum employment and 2 percent inflation." [back to text]

[13] See Dupor (2015) and Figure 3, below. [back to text]

[14] See Bullard and Singh (2008), Bullard and Schaling (2009) and Bullard (2014c). [back to text]

[15] See Borio and Filardo (2007) and Bullard (2012). [back to text]

[16] See Bullard (2012). [back to text]

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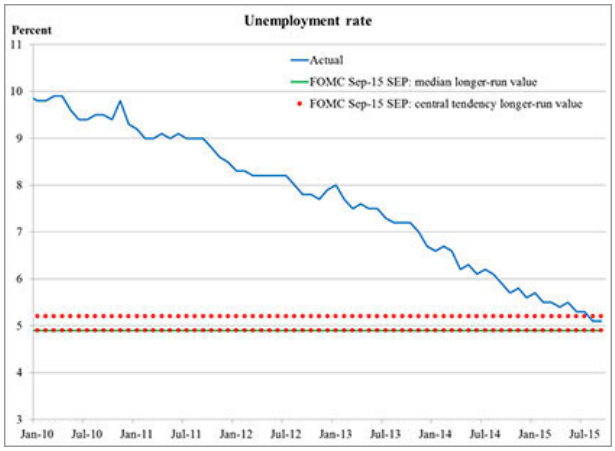


Figure 1: Unemployment relative to Fed objective.
*Source: Bureau of Labor Statistics and Federal Reserve Board. Last observation: September 2015.*


Figure 2: Labor Market Conditions Index relative to long-run average.
*Source: Federal Reserve Board and author's calculations. Last observation: August 2015.*

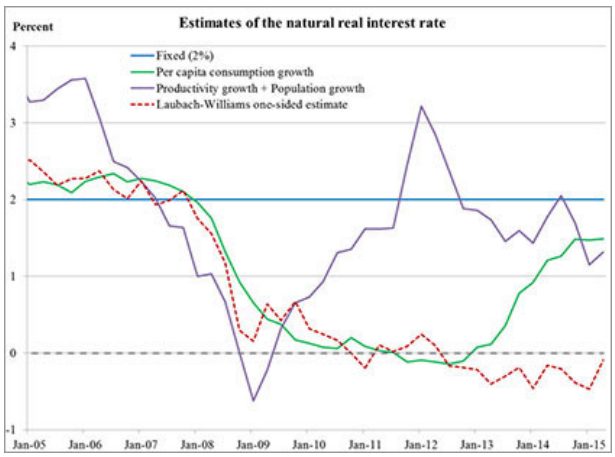


Figure 3: Different estimates of the natural real interest rate.
*Source: Bureau of Economic Analysis, Bureau of Labor Statistics, Census Bureau and author's calculations. Last observation: 2015-Q2.*