
A Risk Management Approach to Monetary Policy

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Introduction

It is my pleasure to be here in Muncie today to speak to you about my views on the progress of the recovery and on the course of monetary policy. I would like to thank Steve Smith, president of the Muncie Forecasting Roundtable, for that kind introduction.

For those of you who follow monetary policy deliberations, you will certainly be aware that I was the lone dissenter at the last policy meeting held in early November. So it should come as no surprise when I say that the views that I am presenting today are my own and not necessarily those of the Federal Open Market Committee (FOMC) or my other colleagues in the Federal Reserve System.

Real Output Gap

Four years ago the U.S. economy entered what developed into the deepest recession since the Great Depression. Two and a half years ago the recovery began. Yet, despite both accommodative monetary policy and fiscal stimulus, the pace of improvement has been agonizingly slow. Real gross domestic product (GDP) is only just back to where it stood at its pre-recession peak in 2007, employment growth is barely enough to keep pace with natural growth in the labor force and the unemployment rate remains extraordinarily high.

Earlier this year, most forecasters thought that the recovery was gaining traction and that economic activity would increase at a solid — though not spectacular — pace through 2012. The labor market was beginning to show some long-awaited improvement, and the financial repair process seemed to be making progress. Analysts thought that higher prices for energy and other commodities would weigh on output growth, as would supply-chain disruptions from the disaster in Japan. But these factors were expected to be transitory, and most forecasters thought growth would improve significantly once these influences had passed.

Unfortunately, the news over the past several months has proved this forecast to be too optimistic. To use an automotive analogy, employment and growth are stuck in neutral. Job growth has been disappointing, and the unemployment rate just last month dipped below 9 percent. Revised data indicate that annualized real GDP growth in the first half of 2011 was only 1 percent and improved only modestly to a 2 percent pace in the third quarter. Consumer spending has been particularly sluggish. Furthermore, the weakness in GDP growth began before the bulk of the effects of higher energy prices hit the economy and before the disaster in Japan happened. This timing, along with the continued softness of most economic indicators into the early summer, indicates that the slowing in output growth was not all due to temporary factors. Even with slightly firmer economic data that have come out recently, the sense of building momentum

seems absent. Rather, the headwinds facing consumers and businesses are even stronger than we had thought.

Against this backdrop, the outlook has weakened substantially. Last June my colleagues on the FOMC and I were projecting real GDP growth would be around 2-3/4 percent in 2011 and 3-1/2 percent in 2012. As I alluded to a moment ago, some of the recent incoming numbers — on manufacturing activity and automobile sales, for example — have improved. Even so, our latest forecast made in early November revised down our outlook for 2011 by a full percentage point and projected GDP growth at just 2-3/4 percent in 2012 — barely above most analysts' views of the potential rate of output growth for the economy. Such growth rates certainly are not strong enough to make much of a dent in the unemployment rate and other measures of resource slack. Indeed, the FOMC's latest forecasts are for the unemployment rate to remain above 8-1/2 percent through 2012 and to fall only to about 8 percent in 2013. Without new developments or changes in policy, I don't believe the U.S. economy is poised to achieve escape velocity anytime soon.

Inflation Outlook under 2 Percent

What about inflation? Large increases in energy prices pushed headline inflation — as measured by the 12-month change in the total Personal Consumption Expenditures Price (PCE) Index — up from about 1-1/4 percent last fall to almost 3 percent this summer. These higher prices certainly took a bite out of households' budgets. But they did not portend a permanent ratcheting up of inflation. Core PCE inflation — which excludes the volatile food and energy components and is a better predictor of future overall inflation — has been just 1.7 percent over the past year. Furthermore, prices for energy and many other commodities have softened of late. And with the unemployment rate still high and capacity utilization low, resource slack continues to exert downward pressure on prices. In addition, measures of longer-run inflation expectations are at the low end of the range they have been running since last November.

Putting these factors together, I would argue that inflation is likely to remain moderate over the foreseeable future. The FOMC forecasts for core inflation were concentrated near 1.8 percent this year, and its forecasts for total inflation were in the range of 1.5 percent to 2.0 percent for 2012, 2013 and 2014. My own assessment is that inflation will be at the lower end of these ranges.

Fed Performance

These disappointing forecasts pose a challenge for monetary policy. The Fed is charged by Congress in the Federal Reserve Act to encourage conditions that foster both maximum employment and price stability. This is what you hear us refer to as the Fed's "dual mandate." Given the high unemployment rate and low job growth, I think it is clear that the Fed has fallen short in achieving its goal of maximum employment. I will return to this point shortly. As for the price stability component of our dual mandate, the majority of FOMC participants — including me — judge our objective for overall inflation to average 2 percent over the medium term. With my own view that inflation is likely to

run below this rate over the next few years, I believe we run the risk of missing on our inflation objective as well.

Two Different Perspectives on the Economy

Central bankers must formulate monetary policy with the understanding that our knowledge is imperfect. We may have incomplete and sometimes competing views of the forces that generate current economic conditions. This is especially true in the difficult circumstances we face today. In my view, we should try to formulate a monetary policy strategy that carefully balances the risks associated with the reasonable alternative economic scenarios that we face and is as robust as possible to miscalculations as to which of these scenarios is predominantly true.

Let me now discuss two quite different perspectives that could account for the disappointing slow growth and continued high unemployment that we confront today. These two conditions are important to consider in that they have markedly different monetary policy prescriptions.

The first storyline I will refer to as the “structural impediments scenario.” In this scenario, the recent period, which has been referred to as the Great Recession, was accompanied by an acute period of structural change, skills mismatch, job-killing uncertainties and excessive regulatory burdens. Accordingly, these structural impediments have caused the natural rate of unemployment to increase.

The structural impediments scenario sounds plausible to many, but I do not find it compelling. As best I can tell, it rests on lots of conjecture about economic forces and outcomes that are not confirmed by the evidence at hand. As an economist seeking firm quantitative explanations, I am not aware of any rigorously studied economic models¹ that both match critically important time-series properties of the data and support the notion that today’s high unemployment rate arises from special structural impediments.² Even generous estimates of the impact of structural reallocation and other factors on today’s equilibrium, or the so-called natural rate of unemployment, do not come anywhere near the current 9 percent rate of unemployment.

Nevertheless suppose this scenario were true. In this case the role for additional monetary accommodation is modest at best: The economy faces a supply constraint that monetary policy simply cannot address. Accordingly, those subscribing to this view think that additional easing would likely raise inflation without having a sizable impact on unemployment. In this scenario, our running a more accommodative monetary policy potentially risks repeating the stagflation of the 1970s. At that time, the Fed did not understand that the changing structure of the economy had caused the natural rate of unemployment to rise. In an effort to reduce the unemployment rate, it provided too much accommodation that only served to raise inflation and inflation expectations. To avoid that mistake today, under the structural impediments scenario, the Fed should revert to a “business-as-usual” monetary policy and begin to consider removing excess

¹ See Christiano, Eichenbaum and Evans (2005), Smets and Wouters (2007) and Chung et al. (2010).

² Federal Open Market Committee (2011).

accommodation before inflation rises above its target and inflation expectations start to creep unalterably upward.

There is a second competing storyline — one that I refer to as the “liquidity trap scenario.” First, consider what occurs during normal times when nominal rates of interest are considerably above zero and real rates of interest are positive. If the supply of savings increased but the demand for investment remained unchanged, market forces would drive down real interest rates to some natural rate of interest that equilibrates savings and investment. This market dynamic is thwarted in the case of a liquidity trap.

Here, cautious behavior holding back spending — whether it is due to risk aversion, extreme patience or deleveraging — causes the supply of savings to exceed the demand for investment even at very low interest rates. Today short-term, risk-free interest rates are close to zero and actual real rates are only modestly negative. But they are still not low enough — because short-term nominal interest rates cannot fall below zero, real rates cannot become negative enough to equilibrate savings and investment.

As I weigh the evidence, I find the case for the liquidity trap scenario more compelling than one for the structural impediments scenario. My assessment has been influenced by the book titled *This Time Is Different: Eight Centuries of Financial Folly*³ by Carmen Reinhart and Kenneth Rogoff. Reinhart and Rogoff document the substantially detrimental effects that financial crises typically impose on the subsequent economic recovery. As we all know, the recent recession was accompanied by a large financial crisis. When I look at the U.S. economy today, I see it tracking Reinhart and Rogoff’s observation that such recoveries are usually painfully slow — and are so for reasons that have little to do with structural impediments in the labor market and the like.

Liquidity traps are rare and difficult events to manage. They present a clear and present danger that we risk repeating the experience of the U.S. in the 1930s or that of Japan over the past 20 years. However, liquidity traps have been studied over the years in rigorous analytical models by a number of prominent economists, including Paul Krugman, Gauti Eggertsson, Michael Woodford and Ivan Werning.⁴ Variants of these models have successfully explained business cycle developments in the United States. The lesson drawn from this literature is that the performance of economies stuck in a liquidity trap can be vastly improved by lowering real interest rates and lifting economic activity using an appropriately prolonged and forward-looking period of accommodative monetary policy. Of course, such monetary accommodation is the antithesis of the policy prescription for the structural impediments scenario.

A Risk-Management Approach to Policy Changes

Of course, I realize that I could be wrong in my assessment. So let us consider how we should conduct policy when we don’t know for sure which scenario is really the one we

³ Reinhart and Rogoff (2009).

⁴ See Eggertsson and Woodford (2003); Krugman (1998); and Werning (2011).

face today. How can we avoid risking a repeat of either the stagflation of the 1970s or the slow growth of the 1930s?

The problem, of course, is that policies that are optimal for the liquidity trap scenario would tend to generate higher inflation without significant reductions in unemployment if the structural impediments scenario were true. Conversely, policies that are optimal for the structural impediments scenario would leave the economy unnecessarily mired in depression and deflation if we were actually in the liquidity trap scenario.

A Middle Ground Proposal

Fortunately, between these two extreme scenarios, there is a robust middle ground policy approach. The Fed could sharpen its forward guidance in two directions by implementing a state-contingent policy. The first part of such a policy would be to communicate that we will keep the funds rate at exceptionally low levels as long as unemployment is somewhat above its natural rate. The second part of the policy is to have an essential safeguard — that is, a commitment to pull back on accommodation if inflation rises above a particular threshold. This inflation safeguard would insure us against the risks that the supply constraints central to the structural impediments scenario are stronger than I think. Rates would remain low as long as the conditions were unmet.

Furthermore, I believe the inflation-safeguard threshold needs to be above our current 2 percent inflation objective — perhaps something like 3 percent. Now, the “3 percent inflation” number may seem shocking coming from a conservative central banker. However, as Kenneth Rogoff recently wrote in a *Financial Times* piece, “Any inflation above 2 percent may seem anathema to those who still remember the anti-inflation wars of the 1970s and 1980s, but a once-in-75-year crisis calls for outside-the-box measures.”⁵ I agree wholeheartedly with Professor Rogoff.

And actually, this middle ground policy guidance is not as out-of-the box as one might think. Importantly, it is consistent with the most recent liquidity trap research, which shows that improved economic performance during a liquidity trap requires the central bank, if necessary, to allow inflation to run higher than its target for some time over the medium term. Such policies can generate the above-trend growth necessary to reduce unemployment and return overall economic activity to its productive potential. In fact, I have seen model simulation results that suggest to me that core inflation is unlikely to rise as high as 3 percent under such a policy.

But suppose the structural impediments scenario turns out to be correct. In this case, inflation will rise more quickly and without any improvements to the real side of the economy. In such an adverse situation, the inflation safeguard triggers an exit from the now-evident excessive policy accommodation before inflation expectations become unhinged. We would not have the desired reductions in unemployment, but then again, there wouldn't be anything that monetary policy could do about it. We would suffer some policy loss in that a 3 percent inflation rate is above our 2 percent target. But we

⁵ Rogoff (2011).

certainly have experienced inflation rates near 3 percent in the recent past and have weathered them well. And 3 percent won't unhinge long-run inflation expectations. We are not talking about anything close to the debilitating higher inflation rates we saw in the 1970s or 1980s. We would also know that we had made our best effort.

Conclusion

Today, I have outlined an appropriate course for monetary policy to take when we cannot know with certainty the degrees to which various forces are driving the economic weakness we currently face. If, as I fear, the liquidity trap scenario describes the present environment, we risk being mired in recession-like circumstances for an unacceptably long period. Indeed, each passing month of stagnation represents real economic losses that are borne by all. In addition, I worry that even when the economy does regain traction, its new potential growth path will be permanently impaired. The skills of the long-term unemployed may atrophy and incentives for workers to invest in acquiring new skills may be diminished. Similarly, businesses facing uncertain demand are less inclined to invest in new productive capacity and technologies. All of these factors may permanently lower the path of potential output.

As I said in the fall of 2010 and I repeat the message again today: I think state-contingent policies such as those I just described are a productive way to provide such necessary monetary accommodation. There is simply too much at stake for us to be excessively complacent while the economy is in such dire shape. It is imperative to undertake action now.

References

Christiano, Lawrence J., Martin Eichenbaum and Charles L. Evans, 2005, "Nominal Rigidities and the Dynamic Effects of a Shock to Monetary Policy," *Journal of Political Economy*, February, Vol. 113, No. 1, February, pp. 1–45.

Chung, Hess, Jean-Philippe Laforte, David Reifschneider and John C. Williams, 2010, "Have We Underestimated the Probability of Hitting the Zero Lower Bound?," paper at the conference, Revisiting Monetary Policy in a Low Inflation Environment, Federal Reserve Bank of Boston, October 13, available at www.bostonfed.org/economic/conf/conf55/papers/Reifschneider.pdf.

Eggertsson, Gauti, and Michael Woodford, 2003, "The Zero Bound on Interest Rates and Optimal Monetary Policy," *Brookings Papers on Economic Activity*, Vol. 34, No. 1, pp. 139–211.

Federal Open Market Committee, 2011, Minutes of the Federal Open Market Committee, January 25–26, Board of Governors of the Federal Reserve System, February 16, available at www.federalreserve.gov/monetarypolicy/files/fomcminutes20110126.pdf

Krugman, Paul R., 1998, "It's Back: Japan's Slump and the Return of the Liquidity Trap," *Brookings Papers on Economic Activity*, Vol. 29, No. 2, pp. 137–206.

Reinhart, Carmen M., and Kenneth S. Rogoff, 2009, *This Time Is Different: Eight Centuries of Financial Folly*, Princeton, NJ: Princeton University Press.

Rogoff, Kenneth S., 2011, "The Bullets Yet to Be Fired to Stop the Crisis," *Financial Times*, August 8, available at www.ft.com/cms/s/0/1e0f0efe-c1a9-11e0-acb3-00144feabdc0.html#axzz1fPi218UE.

Smets, Frank, and Rafael Wouters, 2007, "Shocks and Frictions in U.S. Business Cycles: A Bayesian DSGE Approach," *American Economic Review*, Vol. 97, No. 3, June, pp. 586–606.

Werning, Ivan, 2011, "Managing a Liquidity Trap: Monetary and Fiscal Policy," National Bureau of Economic Research, working paper, No. 17344, August, available at www.nber.org/papers/w17344.