A Perspective on the Future of Monetary Policy and the Implications for Asia

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Introduction

Thank you for the invitation to speak to you today. I am very happy for the opportunity to participate in the Sasin Bangkok Forum and to offer my thoughts on the U.S. and world economies.

We live in an amazingly interconnected world — a world in which financial markets are linked by the instantaneous transmission of information and business activity is intertwined among nations. For a long time, U.S. consumers and firms have been an important source of demand for Asian economies. This comes with pluses and minuses: Without the robust growth in the U.S. in 1997–98, the Asian financial crisis may well have been much worse than it actually was; in contrast, the recession and sluggish growth in the U.S. over the past five years have weighed heavily on the demand for products from Asia.

My comments today will focus primarily on the outlook for the U.S., but with an eye on its potential impact on Asian economies. Of course, here I have to cover the substantial downside risks to the forecast stemming from both the European debt situation and the U.S. fiscal cliff. I will also discuss how this outlook and other economic analyses shape my views for the appropriate stance of monetary policy.

Before I turn to the focus of today's discussion, I would like to remind you that the views expressed are my own and do not necessarily represent those of the Federal Open Market Committee (FOMC) or the Federal Reserve System.

Outlook

Let's start with the economic outlook. We are all too familiar with the fact that the financial crisis that unfolded in 2007 and 2008 precipitated a global recession that was unusually deep and lengthy in the U.S. and other advanced economies. Perhaps this shouldn't have been surprising. According to the detailed analysis by Carmen Reinhart and Kenneth Rogoff (2009) in their recent book, titled *This Time Is Different: Eight Centuries of Financial Folly*, recessions caused by financial crises generally are severe and followed by anemic recoveries. By any yardstick, this certainly describes the U.S. recovery to date: Output growth has averaged only 2.4 percent annually, and resource gaps remain huge. In particular, the unemployment rate remains over 8 percent — well above the 5-1/4 to 6 percent rate most FOMC participants view as being consistent with a fully employed labor force over the longer run.

Both public and private sector forecasts see relatively moderate rates of growth over the next few years. For example, the midpoint of FOMC participants' June forecasts had 2012 gross domestic product (GDP) growth only strong enough to roughly keep up with potential.[1] Growth in 2013 is expected to be only modestly higher. Moreover, both the European debt situation and the looming U.S. fiscal cliff impart substantial downside risks to the forecast.

Even absent any negative shocks, such tepid growth rates would close the large existing resource gaps only very gradually. Indeed, I expect that we will face unemployment well above sustainable levels for some time to come.

Implications for Asia

Growth in most Asian economies has picked back up in recent years, though not quite back to the very robust rates seen prior to the recession. Of course, going forward, they will not be immune to the tepid growth prospects that the U.S. and other advanced economies are now facing. Indeed, the weaker outlook for the U.S. and euro area has already contributed to reduced growth forecasts in Asia.[2] For example, the U.S. and euro area account for about one-third of China's merchandise exports. The recession and weak recoveries in those economies were big factors in the Chinese current account surplus falling from about 10 percent of GDP in 2007 to under 3 percent in 2011. The International Monetary Fund's April *World Economic Outlook* is projecting that in 2013, the Chinese current account surplus will still be just 2.6 percent of GDP. Not much export-led growth there. And this forecast was conditioned on only a small recession in the euro area (–0.2 percent fourth quarter to fourth quarter) and 2 percent growth in the U.S.[3]

International trade is a great thing: Exploiting comparative advantages raises living standards for all nations. However, all countries can't simultaneously export their way out of their problems. For the world as a whole, the current account has to balance. Thus, countries with large external surpluses face risks to their economies posed by slowdowns in their trading partners. Aggregate world growth must reflect aggregated domestic demands. So if demand is going to be sluggish in a large share of the world economy, other nations must take up the slack, or world growth will fall.

Inflation

With regard to inflation, as you know, the FOMC's long-run inflation objective is 2 percent as measured by the price index for personal consumption expenditures (PCE).

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[1] Note that many analysts believe that a number of factors—such as reduced capital formation and dislocations in the labor market—have temporarily lowered the rate of potential output growth relative to its longer-run rate. For example, the Congressional Budget Office (CBO) estimates the rate of potential output growth in 2011–12 to be about 1-3/4 percent per annum, but sees it picking up to about 2-1/2 percent in 2015–16.

[2] For instance, between September 2011 and April 2012, the International Monetary Fund revised down its 2012 growth projections for both advanced and emerging Asian economies by more than 0.5 percentage point, partly because of a deterioration of growth prospects in Europe (see figure 2.1 in International Monetary Fund, Research Department, 2012).

[3] International Monetary Fund, (2012), pp. 43, 191, 211.

For a number of reasons, I don't foresee much risk that inflation will rise above reasonable tolerance levels relative to this objective. First, the ten-year Treasury rate is in the neighborhood of 1-1/2 percent! And its decomposition into a long-run real rate and an inflation expectation is flashing something very different than warnings of dangerous inflationary pressures. I'll have more on this later. Second, energy and commodity prices have fallen well off their recent peaks as the global outlook dims. Third, as I just noted, the output gap remains large and is likely to close only slowly. In this economic environment, wage pressures are practically nonexistent. And it is hard to envision how we could see major persistent inflation pressures without a parallel increase in wage costs. Such parallel price and wage increases were a big part of the 1970s inflation, a scenario some fear repeating today. Fourth, inflationary dynamics depend in large part on the momentum generated by people's expectations of future inflation; currently, inflation expectations are well anchored, which will tend to keep inflation from moving either up or down. Putting all of these factors together along with the fact that core inflation averaged 1.8 percent over the past year, I conclude that inflation will likely remain near or below our 2 percent target over the medium term.

Sources of Risk and Their Implications

I would now like to turn to two important downside risks to the outlook for growth. I'll be taking a bit of a U.S.-centric view to these, but clearly they also have important implications for growth here in Asia and the rest of the world.

Europe

Let me begin with the European debt situation. Obviously, the developments in Europe pose a significant downside risk to the U.S. economy and world economic growth more broadly. The direct effects of slower European growth on the U.S. economy would be relatively small. The eurozone nations account for less than 15 percent of U.S. exports.[4] Thus, according to standard elasticity estimates,[5] even a moderate eurozone recession would reduce U.S. exports by only a couple of tenths of GDP. The direct export exposures to Europe of Asian economies vary relative to that of the U.S. economy, but they are generally of the same order of magnitude.[6] Elasticity estimates are harder to nail down and some might be larger than for the U.S. Nonetheless, overall, the direct effects of a slowing in the euro area on Asian economies probably would be manageable.

The indirect effects of eurozone developments could, however, be more severe, both in the U.S. and Asia. One possible channel would be through financial contagion. If losses on euro-centric assets put a large enough dent in the balance sheets of financial institutions that lend to U.S. households and businesses, increases in the cost and availability of credit would reduce growth in the U.S. and could spill over into Asia as

[4] According to data reported by the United Nations Conference on Trade and Development (UNCTAD), the euro area received 13.9 percent of U.S. exports in 2010. See http://unctadstat.unctad.org.

[5] Crane, Crowley and Quayyum (2007) estimate the U.S. export elasticity with respect to income to be 2.34 on data from 1981 through 2006. Cardarelli and Rebucci (2007) estimate it to be 1.85 using data from 1973 to 2006.

[6] UNCTAD reports that in 2010 the euro area accounted for 14.8 percent of China's exports, 8.3 percent of Japan's, 8.3 percent of Korea's and 7.5 percent of Thailand's. See http://unctadstat.unctad.org.

well. Clearly, this is a risk worth monitoring. Fortunately, though, U.S. financial institutions are in much better shape to handle such potential losses than they were in 2008. Recognizing the risks posed by the European debt situation, U.S. institutions have reduced their direct exposure to European assets. For example, the largest U.S. prime money market funds have trimmed their exposure to eurozone banks to under 15 percent of their assets, about half their allocation prior to the eurozone crisis.[7] U.S. banks have also tightened lending standards to European banks.[8] On the regulatory front, the most recent stress test administered to large U.S. banks included the possibility of a sharp European recession with contagion to global financial markets, and major U.S. banks demonstrated that they had capital plans in place that were adequate to weather this hypothetical scenario.

A second possible channel would be through the effects of uncertainty on current demand. Throughout the recovery, U.S. business and household sentiment has been very fragile. Every hint of bad news seems to generate a wave of increased caution and an associated pullback in spending as firms and families seek to protect their individual balance sheets. After what the U.S. economy went through in the Great Recession, this skittishness is understandable — particularly if one can envision a very large downside to the news event. And, as I just noted, given developments in Europe, there certainly are some serious downside scenarios one can envision, even if they are not the most likely outcomes. So it would be no surprise if yet another wave of uncertainty put a further dent in consumption and investment.

U.S. fiscal cliff

Another risk to the U.S. economy comes from the so-called fiscal cliff. Under current law, numerous tax and spending provisions enacted in various stimulus packages dating as far back as 2001 are scheduled to expire on January 1, 2013. In addition, if no budget agreement is reached by Congress, then significant automatic spending sequestration will take place. There also are some other miscellaneous cuts scheduled to occur in January. According to the Congressional Budget Office's projections,[9] if these cuts all took place, real GDP growth would be reduced by about 4 percentage points in 2013.

I'm not saying that a pullback of this magnitude should be the baseline scenario. The orders of magnitude are just too big. But when you go through the various items and make guesses at which may stay and which may go, it is easy to envision scenarios that include a marked increase in fiscal restraint in 2013. In addition, given the political process, it seems unlikely that we will know much about the size or composition of the cuts until late in the process. It's also easy to see how the rhetoric of public negotiating stances could produce an atmosphere that causes already jittery households and businesses to put some spending plans on hold. In sum, a messy resolution to the fiscal

[7] See Fitch Ratings at http://www.fitchratings.com/web/en/dynamic/fitch-home.jsp.
[8] See the *Senior Loan Survey* at www.federalreserve.gov/boarddocs/snloansurvey/.
[9] Economic effects of reducing the fiscal restraint that is scheduled to occur in 2013, May 2012. http://www.cbo.gov/sites/default/files/cbofiles/attachments/FiscalRestraint_0.pdf

cliff problems presents an important downside risk to U.S. growth prospects and, by extension, to world economic growth.

Policy Choices

Let me now switch gears and talk about my views regarding the choices facing monetary policymakers in the U.S. Yes, we have substantial liquidity already in place in our financial system. On the surface, this looks like substantial monetary accommodation. But as a large body of economic theory tells us, for this liquidity to be sufficiently accommodative, the public needs to expect that we will keep it in place as long as is necessary to restore the economy to a sound footing. This is why I believe we should clarify our forward guidance with regard to the future course of policy. Let me now go into the details behind these thoughts.

Optimal policy and Taylor rules

Since the summer of 2010, I have consistently argued for the strongest policy accommodation available. With huge resource gaps, slow growth and low inflation, the economic circumstances warrant extremely strong accommodation. Many of my views were well captured in the macro-model analyses discussed in a speech given by Vice Chair Janet Yellen (2012) this past April.

Governor Yellen compared two approaches to evaluating the stance of monetary policy to a baseline constructed from the midpoint of FOMC participants' forecasts made in January. The first was an optimal control policy—which prescribes the interest rate path that, in a well-specified econometric model for the U.S. economy, minimizes the deviations in inflation and unemployment from their policy goals. The optimal monetary policy in that analysis kept the federal funds rate near zero into early 2015—a year later than in the baseline—in order to keep the cost of capital extremely low. Even with the additional accommodation under the optimal control exercise, the unemployment rate does not reach 5-1/2 percent until mid-2016; that's pretty late, but it is still at least two years earlier than in the baseline scenario. Furthermore, the outlook for inflation remains benign: The highest that inflation rises in any simulation is 2.3 percent—only 0.3 percentage points above the highest rate in the baseline. In my view this is within any reasonable tolerance band around our 2 percent long-run objective for inflation, especially given that the unemployment rate currently is 2 to 3 percentage points above its sustainable rate.

Of course, economic models, at best, are only approximations to real-world behavior. So it's also prudent to look at policy prescriptions other than the optimal control policy. The most familiar of these are interest rate rules, like the Taylor rule (1993). These interest rate policy prescriptions are relatively simple empirical descriptions of the Fed's historical reactions to misses from its policy goals. If we apply the 1999 version of John Taylor's rule, we see the funds rate rising in early 2015. This lift-off is about 1-1/2 years after that in the 1993 version of the rule. But even the Taylor 1999 rule does not take account of the prolonged period that policy rates have been constrained to be higher than they could have been because of the zero lower bound on the federal funds rate. Taking account of this additional condition would delay the Taylor rule's liftoff towards

the optimal control policy.[10] Furthermore, these analyses were constructed from projections made in January; not only has the baseline forecast dimmed since then, but neither exercise considers the now more evident asymmetric downside balance of risks coming from Europe and the U.S. fiscal cliff. Considering all of these factors, I conclude that both policy prescriptions support the need for a high degree of monetary accommodation.

An explicit economic state-contingent policy

This message is similar to what I have been consistently advocating for some time — specifically, additional monetary accommodation is needed to more quickly boost output to its full potential level.

In weighing alternative policy approaches, I do recognize the risk that these economic model analyses could be wrong. Accordingly, I have proposed that any further accommodative policies should contain a safeguard against an unreasonable increase in inflation. In my judgment, nominal income level targeting is an appropriate policy choice and has such a safeguard. But recognizing the difficult nature of that policy approach, I have a more modest proposal: I support a conditional approach, whereby the federal funds rate is not increased until the unemployment rate falls below 7 percent, at least, or until inflation rises above 3 percent over the medium term. The economic conditionality in my 7/3 threshold policy would clarify our forward policy intentions greatly and provide a more meaningful guide on how long the federal funds rate will remain low. In addition, I would indicate that clear and steady progress toward stronger growth is essential. Because we are not seeing that now, I support using our balance sheet to provide additional accommodation. I think our action in June that continued our Maturity Extension Program was useful; but I would have preferred an even stronger step, such as the purchase of more mortgage-backed securities.

Finding a way to deliver more accommodation — whether it is monetary or fiscal — is particularly important now because delays in reducing unemployment are costly. An unusually large percentage of the unemployed have been without work for quite an extended period of time; their skills can become less current or even deteriorate, leaving affected workers with permanent scars on their lifetime earnings. And any resulting lower aggregate productivity also weighs on potential output, wages and profits for the economy as a whole. The damage intensifies the longer that unemployment remains high. Failure to act aggressively now will lower the capacity of the economy for many years to come.

Accommodation in the Context of a Symmetric Inflation Target and Balanced Policy

I can't tell you how often people look at me in abject horror when I say that we should adopt a conditional policy that tolerates the risk of inflation exceeding our target by as

[10] Reifschneider and Williams (2000) show how taking account of the zero lower bound would delay liftoff in the Taylor 1993 rule; they did not investigate the Taylor 1999 rule, but the logic of their analysis would hold for the 1999 rule as well.

much as 1 percentage point. How can I accept inflation rising above our stated target? Isn't this blasphemy for a central banker?

As you know, in January we announced a specific number — 2 percent — for our inflation objective. At the same time, we also said that policy would take a balanced approach in achieving the two legs of the Federal Reserve's dual mandate — maximum employment and price stability. The explicit recognition of a real-side mandate is something different about the Federal Reserve. Most central banks are explicitly charged only with an inflation objective. Of course, just about all follow a flexible inflation targeting approach, in which they seek to minimize fluctuations in pursuit of their inflation objective. But for the Fed, maximum employment is an explicit part of our mandate.

I strongly support the principles document we released in January. But questions still remain about the specifics of how policy will be implemented under this framework.

As Chairman Bernanke (2012) stated at his April press conference, the 2 percent inflation goal is a symmetric objective and not a ceiling on inflation. Symmetry means that inflation below 2 percent should be viewed as the same policy miss as if inflation overran 2 percent by equal amount. However, if we disproportionately recoil at inflation a little above 2 percent versus a little below, then we are not symmetrically weighing policy misses. And there is some risk of this misperception taking hold, since in the FOMC's *Summary of Economic Projections* (SEP), several participants' forecasts have the funds rate rising before 2014, even though throughout the projection period most see inflation at or below 2 percent and unemployment well above the sustainable rate indicated by the long-run projections.

I believe the FOMC can do better at describing our thinking with respect to tolerance bands around our long-run inflation and unemployment goals. Clarification would increase both transparency and accountability. Importantly, it would help markets better anticipate Fed actions, creating one less source of risk for economic agents to manage.

To me, a symmetric inflation goal and a balanced approach to policy mean that if we are missing our employment mandate by a large mark, but are close to our inflation target, then we should be willing to undertake policies that could substantially reduce the employment gap even if they run the risk of a modest, transitory rise in inflation that remains within a reasonable tolerance range. The 7/3 threshold policy I have been advocating is such a plan under which I expect the sum of the resulting two misses would be less than the one miss under a less accommodative policy.

The Signal from Nominal Long-term Treasury Rates

Another objection I often hear when making the case for more monetary accommodation is that higher inflation is inevitable. After all, there's another important elephant in the room, right? The Fed's balance sheet has ballooned from a mere $800 billion in August 2007 to almost $3 trillion today: With an explosion in the monetary base like this, inflation must be just around the corner, right? Despite the fact that this

prediction has been around since mid-2009 and three years later it has not come close to fruition, it's still early days, right?

The argument that inflation is imminent faces an enormous uphill battle these days, and a single number captures this concern very well: 1.45 percent. The ten-year Treasury rate was 1.45 percent as of June 1. And it is only 1.60 percent today. This is unprecedented in the post-World War II economy, and it is wildly inconsistent with rising inflation over the time frame that monetary policy is concerned with, such as the next ten years.

What do such low rates signify? To start, the nominal short-term interest rate is the sum of the real interest rate plus expected inflation. In turn, long-term interest rates are the average of expected future short-term rates plus a term premium, or risk premium. There are a variety of ways to estimate this decomposition; and they all indicate that today all three pieces — expected real rates, expected inflation and the risk premia — appear to be quite low.

What do these estimates imply? First, real interest rates reflect the expected return to saving and investing today in order to obtain more real goods and services tomorrow. Low long-term real rates imply that agents are expecting such returns to be low for a long time—which is consistent with them expecting economic activity to be relatively weak over the coming years. Next, low expected inflation means that market participants are building in little chance of a breakout in inflation. Indeed, if markets were expecting, say, 5 percent inflation for the U.S., then real rates would be on the order of negative 2 percent or negative 3 percent — implausibly low unless you expected an extraordinary economic meltdown. And if you believed this, you also would probably not think that Treasury securities were a safe bet, and their risk premia would be quite high. These Treasury premia, however, are quite low, reflecting a high demand for safe assets. Economic agents are cautious, and there is little appetite for risk-taking at the moment.

What does this add up to? Well, low long-term Treasury rates support the view that markets are looking for only modest economic growth with low inflation, and a there is a high degree of caution out there — which itself is an important factor holding back economic activity today.

Conclusion: Low Policy Rates Are Appropriate Policy

Of course, underlying these low long-term rates, too, are expectations that short-term policy rates will remain low for an extended period of time. The job of U.S. monetary policy, according to the Federal Reserve Act, is to provide monetary and financial conditions to support maximum employment and stable prices. As I noted earlier, we have an explicit dual mandate. Monetary policy thus aims to set short-term rates so that the supply of saving equals the demand for investment in a way that facilitates the U.S. economy reaching maximum employment and price stability.

Currently, the forces of supply and demand require very low rates. The supply of saving is high as households delever and repair their balance sheets. Furthermore, the demand for investment is low because most firms have much unused capacity and are unsure about the economic path forward. Therefore, equilibrium real rates are quite low. Indeed, today they are lower than actual rates because nominal short-term rates are constrained by the zero lower bound and can go no lower. Economists refer to this as a liquidity trap because interest rates cannot fall low enough to reemploy the economy's unused productive resources. And the mainstream remedy to this dilemma — as articulated clearly in academic work by Krugman (1998), Eggertsson and Woodford (2003), Werning (2011) and others — is to commit to highly accommodative monetary policy now, and for an extended period into the future.

There are those who disagree with these prescriptions; they say that our low-rate policy isn't doing any good — or even hurting the economy — and that we would be better off if we began to remove some accommodation.

Suppose the FOMC immediately undertook a program to raise short-term interest rates. In other words, monetary policy could exogenously turn more restrictive. Would this help the economy? In my judgment, that would be a very bad policy. More restrictive credit would further reduce investment and job creation and limit the supply of credit to small business entrepreneurs, resulting in growth even slower than it is now. True, some savers and investors would receive higher returns on some of their investments. But we would not be left with higher returns on the whole. Weaker growth would generate lower real returns to many projects, and other sources of income, such as employment and entrepreneurial income, would be reduced.

But there will be a time when higher rates will be appropriate. If the FOMC and other policymakers could engineer stronger growth policies so that the economy boomed again and unemployment fell, this would organically lead to higher real rates of return on investment and higher interest rates in general, which would benefit savers and investors throughout the world. A more vibrant economy would benefit owners of unused resources, bring unused factory capacity back on line, and reengage unemployed workers. This is the policy path that is most desirable in my opinion. I also think it is most consistent with the accommodative policies I have been advocating. Thank you.

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