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## Thoughts on the Future Course of Monetary Policy

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**Charles L. Evans**  
**President and Chief Executive Officer**  
**Federal Reserve Bank of Chicago**

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FEDERAL RESERVE BANK OF CHICAGO

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Those of the Federal Reserve System or the FOMC.

## Thoughts on the Future Course of Monetary Policy

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It is my pleasure to participate in this panel discussion on the future of monetary policy. I would like to offer a special note of thanks to Benoit Mojon and the Bank of France for organizing this session.

Over the past three years, the U.S. economy has faced a wide range of challenges. Some were unique to the U.S. economy and policy environment, and others were global in scope. I look forward to hearing the perspectives of my co-panelists as they deliberate the future of monetary and regulatory policy from their points of view.

Before offering my thoughts on U.S. monetary policy, let me emphasize 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.

The U.S. economy is now in its second year of recovery following the deepest recession since the Great Depression. The financial crisis that engulfed economies around the world required bold and innovative policy actions and, at times, close coordination and cooperation among central bankers worldwide. These unprecedented actions have stabilized the financial system. Yet, we in the U.S. have a considerable ways to go before we meet either of the Federal Reserve's policy mandates of maximum employment and price stability.

Let me first briefly describe the current economic situation. Over the course of the recession, U.S. real gross domestic product (GDP) declined by more than 4 percent, over 8 million jobs were lost, the unemployment rate doubled to 10 percent and the household sector lost more than \$13 trillion in wealth. Aided by improvements in financial markets, accommodative monetary policy and fiscal stimulus, real GDP has been growing since mid 2009 and private employment has been increasing for about a year. However, given the depth of the recession — and even allowing for a modest reduction in the level of potential output — we still have a long road ahead before we return to full utilization of the economy's productive capacity.

Overall, the pace of recovery has been disappointing. With the boost in spending from the first fiscal stimulus winding down and inventory accumulation fading in the spring and summer, output growth moderated in the second and third quarters. More recent data have been coming in somewhat stronger. But they do not yet point to the kind of robust, self-perpetuating recovery that we need in order to close today's large resource gaps within a reasonable amount of time. Furthermore, underlying inflation has fallen to a level well below the 2 percent rate that I, and most FOMC policymakers, consider consistent with effective price stability.

Looking ahead, I expect output growth to strengthen in 2011 and 2012: averaging somewhere near 4 percent. Indeed, there is an increased sense of optimism among virtually all economic forecasters. However, even 4 percent is only modestly higher than the growth rate of potential output and thus represents a quite muted recovery given the severity of the recession. In addition, this growth forecast is not strong enough to reduce unemployment significantly within a reasonable timeframe; it would likely result in the unemployment rate remaining in the neighborhood of 8 percent at the end of 2012.

Now let me turn to my views on future monetary policy. The Federal Reserve's actions are driven by our dual mandate: We set policies to help foster both maximum sustainable employment and price stability. The current settings of U.S. monetary policy are intended to better achieve these mandates over time.

My primary message today about prospective policy is this: In order to foster a return of economic conditions consistent with our dual mandate we need to keep short-term nominal policy rates low for an extended period — the implications of this for the yield curve should then stimulate spending by households and businesses. The FOMC's policy statement has included this characterization for the federal funds rate since March, 2009. I view our recently expanded program of asset purchases as a complementary policy tool in this regard as it solidifies our commitment to keeping short term rates low for an extended period.

It is vitally important for our policy actions to be judged relative to the mission that Congress has laid out for us in the Federal Reserve Act. Accountability is a critical obligation for any central bank that requires substantial independence to be effective. Accordingly, it is of utmost importance to continually evaluate our policy record against our objectives and communicate our actions and the results. Frankly, that's why I am here today.

So, where do we stand on our employment mandate? In weighing the evidence, I am convinced that a sizable output gap exists, which, of course, is consistent with the unemployment rate currently being well above the level consistent with maximum sustainable employment. I arrive at this conclusion even after having considered arguments that structural changes (as opposed to cyclical factors) in labor markets may be keeping the unemployment rate unusually high. True, factors such as the need to reallocate labor across industries, house lock and the extension of unemployment insurance benefits have likely increased the natural rate of unemployment, at least temporarily. But attempts to quantify such effects suggest there is still a good deal of labor market slack. The strongest evidence of structural change comes from the uptick in vacancies, as reported in the *Job Openings and Labor Survey (JOLTS)* over the last year, that has so far not been matched by a drop in unemployment. This might be taken as evidence of a drop in the efficiency of job matching, which would be associated with an unfavorable shift of the Beveridge curve. Some of the observed decline in job match efficiency is likely associated with cyclical and other temporary factors. However, even if you thought it was all permanent, my staff did some calculations that provide an upper bound on the increase in the natural rate of unemployment that would result in a

standard specification of the Mortensen–Pissarides search model. Those results would still leave us with about 2 percentage points of unemployment slack. As I said, this is after using an upper bound for the importance of structural unemployment. The bulk of the evidence I've seen suggests the true amount of slack is at least 3 percentage points. So, I don't think there's much question that we're missing badly on our employment mandate.

Most of us on the Federal Open Market Committee have said that a core Personal Consumption Expenditures Price Index (PCE) inflation rate of about 2 percent is consistent with our price stability mandate. Yet, core PCE inflation has been running below this 2 percent rate for about two years. It has been roughly 1 percent for the past several months, and I currently expect it will remain close to 1 percent through the end of 2012. In light of stable inflation expectations and the large resource gaps I previously mentioned, there is little pressure for inflation to move much higher in the current economic environment. Now suppose you were inclined to down-weight the contributions from large resource gaps for inflation forecasts. You would then likely turn to the empirical evidence that a random-walk forecast for inflation is difficult to beat. In the current environment, this forecasting philosophy points to the same qualitative assessment as my forecast does; namely, that inflation is likely to remain well below 2 percent over the next year or two.

With unemployment too high and inflation too low — and both forecast to stay that way over the next two years — we have missed on both of our policy objectives. Even if the Fed were charged with achieving price stability alone, as are many other central banks, undershooting our inflation target would dictate a highly accommodative monetary policy stance. There is currently no policy conflict between improving the employment and inflation outcomes — accommodative monetary policy continues to be necessary for achieving each of these goals.

Next, in weighing future monetary policy, policymakers should have a sturdy foundation for thinking about the current economic situation. I find the modern economic literature on liquidity traps to be particularly compelling for assessing matters today. Currently, spending is being held back by extremely cautious behavior by businesses and households. Firms are willing to let cash sit on their books instead of investing in new projects or expanding their work forces. Households are holding back on spending to reduce debt and build their stock of precautionary savings. At prevailing interest rates, households and businesses have an excess of savings relative to the investment demands for these funds. Normally, monetary policy could reduce the incentives to save and stimulate spending by lowering short term nominal interest rates. But with the federal funds rate already essentially at zero, we are in a liquidity trap. There is no room for further reductions in short-term nominal rates to help re-equilibrate the market for loanable funds.

A variety of typical linear Taylor rules suggest that, given current resource gaps and inflation, a real federal funds rate of around minus 4 percent would be appropriate. A primary justification for putting weight on Taylor rules — which are generally suboptimal

in any particular model — is that these reaction functions yield policy prescriptions that are robust across a variety of specifications. Given my views on reasonable measures of resource gaps, negative rates are a robust policy recommendation in the current setting. In addition, some optimal monetary policy simulations indicate that pursuing such negative real rates for the next couple of years would significantly boost aggregate demand. This would be enough to deliver much lower unemployment and raise inflation to near 2 percent by the end of 2012. Applying these rules of thumb for monetary policy would indicate that substantial policy accommodation continues to be warranted. Our policies are striving to achieve this appropriate accommodation.

One channel is to lower real short-term interest rates by raising inflationary expectations. In the current environment, our policies should aim to moderately raise inflation expectations while maintaining low short-term nominal interest rates. When inflation increases, the opportunity cost of holding cash (and close cash substitutes) goes up, tipping incentives towards higher spending and lending. Moreover, undershooting our inflation target is costly. Many people took on debt obligations two or three years ago, when they expected inflation would be nearer the 2 percent rate that is approximately our price stability objective. As such, the real burden of this debt is unexpectedly higher. Realigning inflation with these prior expectations — which were presumably held by both borrowers and lenders — would therefore be beneficial.

Although long-term inflation expectations arguably are not far from our target, shorter-term Treasury Inflation-Protected Securities (TIPS)-based expectations are nearer to 1 percent. So, all else equal, bringing these expectations back more quickly to 2 percent could translate into something like a 100 basis point decline in real short-term rates. This would be a modest but helpful step towards relieving liquidity trap conditions. In the current situation, with inflation at 1 percent, creating expectations of appropriately higher inflation in the short term is consistent with our price stability objective. Furthermore, it recognizes a symmetry in policy losses whenever inflation deviates above or below our implicit target. Of course, at some point the outlook for inflation will signal the appropriate time to remove policy accommodation. And should our strategy prove to be a little too successful and inflation rise faster than we expect, we have the tools to tighten quickly as needed.

No doubt, lowering short-term real interest rates successfully would help us achieve both our policy goals. Yet, putting such a strategy into practice is complex, and challenges us to communicate our intentions effectively. As the FOMC has repeatedly stated, the Fed is committed to keeping the federal funds rate low for an extended period of time. We also have our recently expanded program of large-scale asset purchases (LSAPs). Everything else equal, these purchases are aimed at reducing long-term interest rates. Other events have intervened and long-term rates are now higher than at our November FOMC meeting. In part, it is reasonable to attribute a portion of this increase to lower probabilities of deflationary tail events.

Nevertheless, LSAPs are continuing to play an important and useful communications role in demonstrating the FOMC's commitment to keeping the federal funds rate extraordinarily low for an extended period of time.

Let me conclude by offering a few remarks on the importance of communicating the Fed's objectives clearly. Ambiguity in our message can undermine our ability to achieve our goals. We can make our existing tools more effective by explicitly stating our objectives and the likely course of future policy that would achieve them. Our communication challenges would be much reduced if we had an explicit numerical inflation objective. Knowing our target, the public and markets could make reliable inferences about the future path of monetary policy. Moreover, a credible inflation target would give the Fed more flexibility in its near-term policies and help achieve our goals sooner and with less risk of unintended consequences.

Thank you.