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Inside the FOMC

Marquette, Michigan August 17, 2010 Thanks for the generous introduction. I'm delighted to have this opportunity to speak with you today. This is my first trip to the Upper Peninsula of Michigan, and I look forward to many more. I want to take this opportunity to thank Bob Jacquart, who was instrumental in helping us set up this meeting. Bob served on one of our economic advisory councils a few years ago, and I know that others in this room have served on such councils or on our bank's board of directors. Thanks to all of you for that service. Thanks also to Dr. Les Wong and the UP CEOs for their role in making this event happen, and especially to Theresa Nease and others here at Northern Michigan University for their hospitality.

One of the benefits of these trips is that I get to hear how the economy is doing on the ground level, if you will. As you might imagine, we have a lot of data at our fingertips at the Federal Reserve Bank of Minneapolis, but sometimes statistics don't tell the whole story. On that note, I'm especially looking forward to the question-and-answer session following my talk. I've learned much from the questions at my various speaking engagements and expect that I'll do the same today.

As you just heard, I became president of the Federal Reserve Bank of Minneapolis last October. Here's the start of a rather typical conversation that I would have had with my friends and relatives last fall. "Congratulations! That's fantastic. Now, what is it that you will do exactly?"

As it turns out, the job has a lot of interesting aspects. But I think I've been invited to speak here today because I help formulate monetary policy for the United States. So what I plan to do is give you some feel for how this part of my job works. In doing so, I'll highlight the Federal Reserve's quintessentially American structure. Unlike the central banks of other countries, you'll see that ours is specifically designed to draw upon the insights of small town

businesses, farmers and ranchers, and large manufacturers, among others, to formulate monetary policy. Before I proceed, I must remind you that any views I express here today are my own, and not necessarily those of others in the Federal Reserve System.

What do I mean by an American structure? Well, relative to its counterparts around the world, the U.S. central bank is highly decentralized. The Federal Reserve Bank of Minneapolis is one of 12 regional Reserve banks that, along with the Board of Governors in Washington, D.C., make up the Federal Reserve System. Our bank represents the ninth of the 12 Federal Reserve districts. The Ninth District is, by area, the second largest. It includes Montana, the Dakotas, Minnesota, northwestern Wisconsin, and the Upper Peninsula of Michigan.

Eight times per year, the Federal Open Market Committee—the FOMC—meets to set the path of short-term interest rates over the next six to seven weeks. All 12 presidents of the various regional Federal Reserve banks—including me—and the seven governors of the Federal Reserve Board contribute to these deliberations. (Actually, right now, there are only five governors—two positions are unfilled, and we're scheduled to go down to four by the end of the month. The good news is that the White House has nominated three excellent candidates for the three vacancies.) However, the committee itself consists only of the governors, the president of the Federal Reserve Bank of New York, and a rotating group of four other presidents (currently Cleveland, St. Louis, Kansas City, and Boston). I'll be on the committee in 2011.

In this way, the structure of the FOMC mirrors the federalist structure of our government. Representatives from different regions of the country—the various presidents—have input into FOMC deliberations. The input from the presidents relies critically on information they receive from their districts about local economic performance. We obtain this information through the work of our research staffs—but we also obtain it from business leaders in industries and towns,

in my case, across the Upper Midwest. The Federal Reserve System is deliberately designed so that the residents of Main Street are able to have a voice in monetary policy.

So how, exactly, do the FOMC meetings work? In the remainder of my remarks, I'll take you inside an FOMC meeting. Its structure provides a perfect vehicle to communicate the key considerations confronting monetary policymakers in the United States today.

The typical FOMC meeting features two so-called go-rounds, in which every president and every governor has a chance to speak without interruption. The first go-round is referred to as the economics go-round. The meeting participants describe their views on current economic conditions and their outlook for future economic conditions. The presidents' remarks will typically include references to their own local economies, as well as the national and global situation.

As part of my contributions to the economics go-round in August, I discussed my outlook for gross domestic product (GDP), inflation, and unemployment. In terms of GDP, I believe that a modest recovery is under way and is likely to continue. In terms of inflation, I expect a slight but welcome uptick over the next 18 months. Finally, in terms of unemployment, I see current and future problems in labor markets that are likely to continue to prove resistant to the tools of monetary policy.

I'll talk first about GDP. Real GDP growth has been positive in each of the past four quarters, and the government's initial estimate is that GDP grew at an annualized rate of 2.4 percent in the second quarter of this year. Based on estimates from our Minneapolis forecasting model, I expect GDP growth to be around 2.5 percent in the second half of 2010 and close to 3.0 percent in 2011. There is a recovery under way in the United States, and I expect it to continue.

As last week's FOMC statement says, though, the pace of the recovery is more modest

than I would have anticipated. We are four quarters into the recovery, and real GDP per person is still about 3.2 percent below its level in the fourth quarter of 2007 when the recession began. In some sense, this number actually understates the economic problem. Typically, real GDP per person grows between 1.5 and 2 percent per year. If the economy had actually grown at that rate over the past two and a half years, we would have between 7 and 8.2 percent more output per person than we do right now. My forecast is such that we will not make up that 7-8.2 percent lost output anytime soon.

Let me turn now to inflation. From the fourth quarter of 2009 through the second quarter of 2010, the change in the PCE (personal consumption expenditures) price level was just over 0.5 percent, which works out to an annual rate of just over 1 percent. The Fed's price stability mandate is generally interpreted as maintaining an inflation rate of 2 percent, and 1 percent inflation is often considered to be too low relative to this stricture. I expect it to remain at about this level during the rest of this year. However, our Minneapolis forecasting model predicts that it will rise back into the more desirable 1.5-2 percent range in 2011.

So the news about inflation and GDP is in the "good, but certainly could be better" category. However, the lack of vitality in the U.S. labor market can only be termed disturbing. The national unemployment rate remains at 9.5 percent in July. Private sector job creation remains weak—only 71,000 net private sector jobs were created in July.

If one digs deeper into the data, the situation seems even more troubling. Since December 2000, the Bureau of Labor Statistics has been keeping data on the job openings rate, which is defined as the number of job openings divided by the sum of job openings and employment. Not surprisingly, when job openings rise, the unemployed can find jobs more readily, and the unemployment rate typically falls. The inverse relationship between unemployment and job

openings was extremely stable throughout the 2000-01 recession, the subsequent recovery, and on through the early part of this recession.

Beginning in June 2008, this stable relationship began to break down, as the unemployment rate rose much faster than could be rationalized by the fall in the job openings rate. Over the past year, the relationship has completely shattered. The job openings rate has risen by about 20 percent between July 2009 and June 2010. Under this scenario, we would expect unemployment to fall because people find it easier to get jobs. However, the unemployment rate actually went up slightly over this period.

What does this change in the relationship between job openings and unemployment connote? In a word, mismatch. Firms have jobs, but can't find appropriate workers. The workers want to work, but can't find appropriate jobs. There are many possible sources of mismatch—geography, skills, demography—and they are probably all at work. Whatever the source, though, it is hard to see how the Fed can do much to cure this problem. Monetary stimulus has provided conditions so that manufacturing plants want to hire new workers. But the Fed does not have a means to transform construction workers into manufacturing workers.

Of course, the key question is: How much of the current unemployment rate is really due to mismatch, as opposed to conditions that the Fed can readily ameliorate? The answer seems to be a lot. I mentioned that the relationship between unemployment and job openings was stable from December 2000 through June 2008. Were that stable relationship still in place today, and given the current job opening rate of 2.2 percent, we would have an unemployment rate of closer to 6.5 percent, not 9.5 percent. Most of the existing unemployment represents mismatch that is not readily amenable to monetary policy.¹

¹ I use the following procedure to reach these conclusions. I calibrated parameters in Shimer's (2007) mismatch model to fit the average job openings rate from December 2000 to December 2007 and the average unemployment

6

Given the structural problems in the labor market, I do not expect unemployment to decline rapidly. My own prediction is that unemployment will remain above 8 percent into 2012. Persistently high unemployment of this kind will impose considerable losses on many of our citizens. Good public policy requires that we help mitigate their losses via a well-designed unemployment insurance program. Recent economic research, including some done at the Federal Reserve Bank of Minneapolis, shows that such a program will not feature the termination of benefits after 26, 52, or 99 weeks. Instead, a good insurance program should offer constant benefits over the entire duration of an unemployment spell, however long. It should provide incentives only through the level of those benefits, not through their timing.²

That was essentially my input about the national economy in the economics go-round of the FOMC last week. GDP is growing, but more slowly than we would like. Inflation is a little low, but only temporarily. The behavior of unemployment is deeply troubling.

After the economics go-round, the FOMC meeting then transitions to its second phase, the policy go-round. Again, the 17 meeting participants have a chance to speak in turn about what they perceive to be the appropriate policy choices for the committee. We are all committed to achieving the Fed's dual mandate to attain both price stability and maximum employment. As I mentioned, the former objective is generally understood as keeping inflation in a tight range around 2 percent. The second part of the mandate is much more of a moving target. Everyone knows that employment is shaped by many determinants beyond the Fed's control:

rate over the same period. I obtained m = 210.5 and n = 205.5 to fit an average unemployment rate of 5.2 percent and an average vacancy rate of 2.9 percent. (The calibrated parameters differ from Shimer's own because of data revisions by the Bureau of Labor Statistics.) In June 2008, the unemployment rate was 5.5 percent and the vacancy rate was 2.7 percent; the model implied an unemployment rate of 5.5 percent and a vacancy rate of 2.6 percent if I set n = 204.2. In June 2010, the vacancy rate was 2.2 percent. I set n = 201.8 to match that in the model. At that value of n, the model implied an unemployment rate of 6.3 percent. The value of m in Shimer's model has changed greatly.

² See Shimer and Werning (2008) and Clement (2006).

demographics, social custom, taxes, and so on. The Fed's job is to keep employment as high as possible, given these other factors.

Right now, the committee has to think about two quite distinct policy tools: short-term interest rates and balance sheet management. I'll talk about both in turn.

The federal funds rate—the key short-term interest rate set by the FOMC—has been set at 0-25 basis points for over 18 months. In terms of its future level, the FOMC's statement last week contains the following key sentence:

"The Committee will maintain the target range for the federal funds rate at 0 to 1/4 percent and continues to anticipate that economic conditions, including low rates of resource utilization, subdued inflation trends, and stable inflation expectations, are likely to warrant exceptionally low levels of the federal funds rate for an extended period."

What do we learn from this rather long sentence? As you would hope, there is an intimate connection between my economic summary and what's in this statement. The unemployment rate is 9.5 percent, and measured inflation is low (below 2 percent). Market and survey measures of expected inflation are also low (also below 2 percent). In its statement, the FOMC is saying: We're keeping interest rates low to keep unemployment from going any higher, and we feel safe in doing so because there seems to be little threat of inflation.

Let me turn next to the issue of the Fed's balance sheet. The Federal Reserve has 2.3 trillion dollars of assets—over 2.5 times what it owned in September 2008. Over 2 trillion dollars of those assets are in Treasuries, debt issued by Fannie Mae and Freddie Mac, or mortgage-backed securities issued by Fannie Mae and Freddie Mac. These MBSs are not toxic assets in any sense of the word—they are fully backed by the U.S. government, and so the Federal Reserve faces no credit risk in holding them. But the MBSs do have another kind of risk called

prepayment risk. If long-term interest rates are low, then many people prepay the mortgages in the MBS. The owners of the MBS—in this case, the Fed—get a large coupon payment and the MBS's principal falls. However, if long-term interest rates are high, then few people make these prepayments.

This kind of fluctuation in prepayments is at the heart of the FOMC's new policy action in August. Long-term interest rates declined surprisingly fast in the past three months. But the fall in long-term rates meant that more people were prepaying their mortgages, and the Fed's MBS principal balances were falling. In this sense, the Fed's holdings of long-term assets were shrinking, leaving a larger share of the long-term risk in the economy in the hands of the private sector. This extra risk in private hands could force up the risk premia on long-term bonds and be a drag on the real economy. The FOMC decided to arrest the decline in its holdings of long-term assets by re-investing the principal payments from the MBSs into long-term Treasuries.

The FOMC's decision has had a larger impact on financial markets than I would have anticipated. My own interpretation is that the FOMC action led investors to believe that the economic situation in the United States was worse than they, the investors, had imagined. In my view, this reaction is unwarranted. The FOMC's decisions were largely predicated on publicly available data about real GDP, its various components, unemployment, and inflation. I would say that there is no new information about the current state of the economy to be learned from the FOMC's actions or its statement.

So, I've taken you through a typical FOMC meeting and the monetary policy situation in the United States. My discussion may have struck you as rather techy and wonkish—maybe even verging on the nerdy. I'm sure that my colleagues will forgive me for saying that this nerdy quality mirrors the tone of the discussion within the meeting itself. There is no inflated political

rhetoric. We are unabashed technocrats, seeking to solve an unabashedly technical problem:

How do we manage monetary policy so as to ensure lower unemployment and maintain inflation at an appropriate rate? We certainly disagree with one another on occasion. But our disagreements ultimately stem from different assessments of the complicated economic situation and not from political differences.

I believe that the apolitical nature of the FOMC's work hinges critically on another aspect of central bank structure, and that has to do with the Federal Reserve's relationship with the U.S. Congress. On the one hand, the Federal Reserve is a creation of Congress. It has the power to amend the Fed's responsibilities, as the recent financial reform legislation certainly attests. The Senate approves the presidential appointments to the Board of Governors. Both chambers receive regular reports from the Board of Governors on the conduct of monetary policy, financial supervision, and the payments system. In addition, the Federal Reserve undergoes regular audits of its finances and various operations.

On the other hand, Congress has intentionally removed itself from the direct conduct of monetary policy by granting the Federal Reserve the independence to perform this function on its own. In effect, Congress has said that it does not want monetary policy unduly affected by political considerations. This independence not only is a hallmark of this country's central bank, but is also a characteristic of developed economies worldwide.

As I said, the FOMC meets eight times a year. Its decisions are always influenced by fairly recent economic data. But, at the same time, its decision-making has to be shaped by long-run considerations. In that vein, let me close by offering some thoughts about long-run inflation—or really, long-run deflation. I mentioned earlier that inflation has been near 1 percent recently. These data have led some observers to worry about the possibility of a multiyear period

of falling prices—that is, persistent deflation. I don't see this possibility as likely. It would require the FOMC to make the surprising mistake of ignoring the long run in its desire to fix the short run.

Here's what I mean. It is conventional for central banks to attribute deflationary outcomes to temporary shortfalls in aggregate demand. Given that interpretation, central banks then respond to deflation by easing monetary policy in order to generate extra demand.

Unfortunately, this conventional response leads to problems if followed for too long. The fed funds rate is roughly the sum of two components: the real, net-of-inflation, return on safe short-term investments and anticipated inflation. Monetary policy does affect the real return on safe investments over short periods of time. But over the long run, money is, as we economists like to say, *neutral*. This means that no matter what the inflation rate is and no matter what the FOMC does, the real return on safe short-term investments averages about 1-2 percent over the long run.

Long-run monetary neutrality is an uncontroversial, simple, but nonetheless profound proposition. In particular, it implies that if the FOMC maintains the fed funds rate at its current level of 0-25 basis points for too long, both anticipated and actual inflation have to become negative. Why? It's simple arithmetic. Let's say that the real rate of return on safe investments is 1 percent and we need to add an amount of anticipated inflation that will result in a fed funds rate of 0.25 percent. The only way to get that is to add a negative number—in this case, –0.75 percent.

To sum up, over the long run, a low fed funds rate must lead to consistent—but low—levels of deflation. The good news is that it is certainly possible to eliminate this eventuality through smart policy choices. Right now, the real safe return on short-term investments is negative because of various headwinds in the real economy. Again, using our simple arithmetic,

this negative real return combined with the near-zero fed funds rate means that inflation must be positive. Eventually, the real economy will improve sufficiently that the real return to safe short-term investments will normalize at its more typical positive level. The FOMC has to be ready to increase its target rate soon thereafter.

That sounds easy—but it's not. When real returns are normalized, inflationary expectations could well be negative, and there may still be a considerable amount of structural unemployment. If the FOMC hews too closely to conventional thinking, it might be inclined to keep its target rate low. That kind of reaction would simply re-enforce the deflationary expectations and lead to many years of deflation.

While this scenario is conceivable, I consider it to be a highly unlikely one. The FOMC and the Board of Governors have displayed exactly the required unconventionality in solving many seemingly intractable problems over the past three years. I am confident that the Federal Reserve will display that same attribute if this deflationary challenge should ever arise. I am sure too that households and financial markets will share my confidence—which would actually eliminate the need for the Fed to ever confront hardened deflationary expectations.

So I've talked about a lot of issues today, and I could certainly talk about a lot more. But I have a feeling that you've got plenty of questions, and we are likely to hit on many key topics.

So I will stop here and happily take your questions.

Thank you once again for this opportunity.

References

Clement, Douglas. 2006. "If You Lost Your Job." Region 20 (June), 34-37, 50-53.

Shimer, Robert. 2007. "Mismatch." American Economic Review 97 (September), 1074-1101.

Shimer, Robert, and Iván Werning. 2008. "Liquidity and Insurance for the Unemployed." *American Economic Review* 98 (December), 1922-42.