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The Economic Outlook[1]

Thank you very much. It's a great pleasure to speak at SIEPR'S first annual State of the West Symposium. I've been asked to give my views on the economy, both in the 12th Federal Reserve district, which covers the western part of the country from Guam to Idaho, and for the nation as a whole, as well as explain what the Federal Reserve is doing to meet its mandates of maximum employment and price stability at this juncture. Economic policy can be controversial and debate about it heated. I would like to present myself as an embodiment of the principle that even the fiercest rivals can at times achieve a meeting of the minds. I am a product of both UC Berkeley—where I got my bachelor's degree—and Stanford, where I earned my Ph.D. I've managed to benefit from my training in economics at these two institutions, which can have such starkly different views of the world, and I've learned to appreciate the ideas of scholars even when I disagree with them. But one problem remains: I still don't know which side of the stadium to sit on at the Big Game. And now for a disclaimer: I should stress that my comments represent my own views and not necessarily those of my Federal Reserve colleagues.

During the past few years, giving talks about the economy has been sobering at best and depressing at worst. Thankfully, things are looking considerably brighter now. That's because, after what was perhaps the worst recession of the postwar era and a recovery that proceeded in fits and starts, the economy finally seems to be attaining escape velocity. That is to say, the

[1] I would like to thank Reuven Glick, Rob Valletta, and Sam Zuckerman for assistance in preparing these remarks.

recovery appears increasingly to be becoming self-sustaining, driven primarily by private-sector demand rather than relying so much on government support.

Even though we have achieved liftoff, we are by no means rocketing to the moon. I would characterize the outlook for growth as solid, but not spectacular. The Commerce Department last week reported that real, inflation-adjusted gross domestic product grew at a 3.2 percent annual rate in the fourth quarter of 2010, up from 2.6 percent in the previous quarter. In fact, the headline GDP number considerably understates the economy's forward momentum. Businesses built up inventories at a slower rate in the fourth quarter, which held down output growth. When you take out the effect of inventories, real final sales grew at over a 7 percent annual rate in the fourth quarter, the best performance for this measure since 1984.

At the San Francisco Fed, we see this momentum continuing to build, with real GDP expected to expand 4 percent this year and 4½ percent in 2012. The main drivers of growth are improving household and business confidence, a banking and financial system that is rebuilding its strength, and pent-up consumer demand for durable goods such as cars and, eventually, housing. I would describe the process under way as a positive feedback loop with improving economic conditions contributing to a strengthening of house prices and the financial system. This in turn helps ease the availability of credit, providing a boost to the economy. This is exactly the opposite direction of the negative loop experienced during the financial crisis.

Now 4 percent is a good, strong number and a welcome improvement over what we've seen the past several years. But it's short of the sizzling growth that took place after past severe recessions, such as the powerful snapback that occurred after the 1981–82 downturn, when the economy grew 7¾ percent in 1983. What's more, given the deep hole we fell into during and after the financial crisis of 2007–08, the current pace of growth means we still face a long slog before we get back to full employment and full utilization of the nation's productive capacity.

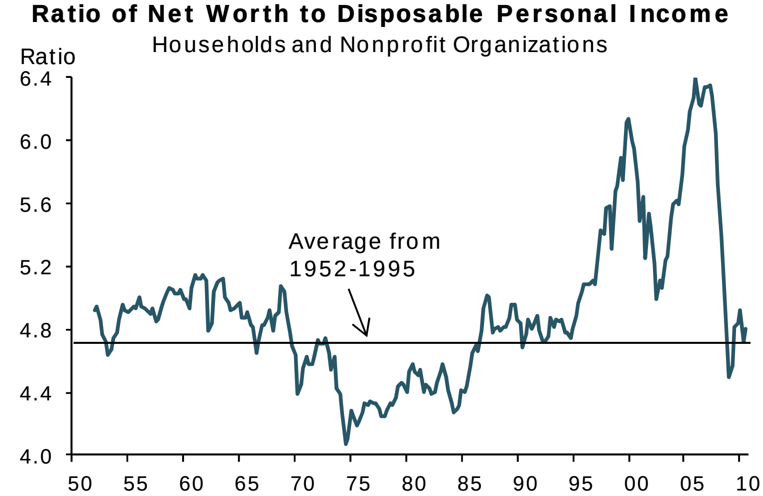
Why has the recovery been so weak for so long and why aren't we getting the kind of rebound that we saw in the early 1980s? To answer these questions, I think it's important to understand the specific nature of the recession of 2007–09 and the lingering effects that have hampered economic performance during the recovery. During the postwar period, most recessions occurred after the Fed tightened interest rates to counter rising inflation. When the Fed reversed course and eased rates, the economy bounced back. By contrast, the recent recession was the product of the worst housing bust and worst financial crisis since the Great Depression. Let's not forget how perilously close we came to a meltdown of the financial system and how tight credit markets became. Research shows that recessions caused by financial crises tend to be followed by slow, gradual recoveries.[2] Damage to the financial system makes it tough for households and businesses to get the credit they need to spend and invest. It saps confidence and puts consumers and businesses into a defensive crouch.

The combination of losses in housing and stock market wealth, the credit crunch, and the debt overhang, all of historic proportions, created a perfect storm for a massive consumer pullback. In 2008, inflation-adjusted personal consumption expenditures fell 1.9 percent as households clamped down on spending. Households were shell-shocked by the decline in their net worth following the housing market meltdown and subsequent plunge in stock prices. The first figure shows the ratio of household net worth to disposable personal income. As you can see, the past 15 years have seen swings in wealth that hadn't occurred previously in the postwar period. When wealth rises, households feel richer and spend more. When it falls, they feel poorer and

[2] See Reinhart and Rogoff (2009) and Reinhart and Reinhart (2010) for discussions of the evidence on banking and financial crises in history.

cut back. And don't forget—consumer spending makes up nearly 70 percent of GDP. The financial crisis occurred at a time when household debt had gone through the roof. During the housing boom years, when it seemed that to get a loan you just needed to show up and sign your name, the ratio of household debt to disposable personal income surged from about 1 at the start of the decade to an all-time high of 1.3 in 2007. Now, households are burdened with debt, face a weak labor market, and worry about saving for the future. This is hardly a prescription for a rapid rebound in confidence and spending.[3]

Figure 1
The Bubble Decades



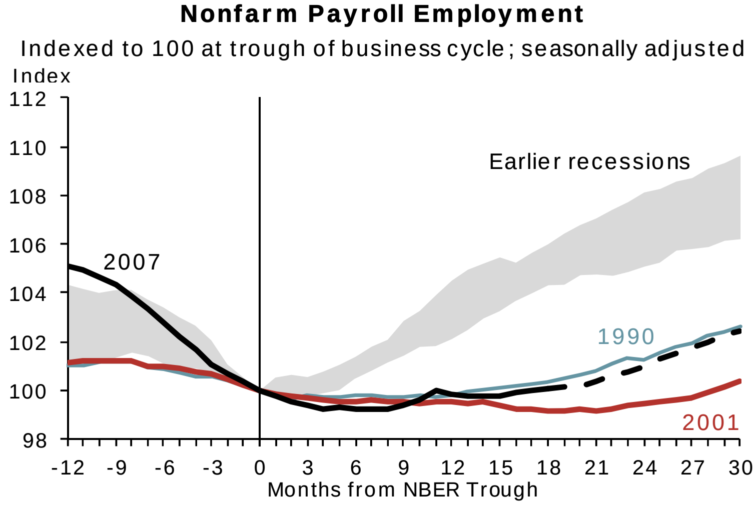
The labor market and the elevated unemployment rate have rightfully been a focus of our attention. In this regard, it's important to stress two things: Conditions are looking better, but we have a long way to go before we return to health. During the recovery, employers raised output by cranking up productivity instead of hiring additional workers. The result has been a jobless recovery, the third time since the early 1990s that a recession has been followed by weak job gains.

The stark contrast between the three most recent jobless recoveries and the V-shaped recoveries of the past is illustrated in Figure 2. Even though we're a year and a half into the expansion phase, we've seen virtually no net increase in payroll employment, consistent with the past two recoveries. This compares with the typical pattern of about a 5 percent increase in jobs

[3] See Glick and Lansing (2011).

experienced 18 months into postwar recoveries before the 1990s. During the last three months of 2010, the economy added about 130,000 jobs per month, real progress, but a pace insufficient to make much of a dent in the unemployment rate.

Figure 2
Jobless Recovery Redux

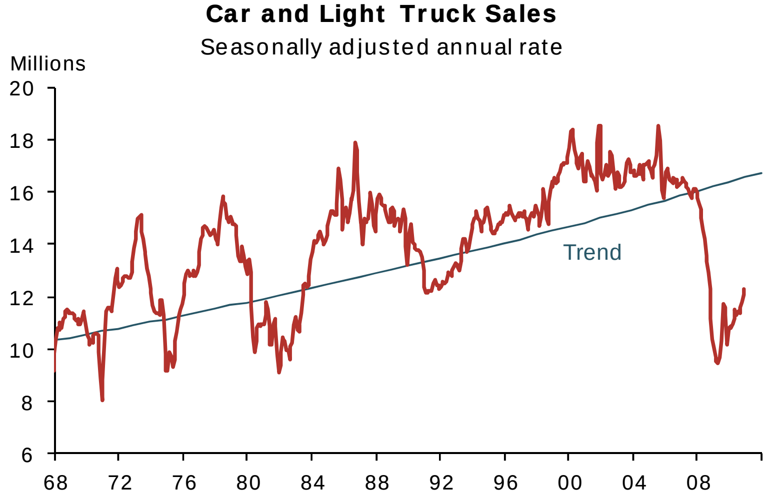


I do think we will see sizable job gains in the months and years ahead, as shown by the dashed line in the figure. Indeed, these gains should be enough to bring the unemployment rate down significantly over time. We project that the unemployment rate will fall gradually below 9 percent this year and to about 7½ percent toward the end of 2012. But, when you're coming down from an unemployment rate that reached 10 percent, such gains will seem disappointingly slow. It would still leave us far from full employment, which we may not get back to until around 2014.

But, I don't want to be overly bleak in my comments. Lately, we've seen a welcome acceleration in consumer outlays. Real personal consumption expenditures rose at a 4.4 percent annual rate in the fourth quarter of 2010, the fastest growth rate since the first quarter of 2006. We hear reports of strong holiday sales and brisk traffic at shopping malls, auto dealers, hotels, and restaurants.

Moreover, there is a silver lining to the sharp drop in consumer spending that occurred during the recession. The fact that households curtailed spending so dramatically means that there is a lot of pent-up demand for cars and other durable goods. The case of motor vehicles is instructive. From 2006 to 2009, we saw annual sales of autos and light trucks plummet from more than 16½ million to less than 10½ million—a 37 percent decline over three years. Sales fell well below the pace needed to keep the stock of vehicles growing along its trend. This is illustrated in Figure 3, which shows U.S. light vehicle sales over the past 40 years, along with a rough estimate of the longer-term trend. As you can see, sales were well above trend during the first half of the 1990s, when housing wealth and easy credit fed a buying binge. I don't expect annual sales to shoot back up to 16 million overnight. After all, the job market is still weak and confidence hasn't yet fully recovered from the events of the past few years. But it's also clear that Americans haven't yet abandoned the automobile. Eventually they'll need to replace those tired, run-down cars. Motor vehicle sales are now running at about a 12½ million annual rate, about 2 million above the 2009 pace. Over the next few years, I expect at least another sizable increase as we get back to more normal levels.

Figure 3
Pent-up Demand for Cars

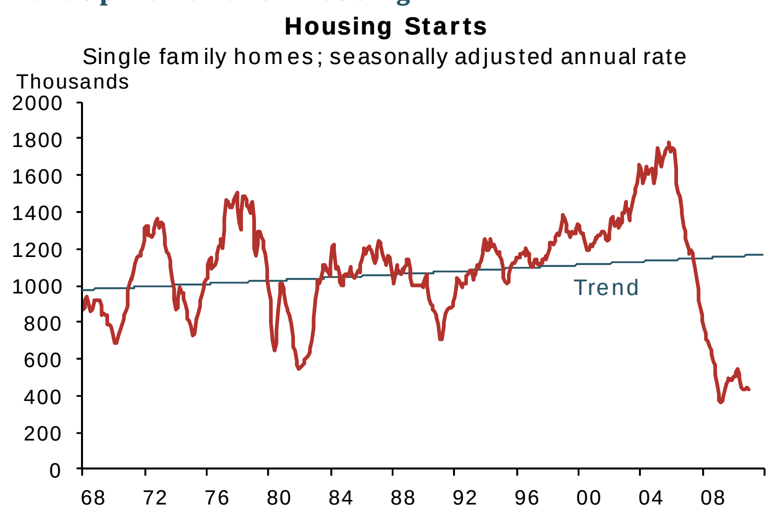


Note: Three-month moving average.

I expect the pattern of slow recovery that we see for products such as motor vehicles to eventually extend to housing, albeit with a longer lag. The housing market was the center of the storm and it will take quite a while for it to right itself. Although credit conditions are gradually improving, it's still comparatively hard for prospective buyers to get mortgages, especially given how many mortgages are underwater. The market is glutted with a huge inventory of unsold homes and foreclosures remain high, despite the legal and procedural problems highlighted by the "robo-signing" controversy. House prices are still falling, with the CoreLogic Home Price Index registering a 5 percent decline in the year that ended in November. We are beginning to see some improvement in sales volume, but construction remains at a very low level. Lower unemployment, rising incomes, easier credit, and the process of household formation will eventually bring about a turnaround.

Housing starts plunged even more steeply than auto sales, from a pace over 1.7 million units in 2005 to less than 450,000 in 2009. This is shown in Figure 4. The story is much the same as for autos. House construction was way above trend during the housing boom. This excess construction created a huge housing overhang that needs to be undone. Since the housing crash, construction has come almost to a standstill. With so little construction taking place, the overhang of available housing will dissipate. Eventually, we will need to start building significantly more new homes to replace old demolished homes and meet the demand of new households. But it will take some time before the economy gets a lot of help from housing construction. And that's a big change from past recessions. Ordinarily, housing is one of the sectors leading the way when the economy bounces back from recession. In part, that's for the reason that I already mentioned. The Fed typically adds monetary stimulus to fuel recovery, and

Figure 4
Pent-up Demand for Housing



Note: Three-month moving average.

housing is one of the most interest-sensitive sectors. But, this time, it's the housing market itself that is the problem. Although low interest rates are helping the sector, they can't yet overcome the fierce headwinds holding back a housing recovery.

Another explanation for a subdued recovery lies overseas. The recent recession was truly global in nature, which meant we couldn't export our way back to health. In fact, trade flows collapsed following the financial crisis and the global recession, and they have only begun to recover. The world's advanced economies are generally expanding, but at only a moderate rate. Meanwhile, the European sovereign debt crisis and Japan's continued economic struggles show that significant downside risks remain. I expect that the debt problems of Greece, Ireland, Portugal, and other countries will be managed without inflicting major harm on the U.S. economy. But slow growth in Europe and other advanced economies suggests that we will see relatively moderate export gains in upcoming quarters.

Inflation has been another area of concern for us. This may be surprising to hear from the Fed, but my concern is not too much inflation, but rather too little. Let me explain. Most participants in the Fed's policymaking body, the Federal Open Market Committee, or FOMC, see an inflation rate of about 2 percent or just a bit under that as being most consistent with the Fed's dual mandate of maximum employment and price stability. In 2008, the core inflation rate—which excludes volatile food and energy prices—was right at 2 percent. But, with substantial slack in the economy, core inflation fell to 1.7 percent in 2009 and then to 0.8 percent last year. This is the lowest reading over four quarters recorded in the 50 years these data are available. Unfortunately, this disinflationary trend is continuing. Over the second half of last year, core inflation was just 0.5 percent. This pattern of continued disinflation is eerily, in fact, I might say ominously, reminiscent of Japan's experience in the 1990s, when that country fell into chronic deflation and economic malaise from which it still hasn't recovered. But, before you accuse me of having slipped back into a depressing mode, I promise to return later to the reasons I think we can and will avoid Japan's fate.

I'd like to turn to economic conditions in our region, which in some ways offer a concentrated example of what has happened in the nation as a whole. This conference is about the West. At the Fed, we think in terms of districts—that is, states served by a specific Federal Reserve Bank. The San Francisco Fed's 12th District includes nine states: California, Oregon, Washington, Arizona, Nevada, Utah, Idaho, Alaska, and Hawaii. Our District got walloped about as hard as any during the downturn, which is not surprising, given our dubious distinction as the region with the biggest housing boom in the nation followed by the most severe housing bust. Declines in house prices in major western metropolitan areas such as Las Vegas and Phoenix, and smaller metro areas such as Merced in California's Central Valley, have been as large as 50 to 60 percent.

One result of our oversized exposure to housing and the worse-than-average economic performance of recent years has been carnage in the labor market. From the employment peak in December 2007 to the trough in December 2009, total nonfarm payroll employment fell nearly 9 percent in the 12th District compared with about 6 percent nationwide. In December, Nevada's 14.5 percent unemployment rate was the highest of any state in the nation, followed by California at 12.5 percent.

Another result was some of the most severe state and local government fiscal crises in the nation. Budget gaps for the upcoming fiscal year are expected to be slightly larger among District states than nationwide. Nevada and California rank among the states facing the largest percentage shortfalls. In California, the resulting spending cuts have been very dramatic and far bigger than reductions during prior fiscal crises in the early 1990s and early 2000s. Between fiscal year 1991–92 and 1993–94, the cumulative cuts in general fund spending were 10 percent. In fiscal 2001–02, they were 1.7 percent. By contrast, from fiscal year 2007–08 to 2010–11, California reduced spending by 19 percent, harsh medicine indeed.

Still, from a macroeconomic point of view, the region is clearly on the rebound. The housing market appears to have stabilized. As housing becomes less of a drag, other sectors of the regional economy are able to pull us forward. In this regard, I'd like to focus on two areas in which the 12th District has advantages compared with the rest of the nation: technology, and trade with China and other booming Asian economies. Thanks to these advantages, there's reason to expect that our region may grow faster than the nation as a whole in the years ahead. Just as we led the way down, so may we help lead the way up.

High-tech encompasses computers and information technology more broadly, as well as related services. It also includes biotechnology and other research-intensive, technologically advanced activities. Broadly defined, tech accounts for about 10 percent of the nation's overall economic activity. But in California, Idaho, Oregon, and Washington, it's in the range of 15 percent or more. And in the San Francisco Bay Area, information technology directly accounts for more than 20 percent of wage and salary income.

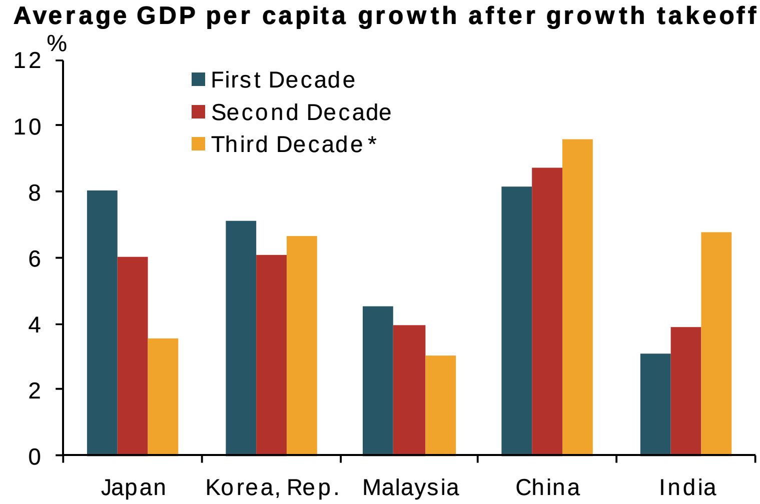
The recession badly hurt tech companies, largely because business spending on capital goods, including high-tech equipment and software, all but ground to a halt. That spending bounced back in late 2009 and 2010 as hardware upgrades could simply no longer be deferred. In 2010, business spending on technology hardware and software rose over 13 percent, the best performance since 2000, at the tail end of the tech boom. As a result, information technology has been one of the few sources of sustained employment growth. In the 12th District, IT-related jobs grew substantially faster than in the nation as a whole. Furthermore, a pickup in the pace of job gains in the District's IT manufacturing sector in the second half of 2010 signals that employment gains are likely to continue.

Trade is another area that was hit hard during the recession but presents a long-term opportunity for the West, thanks to our proximity to Asia, the world's most dynamic economic region. China and much of the rest of Asia have been bulwarks of growth throughout the recession and recovery. While growth in Europe, the United States, and Japan has been sluggish, many emerging economies have bounced back quickly. This is good news for western states. On the import side, many Asian goods enter the United States through Los Angeles/Long Beach, Oakland, Seattle, and other West Coast ports. Receiving, storing, and transshipping those products provide a tremendous boost to our regional economy. On the other side, exports to Asia as a share of GDP are almost twice as high in the nine states of the 12th District than in other parts of the nation. Nationwide, exports to Asia represented about 25 percent of total exports in the first 11 months of 2010. In California, that figure was about 40 percent and in Washington State, the center of Boeing aircraft production, it was more than 50 percent.

Interestingly, the geographical breakdown of our trade with Asia has changed over time. Since 1990, Asia's share of the U.S. merchandise goods trade has remained roughly constant at 25–30 percent of our exports and 35–40 percent of our imports. What has changed is the relative role of China. In 1990, China accounted for only 1 percent of U.S. exports and 3 percent of imports. By 2009, U.S. exports to China had risen to 7 percent of total exports and imports from China had risen to 19 percent. Correspondingly, the shares of Japan and the rest of Asia have declined. China is even more important regionally. California's exports to China rose nearly 30 percent in the first 11 months of 2010. Export growth to China from District states other than California and Washington was more than 40 percent.

It's fair to say then that we in the western United States have a big stake in China's remarkable economic story. Figure 5 compares the growth rates of per capita real GDP in China, Japan, Korea, and several other Asian countries in the decades after they achieved economic takeoff, following implementation of structural reforms. China's growth performance in the first decade after takeoff was not much higher than the 7–8 percent annual growth rates posted by Japan and Korea at similar stages of development. However, in the second and third decades after takeoff, growth in those countries slowed as their economies matured. Japan averaged 6 percent growth in the second decade after takeoff and 3.5 percent in the third decade. By contrast, China has sustained high growth rates into the second and third decades, growing nearly 10 percent annually 30 years after takeoff.

Figure 5
Growth Miracle Redux



Growth takeoff dates: Japan (1955), Korea (1967), Malaysia (1973), China (1979), India (1982).
*Third decade data for India for 7 years only.

Many questions important to our region arise from China's growth. For example, how will competition from China affect our advanced technology industries, such as solar equipment, as Chinese manufacturers continue to climb the value chain? To what extent will U.S. product and service providers be able to tap into the burgeoning Chinese consumer market? If trends in these areas are favorable, the benefits to our region's economy are likely to be substantial.

I'd like to close with a discussion of what the Fed is doing at this point in the economic cycle. A natural question is, if we have solid growth, why has the Fed's monetary policy remained so stimulative? As you know, we have set our main short-term interest rate policy tool, the federal funds rate, at a target close to zero. The FOMC stated that it expects to keep its fed funds target at that level "for an extended period." The Fed supplemented this near-zero fed funds rate by buying $1.7 trillion in longer-term Treasury securities, and debt and mortgage-backed securities issued by Fannie Mae, Freddie Mac, and Ginnie Mae, from late 2008 through early 2010. In November last year, the Fed announced its intention to expand the size of its security holdings further by purchasing an additional $600 billion in longer-term Treasury securities by the middle of 2011.[4]

I think the way to understand this is to distinguish between rates and levels. The economy's growth *rate* now is respectable and improving. But, because the recession was so deep, the *level* of economic activity is still relatively low as measured by our utilization of labor and productive resources. In other words, the economy still has enormous slack. Millions of people could be put back to work and many more goods and services could be produced without igniting unwelcome inflation.

Another way to think about this is to look at the Fed's statutory mandate. Congress has assigned the central bank the goals of fostering maximum employment and price stability. Because the economy is weak and inflation has fallen close to zero, we are falling short on both counts. The unemployment rate is far above the level that can be sustained without triggering

[4] See Yellen (2011) for an explanation of the mechanism and rationale for the Fed's large-scale asset purchases.

inflation. Economists call that noninflationary rate the natural rate of unemployment. I believe a number of factors associated with the crisis and recession have temporarily boosted the natural rate from its long-run trend of 5¼ percent to around 6–6½ percent. This means we have a gap of between 2½ and 3 percentage points between where we are now and full employment. On the price side, as I noted earlier, most FOMC participants define price stability as an inflation rate of just under 2 percent, after taking out volatile food and energy prices. Recent core inflation readings have come in well below 1 percent, which is not far enough away from deflation. So, with unemployment too high and inflation too low, the law regulating monetary policy impels the Fed to do what it can to move the economy back to desired levels of employment and inflation.

In fact, monetary policy models show that the federal funds rate should actually be around a negative 4 percent to achieve the ideal level of stimulus.[5] Obviously, that's impossible. The federal funds rate is constrained by a number that to monetary policy is what the speed of light is to physics—in this case, zero. We can't push the federal funds rate below that zero lower bound. In order to provide the right level of stimulus, the Fed has to look elsewhere.

That explains the Fed's large-scale asset purchase program. It is simply the pursuit of monetary policy by other means. The Fed controls the fed funds rate, the interest rate banks charge each other for overnight loans. The level of the fed funds rate ripples through the financial system and ultimately affects the levels of medium- and long-term interest rates, other asset prices, and thereby the economy. The Fed's purchases of longer-term securities have similar and, in some ways, even more direct effects. By boosting demand for longer-term securities, Fed purchases push down rates at the longer end of the yield curve compared with where they would be otherwise. And those lower rates help ease overall credit conditions, boost

[5] See Chung et al. (2011a).

asset prices, and stimulate economic activity. Fed researchers estimate that by the second half of 2012 these asset purchases will raise the level of real GDP almost 3 percent and contribute an incremental 3 million jobs to the economy. Some 700,000 jobs will be generated just by the most recent phase of the program. The unemployment rate is estimated to be about 1½ percentage points below where it would be absent the Fed's asset purchases.[6]

Many misconceptions surround the Fed's large-scale asset purchases. For example, commentators have equated it with the so-called quantitative easing programs pursued by the Bank of Japan in the past. But the mechanisms are fundamentally different. Under quantitative easing, the central bank buys short-term securities at volumes far above normal, flooding the banking system with reserves. By contrast, the Fed's large-scale asset purchases involve longer-term securities and the mechanism of action is simple supply and demand. By increasing demand for such securities, yields fall relative to where they would be without the Fed purchases. The idea isn't to build up reserves, but to directly push longer-term interest rates down.

Without this monetary stimulus, the recession would have likely been very much worse and the recovery might have failed to reach the escape velocity I referred to at the beginning of this talk. Moreover, it has so far helped protect us from sliding into deflation as Japan did. Importantly, these policy actions have not damaged the public's confidence in the Fed's commitment to price stability. Longer-term inflation expectations, whether measured by surveys of households or economists, or by prices paid in financial markets for protection from inflation, remain well anchored. That said, it's important to emphasize that when the right time comes, the Fed will reduce monetary stimulus. A great deal of thought has gone into designing the proper ways to unwind the measures that are now in place, and I'm confident we'll be able to do so

[6] See Chung et al. (2011a, b) for further details on these estimates.

successfully and maintain price stability. Meanwhile, we can finally say that we're headed in the right direction and picking up speed, which makes giving speeches about the economy a pleasure again. Thank you very much.

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