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Dean's Speaker Series
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Issues Raised by the Credit Crunch and Global Recession¹

I'm delighted to be with you at the Haas School and be hosted by my friend Rich Lyons. As you know, this is a homecoming for me. I spent almost 25 rewarding years of my professional life as a faculty member here. And I will always think of the Haas and broader Berkeley communities with great fondness. Now, of course, I am with the Federal Reserve, and that's another institution that means a great deal to me because it's a place where many of the ideas and issues that were central to both my teaching and research here at Haas are translated into real-world policy. The decisions we make at the Fed have taken on added significance with the nation and most of the world going through a deep and worrisome recession, one that has caused millions of people to lose their jobs or homes, and threatened or destroyed businesses large and small.

I think the most useful thing I can do tonight is to give you my views on the current economic situation and then examine some key issues that will shape the course of the economy as we try to dig out from a very deep hole. The story I'm going to tell involves many crosscurrents and uncertainties. This murky picture may actually be good news. I've spent the last year or so being so downbeat that I could actually see the faces in my audiences sink as I spoke. The fact that I can now talk about crosscurrents may mean that the economy is reaching an inflection point. It's too soon for me to be convinced of that, and I see a lot of downside risk, but at least there is some basis for optimism. That said, I expect the recovery, whenever it does

¹ I would like to thank John Judd and Sam Zuckerman for assistance in preparing these remarks.

begin, to be quite gradual compared with those following previous deep recessions. As always, my comments represent my own views and not necessarily those of my colleagues in the Federal Reserve System.

The recession is now in its sixth quarter and it's shaping up as the most severe downturn since the Great Depression. Last week we found out that real GDP contracted at an annual rate of slightly more than 6 percent in the first quarter, according to the Commerce Department's advance estimate. That is about the same pace of decline registered in the final quarter of last year. These are the largest consecutive declines in real GDP since 1958. The recession is also very broad-based. Housing, business fixed investment, exports, and imports are all falling at eye-popping rates—down more than 30 percent each. The one sector that held up surprisingly well in the first quarter is the largest—consumer spending—which rose by a respectable 2¼ percent.

Whether this is a harbinger of good things to come is uncertain, in part because, after adjusting for inflation, consumption slowed over the months of the quarter and declined absolutely in March. Still, it does offer a glimmer of hope. In addition, business inventories fell by a very large amount in the first quarter. That too is a positive signal. When spending contracted last year, inventories ballooned relative to sales and firms have been struggling to bring them into better alignment. The first-quarter data suggest that the necessary inventory correction may be quite far along. Recent data also offer some hints of stabilization in the housing sector. Home construction contracted sharply in the first quarter as a whole, but we saw signs of improvement late in the period. In the past couple of months, home sales and housing

starts have leveled off. Meanwhile, depending on the index, home prices have either increased slightly or fallen at a slower pace.

While output is at least showing potential for improvement going forward, recent news from the labor market is still very weak. The unemployment rate has risen by 1.7 percentage points over the past four months and, as bad as that is, I think it actually understates the true magnitude of the labor market deterioration. For one thing, the incidence of permanent, as opposed to temporary, layoffs is unusually high compared with past downturns. In addition, involuntary part-time work has increased during this recession far more than we would expect relative to the rise in unemployment. My business contacts tell me, and the data confirm, that the use of furloughs is now widespread. I know that they are under consideration here at Berkeley as a way to address the budget crunch. The result is that nationally, we have seen a surge in part-time work for economic reasons occurring broadly across occupations. The *underemployment* rate, a broad measure that adds individuals working part time for economic reasons to the unemployed, now stands at 14¼ percent. This is a whopping 6½ percentage points higher than at the start of the recession, nearly twice the increase in the standard unemployment rate.

Looking forward, my personal forecast for output growth is similar to the Blue Chip consensus. I believe the most likely scenario is that real GDP will advance at a low, but positive, rate in the second half of this year followed by trend-like growth in 2010. A forecast that the economy will soon switch from contraction to expansion strikes some people as optimistic. But, it takes less than you might think for real GDP growth rates to turn positive. Positive growth becomes likely if some of the economy's weak sectors stop dragging down GDP going forward. Residential construction in particular has been declining for several years, subtracting about 1

percentage point from real GDP growth. This spending can sink only so far, and, as I said, we've seen some tentative signs of stabilization recently. If housing starts level out, the sector would no longer weigh down the economy and faster growth would ensue. Similarly, as I noted earlier, inventory liquidation has been unusually severe in recent months, especially in motor vehicles. A reduction in the pace of liquidation also would raise the GDP growth rate. Finally, if consumers become more confident—and there is evidence from surveys that they have recently—pent-up demand actually could boost spending on autos, durable goods, and even housing, providing some real “juice” to economic growth.

Of course, monetary and fiscal policy are also sharply focused on promoting economic recovery. On the monetary side, the Federal Reserve has pushed its traditional policy lever—the federal funds rate—close to zero. And we haven't stopped there. We have put in place an array of unconventional approaches to spur the flow of credit to households and businesses. These include measures to improve liquidity and financial market functioning, and facilities to support the issuance of asset-backed securities. Moreover, we are undertaking large-scale purchases of Treasury and agency-related debt. These initiatives appear to be lowering longer-term interest rates and easing financial conditions more generally. Mortgage and other private borrowing rates have fallen, and, as those who've been bold enough to open their 401(k) statements again will attest, stock prices have risen: they're up around 35 percent from the lows reached in March. We've also seen improvements in key measures of financial market functioning, such as spreads of Libor over the expected federal funds rate. On the fiscal side, the stimulus package passed by Congress in February will provide an important economic shot in the arm. While the program does not appear large enough to solve the economy's problems on its own, the support it will

provide to aggregate demand is significant and helpful. We will likely begin seeing its effects on the economy this quarter.

So, to summarize, I am hopeful that the recession will end in the second half of this year due to aggressive monetary and fiscal policies, and the operation of typical business cycle mechanisms, such as inventory dynamics. Unfortunately, this combination of ingredients is not a recipe for a resounding rebound. My forecast that output growth will turn positive in 2009 and proceed near trend in 2010 implies that the unemployment rate will rise from 8½ percent now to around 9½ percent by the end of this year, and remain at about that level through 2010. An implication is that inflation is likely to decline below the 2 percent pace that I and most of my colleagues consider most consistent with our congressional mandate to strive for full employment and price stability. Substantial slack in labor and product markets combined with lower commodity prices is already restraining overall price increases for goods and services. If, as seems likely, this downward pressure continues, core consumer inflation is apt to fall from about 2 percent last year to around 1½ percent this year, and go even lower in 2010. I'll have more to say about inflation later.

The forecast I just described implies that I am not in the ranks of those who believe that “V” is the letter that will best describe the economy’s trajectory going forward. Those who anticipate a V-shaped recovery argue that growth in the first year after a business-cycle trough has typically been very rapid in previous U.S. downturns, including the deep recession that occurred in 1981 and 82. My own forecast, in contrast, implies a far less robust recovery. In my view, the explanation for the V-shaped pattern typical of past recessions relates to monetary policy. Most deep recessions in the postwar era happened after the Fed tightened policy to fight

inflation. Once the inflation scare passed, the central bank was able to cut its policy rate sharply, and the economy snapped back. But, of course, the current recession is far different, having been triggered by a historic housing bust, and a banking and financial crisis. Carmen Reinhart and Ken Rogoff have compared recessions around the world and shown that it takes a long time to recover from downturns caused by financial crises.² And that is what I expect this time as well.

I can point to a number of specific factors in this recession that are likely to weaken recovery. First, despite signs that consumer spending is stabilizing, the chance of strong and sustained consumption growth appears low. For years prior to the recession, households went on a spending spree of major proportions. This occurred during what has come to be called the “great moderation,” a period of about two decades when recessions were infrequent and mild, and inflation was low and stable. This may have lulled households into a false sense of security. The personal saving rate fell from around 8 percent two decades ago to almost zero in recent years as households financed their lifestyles by drawing on increasing stock market and housing wealth, and taking on higher levels of debt.

Now, the era of such low saving may be over. Falling house and stock prices have vaporized trillions of dollars in household wealth. The destruction of their nest eggs is prompting households to rebuild savings. The deleveraging of household balance sheets could restrain spending for years. Indeed, the personal saving rate is finally on the rise, averaging more than 4 percent so far this year. It wouldn’t surprise me if this effect persists, as the shock of the financial crisis convinces many households that they need to save higher fractions of their incomes for the long term. Of course, ultimately this would be good for economic growth,

² Carmen M. Reinhart and Kenneth S. Rogoff, “Is the 2007 Sub-Prime Financial Crisis So Different? An International Historical Comparison,” unpublished manuscript, February 5, 2008. http://www.economics.harvard.edu/files/faculty/51_Is_The_US_Subprime_Crisis_So_Different.pdf

channeling resources from consumption to investment. That said, the transition could be painful if subpar consumption growth restrains the pace of economic recovery.

Meanwhile, the story for banks and other financial firms is eerily similar. In the buildup to the recession, financial institutions, like consumers, became highly leveraged. Their vulnerability was compounded because they often invested in complex and risky assets that were funded with short-term debt. Since the crisis hit, in an attempt to increase the soundness of their individual balance sheets, banks have tightened lending standards, trying to improve credit quality at the same time that rising unemployment and falling house prices have led to more credit losses. The attempts by banks to cut back the volume of their assets to reduce leverage and conserve capital, combined with a breakdown in the flow of lending through securitization, has constricted the provision of credit in the economy. One important purpose of the stress tests, now nearing completion by banking regulators, is to ensure that our largest banking organizations establish capital buffers that are large enough for them to withstand losses, while continuing to provide credit to households and businesses, even if the recession turns out to be significantly worse than currently anticipated. Such lending is critical to recovery.

The challenges facing monetary policy makers are another factor that makes a strong recovery uncertain. With the federal funds rate essentially at zero, the Fed's traditional policy tool has reached its maximum degree of accommodation. Many versions of the Taylor rule, a well-known policy benchmark, indicate that we ought to lower the funds rate well below this zero bound, if such a thing were possible. As I noted, the Fed has turned to unconventional policy tools. Through a variety of programs, the Fed has augmented the flow of credit to the economy, provided a reliable source of liquidity to the financial system, and helped prevent the

failure of systemically important depository and nondepository institutions. Most of the action recently has involved boosting credit flows through large-scale asset purchases. To support the housing sector, the Fed announced last November that it would start buying agency-insured mortgage-backed securities (MBS) and agency debt. In March, this program was expanded substantially. In addition, the Federal Open Market Committee (FOMC) launched a new program to purchase large quantities of longer-term Treasury debt. These asset purchases have the potential to stimulate aggregate demand through a number of channels, most obviously by reducing yields on securities included in the program. Indeed, when the FOMC announced in March that the Fed would expand these purchases, interest rates declined on both Treasury securities and agency-backed MBS. Still, even though these programs appear to be having a useful effect, we have little experience with them and the magnitude of their impact is uncertain. In other words, it is difficult to tell if unconventional monetary policies will be as effective in promoting recovery as easing the funds rate has been in the past.

Finally, the global nature of the recession is likely to hold back the pace of our recovery. We haven't seen anything like this global downturn since the Great Depression. Virtually all advanced economies and many emerging economies are in recession. Financial systems around the globe are under stress, housing markets in some countries have collapsed, and trade has shriveled. The International Monetary Fund recently forecast that the global economy would recover very gradually. This makes sense. As I said, recessions caused by financial crises are generally followed by more measured upswings. In addition, when recessions occur in many regions simultaneously, recoveries are slower than when downturns are confined to just a few

countries.³ Now we have a double whammy—a highly synchronized global recession and a financial crisis. That’s a daunting combination.

For all of these reasons—the need for balance sheet repair by households and financial firms, uncertainties about unconventional monetary policy tools, and the global nature of the recession—I expect the U.S. recovery to be frustratingly tepid once it does get started. It likely will take several more years to bring unemployment back to its long-run equilibrium value.

As we think about the course of the economy, we must also be wary of developments that could derail recovery. I see the economy as vulnerable to a number of downside risks, including the possibility of another disruptive financial event—another “shoe” dropping, if you will. Commercial real estate is an area that seems vulnerable. Nonresidential construction declined sharply in the first quarter as business activity slowed; new buildings came on line; vacancy rates on office, industrial, and retail space rose; and property values fell. For developers, financing is extremely hard to get. The market for commercial MBS has all but dried up and banks are tightening lending standards. Many developers will have trouble rolling over debt when it comes due. Banks—especially community banks—are major lenders to this sector and are vulnerable to losses.

We must also keep an eye on developing nations, which face stark challenges as markets for their products shrink and capital inflows dry up. Emerging market defaults could trigger further financial turmoil. The downturn in eastern Europe poses especially significant financial risks to western European banks, whose exposure amounts to an estimated \$1.5 trillion. With

³ International Monetary Fund, *World Economic Outlook*, April 2009.
<http://www.imf.org/external/pubs/ft/weo/2009/01/index.htm>

confidence in the global financial system already fragile, these problems easily could spill over to the United States.

Another risk I'd like to discuss is inflation—or perhaps I should say deflation. This is an extraordinary time when you can hear a warning about inflation from one quarter and a dire prediction of deflation from another quarter. I hear from both sides, though more often from those worried about inflation. Concerns about an inflationary surge focus on the expansion of the Fed's balance sheet, which has increased from under \$900 billion in mid-2007 to over \$2 trillion now, largely financed by increases in bank reserves. The inflation worriers may be focused on these excess reserves as a *potential* source of inflation down the road. Their fears are compounded because federal budget deficits are ballooning. While I understand that the combination of Fed expansion and big federal budget deficits might seem scary, I don't see a surge in inflation as very likely. Expansionary monetary policy creates inflation by loosening financial conditions enough to create excess demand for goods and services. That's obviously not the problem we face now. In spite of the Fed's best efforts to enhance the flow of credit, financial conditions, while somewhat improved, overall remain abnormally tight. In our current recession, we need more demand—not less—to offset the slack in labor and product markets.

That said, in theory there's one way inflation could rise before the economy recovers from the recession: inflation expectations might increase because of fears that the Fed will not shift gears quickly enough when the recession and credit crunch are over. Some people have argued that the Fed might find it politically difficult to stop lending to the private sector borrowers it has supported during the crisis.⁴ I don't find this argument persuasive and I don't

⁴ Jeffrey Lacker, "Government Lending and Monetary Policy," remarks to the National Association for Business Economics, 2009 Washington Economic Policy Conference, Alexandria, VA, March 2, 2009

see evidence that the broad public finds it convincing either. The Fed has accumulated considerable anti-inflation credibility over the past 25 years or so.⁵ This credibility was evident a few years ago when prices for energy, food, and other commodities soared to historically high levels. While the direct effects of those price increases showed up in headline consumer inflation, very little was passed through to core inflation. Right now, there's little evidence that inflation expectations have deteriorated. Market indicators and survey measures of longer-run expectations have been quite stable.

Of course, the inflation worriers are correct in an important respect: The Federal Reserve will need to remove monetary accommodation once the credit crunch eases, private spending revives, and the economy picks up steam. If the Fed were to fail to tighten the stance of monetary policy quickly enough, we would see higher inflation. But I want to assure you that the Fed is well aware of this danger and is readying the tools even now. Most importantly, the Fed is committed to maintaining price stability and, when the time to remove accommodation comes, we have a number of tools in our kit bag that could be quite effective.

The simplest approach—the one that we have used traditionally—would be to shrink our balance sheet by selling the Treasuries, agency debt, and agency MBS we accumulated during the crisis. Many of the special liquidity and credit facilities we have developed will be phased out as financial markets recover. But it is conceivable that, even with the economy rebounding nicely, the credit crunch might not be fully behind us and some financial markets might still need

(http://www.richmondfed.org/press_room/speeches/president_jeff_lacker/2009/lacker_speech_20090302.cfm); and Charles I. Plosser, "[Ensuring Sound Monetary Policy in the Aftermath of Crisis](#)," speech to the U.S. Monetary Policy Forum, The Initiative on Global Markets, New York City, February 27, 2009 (http://www.philadelphiafed.org/publications/speeches/plosser/2009/02-27-09_us-monetary-policy-forum.cfm).

⁵ John C. Williams, "Inflation Persistence in an Era of Well-Anchored Inflation Expectations," *FRBSF Economic Letter* 2006-27 (October 13, 2006). <http://www.frbsf.org/publications/economics/letter/2006/el2006-27.html>

Fed support. In this case, we could increase the interest rate we pay on bank reserves. This would induce banks to remove funds from the federal funds market and lend them to us, thereby increasing the federal funds rate and longer-term interest rates that are more relevant to private borrowers. Importantly, this approach provides us with the flexibility to tighten monetary policy in response to an improving macroeconomic picture without shrinking the size of our balance sheet or our support to financial markets. It is the main method employed by many central banks to influence financial conditions. An alternative approach that could accomplish the same goal, and perhaps do it better, would be something completely new for the Federal Reserve—that's to issue interest-bearing debt broadly to private investors. Let's call this debt Fed bills. Congress would have to authorize this, but it too is a tool available to many central banks. The sale of Fed bills would reduce the reserves of the banking system, as in a typical contractionary open-market operation. As with interest on reserves, we could accomplish a tightening of policy while maintaining our support of credit markets. But Fed bills would have an advantage over interest on reserves. The loans to the Fed would come from investors throughout the economy, not just from banks. At a time when we need banks to lend to the private sector to fight a credit crunch, this is a decided plus.

As you can tell, I'm quite skeptical about the risk of higher inflation. My thoughts about the possibility of deflation are more complex. At first blush, there is cause for concern. We are starting from a situation where core inflation is already a bit below 2 percent. The economy has a great deal of slack and unemployment is likely to rise further, which would put more downward pressure on wage growth and inflation. Indeed, we have already seen evidence that wages are rising less rapidly and there have been some outright wage cuts. Furthermore, as I noted, with the funds rate at the zero bound, monetary policy has been forced to ease its stance

through unconventional instruments that are hardly tried and true. If deflation were to occur with the funds rate near zero, the effects could be severe. In the textbook case, with no way of lowering the nominal funds rate, real interest rates would rise as prices fell. That could drive the economy into a spiral of larger and larger price decreases, with economic activity sinking more and more.

The risk of such a deflationary spiral depends crucially on the nature of inflation expectations.⁶ If expectations are *unanchored*, meaning that people have variable expectations depending on the recent behavior of inflation, then the lower inflation that's characteristic of recessions can convince them that inflation will go still lower in the future. If a recession is severe and long enough, this process eventually will cause prices to fall, and then create a downward spiral. But I don't think this is a likely scenario in the United States. I believe that inflation expectations are *well anchored*, in the sense that people expect inflation to be consistent with the Fed's goals and policies. Based on measures of inflation expectations, people appear to think we will take policy actions that will maintain a positive rate of inflation. This expectation acts as a buttress holding inflation up. This does not mean that a short episode of deflation couldn't occur, but it does help to avoid a prolonged deflationary spiral.

To reinforce our commitment to price stability, the FOMC recently began releasing long-run inflation forecasts based on the assumption of appropriate monetary policy. These figures, which indicate where FOMC members would like inflation to settle in the longer run, show, as I mentioned, a consensus of 2 percent for consumer inflation.⁷ Such words, backed by appropriate

⁶ John C. Williams, "The Risk of Deflation," *FRBSF Economic Letter* 2009-12 (March 27, 2009). <http://www.frbsf.org/publications/economics/letter/2009/el2009-12.html>

⁷ The price index for personal consumption expenditures is used for this calculation.

actions, help keep inflation expectations well anchored and reduce the chances of a deflationary spiral. So, for me the bottom line is this: I see little basis to worry that we will develop an inflation problem. There is more of a reason to think that we could experience some deflation, but the chances of a severe bout of that ailment seem remote.

You may have gotten a case of whiplash hearing me say that, although conditions are poor, some hopeful signs are visible, but significant risks remain. Your necks may not have felt any better when I said that I hear worries about inflation and deflation at the same time. However, that's the situation we find ourselves in now. The good news is that, for the first time in a while, there is some good news to savor. But, when it comes to assessing the future of the economy, the dominant theme is uncertainty. The one thing that is sure is that policymakers around the globe are working hard to restore economic growth. As for the Federal Reserve, it remains fully committed to doing everything in its power to foster recovery while maintaining price stability.