Speech to the San Francisco Planning and Urban Research Group San Francisco, California By Janet L. Yellen, President and CEO, Federal Reserve Bank of San Francisco For delivery February 12, 2008, 8:05 AM Pacific, 11:05 AM Eastern

Prospects for the U.S. Economy in 2008

Good morning, and thank you very much for inviting me to speak to you today. I was very pleased that things worked out for us to get together here at the San Francisco Fed, and I want you to know that we're delighted to have you. I'd also like to say a word of appreciation for all the support this event has received from the people at Shorenstein. It is yet another example of the company's engagement in and commitment to San Francisco and to the Bay Area.

Today I'd like to talk about developments in the economy and in monetary policy, two items that have definitely been making the news lately. On January 22, the Federal Open Market Committee cut its main policy rate—the federal funds rate—by three-quarters of a percentage point. Then, on January 30, at the scheduled meeting, the Committee voted to cut the policy rate again, this time by half a percentage point to 3 percent. Taking these actions together with those that began last September, the Committee has cut that rate by a total of $2\frac{1}{4}$ percentage points.

The purpose of these actions is to stimulate demand in the face of the combined impact of the severe contraction in housing and the related financial market disruptions. While housing construction has been weak for more than two years, its effects did not spill over to most other sectors until fairly recently. That's why we used to talk about a "dual economy," with housing notably weak, but other sectors doing well. However, financial markets became disrupted in the middle of last year, which has not only

intensified the housing slump, but also has tightened credit conditions for some households and businesses. The combined impact has led to slowing more broadly through the economy. It is this broader slowdown that has elicited Federal Reserve actions in recent months.

In my remarks today, I plan to discuss my views on policy and on the prospects for the nation's economy this year and beyond.

Financial markets

I'd like to begin with a discussion of the disruptions in U.S. and global financial markets, because they influence not only the economy's most likely course but also the risks that could alter that course. In my view, these disruptions are likely to continue for some time. In other words, I think they have laid bare some fundamental issues with the structure of the financial system that will require significant adjustments.

The financial disruptions are centered in the markets for asset-backed securities.

The aim of such instruments is to diversify and spread risk, potentially enhancing economic welfare by broadening access to credit and lowering its cost. These instruments have been around a long time. For example, for many years, when a bank originated a mortgage, instead of holding it on its books, it may have sold the mortgage to one of the government-sponsored agencies, Fannie Mae or Freddie Mac. The agencies, in turn, would then bundle that mortgage with other similar mortgages into a security. The virtue of this mortgage-backed security is its liquidity—that is, it can be traded in financial markets. Since around 2003, private investment banks and commercial banks have increasingly been involved in securitizing mortgages and other assets as well. This

business has grown dramatically, securitizing many types of underlying loans and, importantly, about 75 percent of all subprime mortgages in 2006.

Advances in financial engineering have led to new and complex forms of asset-backed securities. For example, CDOs, or collateralized debt obligations, package multiple mortgage-backed securities—essentially securitizing several already securitized bundles of long-term debt instruments. Typically, they include tranches—literally, "slices"—of mortgage-backed securities with different exposures to risk based on a prioritization of the payments from the underlying mortgage securities, and are a type of "structured credit." There are even instruments, known as CDO-squared, that consist of tranches based on holdings of other CDOs, rather than "simple" mortgage-backed securities, and CDO-cubed that, as you might now guess, consist of tranches based on holdings of CDO-squared.

To deal with the complexity of these instruments, many market participants, including financial institutions and other sophisticated investors, relied to a great extent on credit rating agencies for assessments of the risk. However, last summer, to the surprise of many, the rating agencies announced a set of substantial downgradings of highly rated tranches of a number of subprime mortgage-backed securities in light of rapidly rising delinquencies in some types of those mortgages. These downgrades raised concerns not only about mortgage-backed securities themselves, but also about the quality of rating agencies' evaluations of risk in other structured credits. As a result, investors grew wary, as they had trouble knowing what risks were embedded in these instruments, how to price the risks, and who would ultimately bear the risks. The

consequence is that the markets for many such assets are now highly illiquid and all but closed for new business.

With the benefit of hindsight, it is now apparent that underwriting standards slipped substantially in the United States as house prices soared. For example, permissible combined loan-to-value ratios edged up during 2005 and 2006. And no- or low-documentation loans—so-called "stated income" loans—became more prevalent. Such loans might have performed reasonably well if house prices had continued to rise, but once house prices leveled off and then began to decline, the stage was set for trouble.

The financial turmoil has spread beyond the mortgage market in part because structured credits have been based on a wide variety of underlying loans, such as business loans, including the loans used to finance the recent wave of leveraged buyouts, or LBOs, commercial real estate, student loans, credit card loans, and subprime mortgages, to name a few.

The bottom line is that, in recent years, the financial system has gone through a significant restructuring that made evaluating and pricing risk difficult. The reverberations of the resulting financial disruption are still with us. I'd like to describe some of them now.

As investors have sought to shun risk, there has been a worldwide "flight to safety," leading to a strong demand to hold U.S. Treasury securities—the safest and most liquid instruments in the world. This demand has contributed to a sharp decline in interest rates on Treasuries. Of course, these rates also have declined because of the Committee's moves to ease policy.

However, the potential stimulatory effects of this drop in risk-free Treasury rates have been offset in many cases by another key feature of the financial turmoil, namely, a sharp rise in interest rate risk spreads, as riskier borrowers have had to pay higher premiums to compensate lenders for a perceived increase in the probability of default or losses in that event. On the corporate side, prime borrowers have actually experienced some net decline in interest rates since the shock first hit—that is, even though risk spreads are higher, they have been more than offset by lower Treasury rates. However, issuers of low-grade corporate bonds with greater credit risk, in contrast, face notably higher interest rates.

The mortgage market has been the epicenter of the shock, and, not surprisingly, greater aversion to risk has been particularly apparent there, with spreads above

Treasuries increasing for mortgages of all types. Although borrowing rates for low-risk conforming mortgages are now lower than they were before the financial shock hit, fixed rates on jumbo mortgages are higher on net. Subprime mortgages remain difficult to get at any rate. Moreover, many markets for securitized assets, especially non-agency mortgage-backed securities, continue to experience severe illiquidity; in other words, the markets are not functioning efficiently, or may not be functioning much at all.

The turmoil is reverberating in depository institutions as well. One problem is an unanticipated buildup of mortgages as well as LBO-related loans on their balance sheets. These loans were in the pipeline for securitization but could not be sold. This problem has hit banks in part because they themselves were involved in creating structured credits that held mortgages and the leveraged loans that they had originated. In addition, they face problems with some structured investment vehicles, or SIVs, that they had sponsored and backstopped to hold and fund portfolios of securitized assets through the issuance of asset-backed commercial paper. When the SIVs were in danger of failing, the banks were concerned about reputational effects and decided to rescue them by taking the underlying assets back onto their own balance sheets. Furthermore, as investors have pulled back from the markets for asset-backed securities, the value of these securities and CDOs has fallen dramatically, so banks and other financial institutions have had to write down their values, which has shrunk their capital and driven their stock prices down. Another problem for bank balance sheets is that credit losses have been edging up.

The latest reverberation involves monoline financial guarantors. These companies guarantee the timely payment of principal and interest due on various types of

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¹ In recent months, and particularly toward year-end, strains were evident in the term interbank funding markets; in these markets, banks borrow from and lend to each other, with loans maturing in a number of weeks, months, or even a year. The problem has been that banks that would normally lend their excess funds to other banks that need them became reluctant to do so. This may reflect banks' recognition of the need to preserve liquidity to meet unexpected credit demands, greater uncertainty about the creditworthiness of counterparties and concerns relating to capital positions, on top of typical, year-end balance sheet considerations. A heightened focus on liquidity is logical when the markets for securitized assets held by banks have become highly illiquid and when the potential exists for some customers—such as struggling mortgage companies and others—to draw on unsecured credit lines. These markets have improved since the end of last year, perhaps in part because of the Fed's introduction of the Term Auction Facility, which gives banks another route besides the discount window to tap into the Fed's lending function. (Banks had not used the discount window very much despite their need for liquidity because they were concerned that doing so might erroneously signal to other financial institutions that they were in bad straits. The plan for the TFA, which the Fed created in cooperation with the European Central Bank and the National Bank of Switzerland, was announced on December 12.)

securities, including structured credits. The guarantees can increase the credit rating of the covered securities and thus increase the value of those securities on banks' balance sheets. The problem today is that the guarantors are reporting sizable losses because of the increased riskiness of the securities they are covering. Those losses can affect the guarantors' capital positions and even their own credit ratings. A rating downgrade of a guarantor reduces the value of its credit enhancements and lowers the price of the covered securities. Holders of those securities such as banks then have to take writedowns to reflect the lower value of the securities.

Fortunately, the banking system entered this difficult period in a strong position. Most institutions were extremely well capitalized. However, the combination of unanticipated growth in assets and in write-downs has put increased pressure on banks' capital positions. Given their concerns about capital adequacy and their increased caution in managing liquidity, it is not surprising that they are tightening credit terms and restricting availability. At first, the focus was mostly on mortgages, but now it has spread to other kinds of loans, including home equity lines of credit, credit cards, and other consumer credit, as well as business loans. The tightening of credit is also a response to a now noticeable deterioration in credit quality, particularly for subprime mortgages; the losses in other parts of the consumer loan portfolio remain at relatively low levels from an historical perspective, but they, too, have edged up.

Finally, equity markets have hardly been immune to recent financial turbulence.

Broad U.S. equity indices have been very volatile, and, on the whole, have declined since

August, representing a restraint on spending. More recently, some of these declines have

occurred as profits have come in below market expectations for some financial firms due to write-downs of the value of mortgage-backed securities.

My overall assessment is that the turbulence in financial markets is due to some fundamental problems that are not likely to be resolved quickly. The effects of these problems have now made credit conditions tighter throughout most of the economy's private sector, and this will restrain spending going forward. The impact hit economic activity mainly in the fourth quarter, and so far, it has been starkly negative. After robust performance in the second and third quarters of last year, growth slowed significantly in the fourth quarter—to a pace of only ½ percent. This brings me to the outlook for the economy.

Economic outlook

Current indicators point to continued anemic growth for at least the first half of this year as well as significant downside risks even to those weak expectations. As I mentioned at the outset, though the prolonged slump in housing construction did not spill over significantly to the rest of the economy during 2006 and much of 2007, when combined with the recent financial market turmoil, it has been central to the emergence of today's slow-growth environment. And the course of its resolution will be a key factor in the economic outlook.

Forward-looking indicators of housing activity strongly suggest that the downward cycle may be with us a while longer. Housing permits and sales are dropping, and inventories of unsold homes are at very high levels. Those inventories could rise even higher as foreclosures continue to mount. I'm not referring only to foreclosures on

subprime adjustable-rate mortgages, which, as we all know, have increased sharply over the past couple of years. More recently, we've begun to see increases in foreclosures on subprime fixed-rate mortgages and even on prime adjustable-rate mortgages.

Within this Federal Reserve District, housing has been harder hit in some areas than in others. For example, builders and homeowners in parts of Arizona, Nevada, and the inland regions of California have seen some of the worst of the downturn, watching prices fall and equity evaporate as homes sit unsold for extended periods.

The Bay Area has not been totally immune to these developments. By the end of 2007, existing home sales were down about 35 to 40 percent from the previous year, reaching their lowest level in at least two decades. Some cities and towns in the eastern part of this region were more exposed than others to subprime mortgages, and they experienced a sharp increase in mortgage delinquencies and foreclosures last year. Here in San Francisco and other parts of the Bay Area, where house prices routinely exceed half a million dollars, those in the housing market have run into a problem I already mentioned, namely, relatively high rates on jumbo mortgages. Despite the subprime and jumbo mortgage challenges, home prices were largely stable in the Bay Area during the first three quarters of 2007. It remains to be seen, of course, how they will do as further market adjustments occur.

On the national level, housing construction probably will continue to contract through the end of this year. It is true that the residential construction sector is a fairly small piece of the overall economy and is unlikely to cause significant overall weakness in and of itself. But the fallout from the housing cycle has many dimensions, and in the fourth quarter there were signs of spillovers to other sectors of the economy, most

worrisomely, to consumer spending. This sector is a huge part of the economy—about 70 percent—and its growth slowed to a rate that is somewhat below its long-run trend in the face of spillovers from the housing market and rising energy and food prices.

Looking ahead, developments related to housing are likely to continue to put a strain on consumers. For example, house prices have fallen noticeably and the declines have intensified. Moreover, futures markets for house prices indicate further—and even larger—declines in a number of metropolitan areas this year.

With house prices falling, homeowners' total wealth is declining, and that could lead to a pullback in spending. At the same time, the fall in house prices may constrain consumer spending by lowering the value of mortgage equity; less equity reduces the quantity of funds available for credit-constrained consumers to borrow through home equity loans or to withdraw through refinancing.

Indeed, it would not be surprising to see even more moderation over the next year or so, as consumers face additional constraints due to the declines in the stock market, the tightening of lending terms at depository institutions, and the lagged effects of previous increases in energy prices. National surveys show that consumer confidence has plummeted. And I have been hearing comments and stories from my business contacts in the retail industry that are also downbeat. The rise in delinquency rates across the spectrum of consumer loans is strongly indicative of the growing strains on households.

Finally, another negative factor for consumption is that labor markets have softened. In recent months, growth in employment from a survey of business establishments slowed sharply, actually falling in January, and many other indicators point in the same direction. Slower job growth will have a negative impact on the

disposable income available to households and therefore will provide an additional restraint on consumer spending.

With the domestic consumer likely to be pretty hobbled, it is tempting to look at consumers beyond our own borders to be a source of strength for economic activity.

Foreign real GDP has advanced robustly over the past three years. With the dollar falling well below its level of a year ago, U.S. exports have done very well; partly for this reason, U.S. net exports—exports minus imports—which consistently held growth down from 2000 to 2005, actually gave it a lift over the past couple of years. I expect net exports to remain a source of strength. But some countries—especially in Europe—are experiencing direct negative impacts from the ongoing turmoil in financial markets.

Others are likely to suffer indirect impacts from any slowdown in the U.S. A slowdown here could well produce ripple effects lowering growth there through trade linkages, and recently this factor has been reinforced by a worldwide drop in stock prices.

Economic policies are another important factor in gauging the economic outlook. As I have noted, the FOMC has eased the stance of monetary policy substantially in the past five months. Moreover, Congress has now passed a fiscal stimulus package to help the economy and it could provide notable stimulus in the latter half of this year.

Even with such policy stimulus, the overall economy is still likely to turn in a very sluggish performance this year, expanding by a rate well below potential and creating more slack in labor markets. At 4.9 percent, the unemployment rate is already slightly above my estimate of its sustainable level. Slow growth this year would most likely push unemployment even higher.

To sum it up, for the next few quarters, I see economic activity as weighed down by the housing slump and the negative factors now impacting consumer spending. It remains particularly vulnerable to the continuing turmoil in financial markets. My comments haven't even touched on possible slowdowns in business investment in equipment and software and buildings. I see the growth risks as skewed to the downside for the near term. In circumstances like these, we can't rule out the possibility of getting into an adverse feedback loop—that is, the slowing economy weakens financial markets, which induces greater caution by lenders, households, and firms, and which feeds back to even more weakness in economic activity and more caution. Indeed, an important objective of Fed policy is to mitigate the possibility that such a negative feedback loop could develop and take hold.

Now let me turn to inflation. The recent news has been disappointing. Over the past three months, the personal consumption expenditures price index excluding food and energy, or the core PCE price index—one of the key measures included in the FOMC's quarterly forecasts—has increased by 2.7 percent, bringing the increase over the past twelve months to 2.2 percent. This rate is somewhat above what I consider to be price stability.

I expect core inflation to moderate over the next few years, edging down to around 1¾ percent under appropriate monetary policy. Such an outcome is broadly consistent with my interpretation of the Fed's price stability mandate. Moreover, I believe the risks on the upside and downside are roughly balanced. First, it appears that core inflation has been pushed up somewhat by the pass-through of higher energy and food prices and by the drop in the dollar. However, recently, energy prices have turned

down in response to concerns that a slowdown in the U.S. will weaken economic growth around the world, and thereby lower the demand for energy.

Another factor that could restrain inflationary pressures is the slowdown in the U.S. economy. This can be expected to create more slack in labor and goods markets, a development that typically has been associated with reduced inflation in the past.

A key factor for inflation going forward is inflation expectations. These appear to have become well-anchored over the past decade or so as the Fed's inflation resolve has gained credibility. Very recently, far-dated inflation compensation—a measure derived from various Treasury yields—has risen, but it's not clear whether this rise is due to higher inflation expectations or to changes in the liquidity of those Treasury instruments or inflation risk. Going forward, we will need to monitor inflation expectations carefully to ensure that they do indeed remain well anchored.

Monetary policy

Now let me turn to monetary policy. The federal funds rate has been cut by 2¹/₄ percentage points since September and now stands at 3 percent. With near-term expected inflation of just above 2 percent, the real—inflation adjusted—funds rate is around 1 percent or slightly lower, which represents an accommodative posture.

I believe that accommodation is appropriate because the financial shock and the housing cycle have significantly restrained economic growth. While growth seems likely to be sluggish this year, the Fed's policy actions should help to promote a pickup in growth over time. I consider it most probable that the U.S. economy will experience

slow growth, and not outright recession, in coming quarters. At the same time, core consumer inflation seems likely to decline gradually to somewhat below 2 percent over the next couple of years, a level that is consistent with price stability.

However, economic prospects are unusually uncertain. And downside risks to economic growth remain. This implies that, going forward, the Committee must carefully monitor and assess the effects of ongoing financial and economic developments on the outlook and be prepared to act in a timely manner to address developments that alter the forecast or the risks to it.

Now, I'd be glad to take your questions.

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