## FRBSF ECONOMIC LETTER

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## The U.S. Economy and Monetary Policy

This Economic Letter is adapted from a speech by Janet L. Yellen, president and chief executive officer of the Federal Reserve Bank of San Francisco, to the Seattle Community Development Roundtable and the Seattle Chamber of Commerce Board of Trustees in Seattle, Washington, on December 3, 2007.

Good afternoon, and thanks very much to everyone at the Seattle Community Development Roundtable and the Board of Trustees of the Seattle Chamber of Commerce for inviting me to join you. In my remarks today, I plan to give you my views on the prospects for the nation's economy and discuss some of the implications I see for the conduct of monetary policy. Afterward, I hope there will be ample time for your questions and comments because I view these events as an opportunity for two-way communication—in other words, not only do you get to hear what's on my mind, but I get to hear what's on yours.

#### Communication

Indeed, communication between the Fed and the public has been a special focus for me for the last year and a half. I was part of the FOMC subcommittee—along with Fed Vice Chairman Donald Kohn and Minneapolis Fed President Gary Stern—that led the discussions on the FOMC's communications strategy. One outcome was the initiative that Chairman Bernanke (2007) announced last month. This effort aims to make elements of the conduct of monetary policy clearer to the public by providing more extensive information about the Committee's forecasts and goals for the U.S. economy. This new information was first released recently as part of the minutes to the October FOMC meeting. So, I'd like to start by discussing some of the reasons for this initiative and its main features. Then I'll couch my discussion of the economy and monetary policy in

those terms. As always, these remarks reflect my own views and not necessarily those of my colleagues in the Federal Reserve System.

Let me begin by placing this development in context. It is neither the beginning point nor is it likely to be the endpoint of efforts to improve the Fed's communication with the public about its goals and its approach to reaching those goals. Some notable earlier efforts include releasing a statement explaining policy decisions after each meeting of the FOMC and, most recently, releasing the minutes of each meeting earlier, so that they are available to the public not after the subsequent meeting, but *before* it.

Why this emphasis on communication? There are several reasons. The first is one that is fundamental to our democratic principles: the Federal Reserve's accountability to the public. By making both our goals and our strategies to reach those goals clearer, the public is in a better position to keep an eye on us and to judge how well we are doing our job. Second, greater clarity about the Fed's goals and strategies actually helps in achieving them. For example, financial sector participants should have a better understanding of how the Committee is likely to react to economic developments, and, as a result, asset prices and interest rates should tend to move in ways that further the Fed's objectives. Furthermore, the public's expectations of inflation may be better anchored, and this not only helps the Fed control inflation but also gives it more flexibility in stabilizing the business cycle, the other element in our dual mandate; that is, with well-anchored inflation expectations, the Fed can respond quickly to disturbances that threaten growth without engendering public fears of rising inflation.

As I indicated, the communication initiative involves providing more information on the economic forecasts of all of the FOMC participants. Forecasts play a role because the effects of monetary policy actions are not felt in the economy immediately,

<sup>&</sup>lt;sup>1</sup>I would like to thank San Francisco Fed staff members, especially John Judd and Judith Goff, for excellent assistance in the preparation of these remarks.

but only after some time has passed. These lags between actions and outcomes provide a rationale for monetary policy strategies that are forward-looking—anticipating future developments in the economy and how policy actions will influence them.

I'll describe the main elements of the enhanced FOMC projections briefly. The projections are now released four times a year, rather than twice a year, as they were in the past. They summarize the point estimates of the outcomes for real GDP, the unemployment rate, core inflation, and headline inflation that each participant considers most likely over the forecast horizon. The forecast horizon now extends to three years, rather than to just two years, thus giving a better sense of the Committee's medium-term outlook. The forecasts are made under the assumption—and this is a key point—of appropriate monetary policy. Given this assumption, the three-year-ahead forecasts for inflation rates provide better insight into levels that are considered by the participants to be consistent with the Committee's mandate to achieve price stability. By the same token, the third-year forecasts for real GDP growth and the unemployment rate provide more of an indication of the Committee's estimates of the maximum sustainable rate of growth for economic activity and level of employment. In the long run, neither of these is directly influenced by monetary policy. In the short run, however, monetary policy does affect the actual growth rates of economic activity and employment. Therefore, business cycle developments play a key role in determining our plan for policy over the medium term.

In keeping with past practice, the Committee will continue to report the central tendency and full range of the independent forecasts deemed most likely by each of the FOMC participants. Such independence and diversity of views are longstanding strengths of the Committee's decisionmaking. Because there is often considerable uncertainty and risk associated with gauging appropriate monetary policy, having the independent views of all participants reduces the chance of missing an important consideration in any decision.

One new feature is a description—or narrative—that summarizes the key factors that influence

the forecasts. It puts the projection numbers into context, and, in particular, in the context of the basic economic "story" underlying the views of the participants. The narrative also highlights factors responsible for changes in participants' views since the previous forecast. In addition, it portrays not only the central tendency of the participants' views, but also gives the flavor of the diversity of views on the Committee.

Another new feature relates to the characterization of risks. Forecasts are subject to considerable error, given the inherent uncertainty about both the underlying economic relationships that drive observed outcomes and the prevalence of unanticipated shocks affecting economic developments. Policy must take such uncertainty into account, particularly when some possible outcomes could entail unusually high costs. The new projections attempt to characterize qualitatively both whether the degree of forecast uncertainty is greater or less than usual and also whether the risks around the economic scenario deemed "most likely" are symmetric or skewed to the upside or downside.

It is important to recognize that providing more information on our forecasts does not represent a new way to do policy. Rather, it helps clarify what the Committee is focused on. It also makes more explicit that the Committee *is* looking forward, *does* have a plan to pursue its dual mandate, and *is* attentive to situations where the risks to its forecast may be unusually large or asymmetric.

The forecasts give the public at least some basis for judging whether incoming data are consistent with the Committee's expectations or else are surprising, potentially leading over time to an updating of forecasts and policy assumptions. If the projections, for example, already incorporate expectations for, say, a "rough patch" ahead for output or inflation, incoming data confirming that "rough patch" would not typically alter the plan for policy. Rather, a change in the policy plan would be appropriate when the forecast shifts due to unanticipated developments in the financial or real economies. Furthermore, a change in the policy plan may also be warranted when the forecast itself is unchanged, but when the risks around it have changed. I will return to these important themes in my discussion of policy.

#### Financial markets

Now let me turn to my own forecasts—both the one I held at the October meeting and the one I am working on for our meeting next week. At present, the ongoing turmoil in financial markets plays a crucial role in that outlook, influencing not only the economy's "most likely" path but also the risks around those projections. The turmoil began, of course, in mid-July, as global financial markets became highly volatile, increasingly illiquid, and notably more risk-averse. These developments led the Fed to take actions on several fronts—as bank regulator and supervisor, as provider of liquidity to mitigate financial instability, and as monetary policymaker. In terms of monetary policy, the Committee twice lowered its main policy instrument, the federal funds rate, by a total of threequarters of a percentage point to help forestall some of the restraining effects on economic activity of this financial shock.

When the shock first hit, I expected the reverberations to subside gradually, especially in view of the easing in the stance of policy, so that by now there would have been a noticeable improvement in financial conditions. Indeed, though the reverberations have ebbed at times over the last four and a half months, since the October meeting market conditions have deteriorated again, and indications of heightened risk-aversion continue to abound both here and abroad.

For example, there continues to be a strong demand to hold U.S. Treasury securities—which are the safest and most liquid in the world—leading to Treasury yields that are much lower than they were before the shock hit in mid-July. Of course, one reason for the decline in Treasury yields is that the Fed has cut the federal funds rate and the market expects substantial additional cuts in the future, reflecting the view that policy will ease further to offset the contractionary effects on economic activity of the financial turmoil. But another important reason is that there has been a worldwide "flight to safety." Stated differently, the spreads of most risky assets above Treasuries have risen.

Likewise, the cost of insuring investors against default on securities they hold, through derivatives known as credit default swaps, has jumped again in recent weeks and is far higher than normal. Indeed, the higher costs are particularly evident for instruments related to mortgages, with lower-rated instruments seeing especially big increases. To some extent, this development may reflect heightened anxiety among market participants about downside risks to economic activity, particularly housing. At the same time, greater uncertainty about the future is reflected in implied expected price volatility as derived from options contracts on a range of assets, from equities to foreign exchange.

While risk *spreads* have generally risen, it is also important to pay attention to the actual interest rates on loans that support the spending of American households and firms. On the corporate side, prime borrowers have, in fact, experienced some net decline in rates since the shock first hit—that is, even though risk spreads are higher, they have been more than offset by lower Treasury rates. Issuers of low-grade corporate bonds with greater credit risk, in contrast, face notably higher interest rates and these rates have jumped in recent weeks.

The mortgage market has been the epicenter of the financial 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 have decreased, other mortgage rates have risen, even for some borrowers with high credit ratings. In particular, fixed rates on jumbo mortgages are up on net since mid-July. Subprime mortgages remain difficult to get at any rate.

Moreover, many markets for securitized assets, especially private-label mortgage-backed securities, continue to experience outright illiquidity; in other words, the markets are not functioning efficiently, or may not be functioning much at all. This illiquidity remains an enormous problem not only for companies that specialize in originating mortgages and then bundling them to sell as securities, but also for financial institutions holding such securities and for sponsors, including banks, of structured investment vehicles—these are entities that relied heavily on asset-backed commercial paper to fund portfolios of securitized assets.

Depository institutions are increasingly facing challenges. For example, there continue to be strains 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 is that banks that would normally lend their excess funds to other banks that need them are 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, or concerns relating to capital positions. 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. Pressures on banks' capital cushions are arising in part because loans they intended to push off their balance sheets by securitizing them have become "stuck" on their balance sheets. In addition, banks may end up moving assets held off-balance sheet back onto their own books, raising regulatory capital requirements. Furthermore, many institutions face required write-downs of the value of mortgage-backed assets on their balance sheets. To the surprise of many, these write-downs and capital strains have even hit Freddie Mac and Fannie Mae, the huge government-sponsored enterprises that some observers and legislators hoped could provide support to the mortgage markets by taking more mortgages on to their own books.

Given some banks' increasing concerns that their capital ratios will become binding and their increased caution in managing liquidity, it is not surprising to see some evidence suggesting that they are tightening credit terms and restricting availability at least to some extent. As yet, however, we do not appear to be at the point of an all-out credit crunch as we were in the early 1990s, when so-called "headwinds" significantly restrained spending and economic activity. Increased concern on the part of lenders about downside risks to the economy that would harm credit quality has the potential to cause a further tightening of credit conditions to households and firms. This is clearly an area that bears close monitoring.

To assess how financial conditions relevant to aggregate demand have changed since the shock first hit, we must consider not only credit markets but also the markets for equity and foreign ex-change. These markets have hardly been immune to recent financial turbulence. Broad equity indices have been very volatile, and, on the whole, they have declined noticeably since mid-July, 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 securities.

As for the dollar, it has been depreciating since early 2002, and has continued to do so since the financial turmoil began. This development will help to improve our gaping trade deficit and thereby offset some of the otherwise contractionary effects of the tighter credit conditions and lower equity values, even though a weaker dollar diminishes the well-being of consumers by lowering their purchasing power.

#### Economic outlook

With these developments in mind, let me review the economic situation. By the time of the October meeting, the data indicated that the economy had turned in a very strong performance in the second and third quarters. However, the fourth quarter is sizing up to show only very meager growth. The current weakness probably reflects some payback for the strength earlier this year in other words, just some quarter-to-quarter volatility due to business inventories and exports. But it may also reflect some impact of the financial turmoil on economic activity. If so, a more prolonged period of sluggishness in demand seems more likely. The timing of the slowdown certainly matches well with the financial turmoil explanation. Of course, much of the data that drove the third quarter strength cover the earlier part of that quarter, just the very beginnings of the turmoil in July and August, and therefore probably do not reflect its effects very much. However, the data for the end of the quarter—that is, for September—did come in on the soft side, and the data for the beginning of the fourth quarter in October have shown even more of a slowdown.

I'd like to go into this "story" in more detail. First, the ongoing strains in mortgage finance markets seem to have intensified an already steep downturn in housing. Indeed, forward-looking indicators of conditions in housing markets are pointing lower. Housing permits and sales are dropping, and inventories of unsold homes are at very high levels. Moreover, rising foreclosures will likely add to the supply of houses on the market. It's well known that foreclosures on subprime adjustablerate mortgages (ARMs) 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 ARMs. The bottom line is that housing construction will likely be quite weak well into next year before beginning to turn around.

Turning to house prices, many measures at the national level have fallen moderately, and the declines appear to be intensifying. Indeed, the ratio of house prices to rents, which is a kind of price-dividend ratio for housing, remains quite high by historical standards, suggesting that further price declines may be needed to bring housing markets into balance. This perspective is reinforced by futures markets for house prices, which indicate further—and even larger—declines in a number of metropolitan areas this year.

This weakness in house construction and prices is one of the factors that has led me to include a "rough patch" in my forecast for some time. More recently, however, the prospects for housing have actually worsened somewhat, as financial strains have intensified and housing demand appears to have fallen further.

Moreover, we face a risk that the problems in the housing market could spill over to personal consumption expenditures in a bigger way than has thus far been evident in the data. This is a significant risk since personal consumption accounts for about 70% of real GDP. These spillovers could occur through several channels. For example, with house prices falling, homeowners' total wealth declines, and that could lead to a pullback in spending. At the same time, the fall in house prices may constrain consumer spending by changing the value of mortgage equity; less equity, for example, reduces the quantity of funds available

for credit-constrained consumers to borrow through home equity loans or to withdraw through refinancing. Furthermore, in the new environment of higher rates and tighter terms on mortgages, we may see other negative impacts on consumer spending. The reduced availability of high loan-to-value ratio and piggyback loans may drive some would-be homeowners to pull back on consumption in order to save for a sizable down payment. In addition, credit-constrained consumers with adjustable-rate mortgages seem likely to curtail spending, as interest rates reset at higher levels and they find themselves with less disposable income.

Consumption spending was moderately above trend in the third quarter, and though I had built in some slowing for it in my October forecast, there are signs suggesting even more moderation over the next year or so. For example, although consumers will continue to receive support from gains in employment and personal income, they will also confront constraints because of the declines in the stock market and house prices, the tightening of lending terms at depository institutions, and higher energy prices.

Moreover, there are significant downside risks to this projection. Recent data on personal consumption expenditures and retail sales are not that encouraging. They have begun to show a significant deceleration—more than was expected—and consumer confidence has plummeted. Reinforcing these concerns, I have begun to hear a pattern of negative comments and stories from my business contacts, including members of our Head Office and Branch Boards of Directors. It is far too early to tell if we are in for a sustained period of sluggish growth in consumption spending, but recent developments do raise this possibility as a serious risk to the forecast.

Like consumer spending, foreign economic activity has been a source of strength for economic activity. Foreign real GDP—weighted by U.S. export shares—advanced at rates of 3¾ to 4% from 2004 through 2006 and by over 4% in the first two quarters of this year. With the tradeweighted dollar falling for some time, U.S. exports have done very well—real exports increased by an average of nearly 8% during 2004 through

2006. Partly for this reason, U.S. net exports, which consistently held growth down from 2000 to 2005, actually gave it a lift during 2006. I anticipate ongoing strength in net exports, but perhaps somewhat less than in recent years, since foreign activity may be somewhat weaker going forward. Some countries 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. For example, most Asian economies are now enjoying exceptionally buoyant conditions. But the U.S. and Asian economies are not decoupled, and a slowdown here is likely to produce ripple effects lowering growth there through trade linkages.

I don't want to give the impression that all of the available recent data have been weak or overemphasize the downside risks. There are some significant areas of strength. In particular, labor markets have been fairly robust in recent months. As I mentioned before, the growth of jobs is an important element in generating the expansion of personal income needed to support consumption spending, which is a key factor for the overall health of the economy. In addition, business investment in equipment and software also has been fairly strong, although here too, recent data suggest some deceleration. Despite the hike in borrowing costs for higher-risk corporate borrowers and the illiquidity in markets for collateralized loan obligations, it appears that financing for capital spending for most firms remains readily available on terms that have been little affected by the recent financial turmoil.

To sum up the story on the outlook for real GDP growth, my own view is that, under appropriate monetary policy, the economy is still likely to achieve a relatively smooth adjustment path, with real GDP growth gradually returning to its roughly 2½% trend over the next year or so, and the unemployment rate rising only very gradually to just above its 4¾% sustainable level. However, for the next few quarters, there are signs that growth may come in somewhat lower than I had previously thought likely. For example, some of the risks that I worried about in my earlier forecast have materialized—the turmoil in financial markets has not subsided as much as I had hoped, and some data on personal consumption have

come in weaker than expected. I continue to see the growth risks as skewed to the downside in part because increased perceptions of downside economic risk may induce greater caution by lenders, households, and firms.

Turning to inflation, signs of improvement in underlying inflationary pressures are evident in recent data. Over the past twelve months, the price index for the measure of consumer inflation on which the FOMC bases its forecasts—personal consumption expenditures excluding food and energy, or the core PCE price index—has increased by 1.9%. Just several months ago, the twelvemonth change was quite a bit higher, at nearly 2½%. It seems most likely that core PCE price inflation will edge down to around 13/4% over the next few years under appropriate policy and the gap between total and core PCE inflation will diminish substantially. Such an outcome is broadly consistent with my interpretation of the Fed's price stability mandate. This view is predicated on continued well-anchored inflation expectations. It also assumes the emergence of a slight amount of slack in the labor market, as well as the ebbing of the upward effects of movements in energy and commodity prices. However, we do still face some inflation risks, mainly due to faster increases in unit labor costs, the depreciation of the dollar, and the continuing upside surprises in energy prices. Moreover, labor markets have continued to surprise on the strong side. All of these factors will need to be watched carefully going forward.

#### Monetary policy

Now I'd like to turn to monetary policy. In September, the Committee reduced the federal funds rate target by 50 basis points, and in late October lowered the target by another 25 basis points. These actions reflected the Committee's concern that the financial shock had the potential to intensify the housing correction and thereby to restrain economic growth more generally. The steps were meant to help forestall some of the potential fallout to the economy from the disruptions in financial markets and to promote moderate growth over time.

In line with the forecast-based policy I've described, the Committee's decisions reflected a forwardlooking and preemptive approach. In particular, I supported putting a substantial easing in place so as not to fall "behind the curve." Given the long lags between policy actions and their impact on the economy, and the possibility that economic downturns can be difficult to reverse once they take hold, an approach that was more gradual and reactive than this would have created unnecessary economic risks.

Since the October FOMC meeting, financial conditions have deteriorated, and we have seen some unexpected softening in the economic data. These developments necessitate some rethinking of my growth forecast, and have highlighted the downside skew in the risks to that forecast. On the inflation front, I continue to expect core consumer prices to rise at a pace that is broadly consistent with price stability, although there are some notable upside risks that bear careful watching and consideration. Additional data bearing

on the outlook will become available before the FOMC's meeting next week, and this information must also be factored into an assessment of the economy's prospects.

I hope these remarks provide an indication of the issues that will be on my mind as I assess the appropriate approach to policy that will foster full employment while maintaining the success we have achieved on our price stability objective.

### Janet L. Yellen President and Chief Executive Officer

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