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Recent Financial Developments and the U.S. Economic Outlook

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 National Association for Business Economics in San Francisco, California, on September 10, 2007.*[1]

Good morning. It's my pleasure to welcome you to this beautiful city. I'm delighted that NABE chose to have its national meeting here, and I'm especially pleased to have been invited to speak to you today. As some of you may know, I occasionally use colorful language to describe the economy. Certainly, the events in financial markets over the past couple of months have generated their share of it. But I believe these are times when there is particularly great value in speaking deliberately, keeping a cool head, conducting careful analyses, and closely monitoring emerging developments. So those considerations will be reflected in the tenor of my remarks today. I would like to discuss recent events in financial markets, consider their impact on the prospects for the U.S. economy, and offer my perspective on recent Fed policy actions, both in its role in promoting stability in financial markets and in its role in the conduct of the nation's monetary policy. I want to emphasize at the outset that these remarks reflect my own personal views and not necessarily those of the Federal Open Market Committee.

Let me begin with the financial markets and review some of the recent developments I consider to be relevant in evaluating the prospects for the economy going forward. Beginning in mid-July, global financial markets became highly volatile and increasingly averse to risk. In the U.S., perhaps the most dramatic illustration of the ensuing flight to safety was the decline in the three-month Treasury bill rate, which dipped by almost 2 percentage points between mid-July and August 20th.

Dramatically wider yield spreads on credit default swaps, which provide insurance against default on the underlying securities, are further evidence of increased risk aversion in financial markets. Indeed, wider spreads are evident for a host of underlying instruments, from mortgages to corporate bonds, with lower-rated instruments seeing especially big increases in spreads. At the same time, options-based implied volatilities on a range of assets, from equities to foreign exchange, increased markedly, reflecting heightened uncertainty about the future. Since mid-August, Treasury bill rates have partially rebounded and credit default spreads have abated somewhat, but risk aversion remains notably high. This same turbulence has hit markets abroad, where risk spreads and implied volatilities are up, and there has been a significant flight to safety.

Of greater relevance to monetary policy are movements in the borrowing costs facing households and firms, since it is these interest rates that influence spending decisions and aggregate demand. On the corporate side, prime borrowers have experienced little change in their borrowing costs because higher spreads have been offset by lower Treasury rates. Issuers of low-grade corporate bonds with greater credit risk, in contrast, face sharply higher borrowing costs: spreads have widened so much that yields are up substantially since mid-July.

In the mortgage market, increased aversion to risk has been particularly apparent, with spreads above Treasuries increasing for mortgages of all types. Borrowing rates for low-risk conforming mortgages have actually decreased somewhat. But other mortgage rates have risen, including those available to some borrowers with high credit ratings. In particular, rates on jumbo mortgages, both fixed- and adjustable-rate, have risen noticeably since mid-July. Rates on home equity loans and lines of credit are also up, especially for those with high loan-to-value ratios.

Of course, subprime mortgages have become difficult to get at any rate. And that reflects another sign of the increased caution of market participants, specifically, sharply restricted credit terms and availability. In the mortgage market, lenders have tightened credit standards, making nonprime and jumbo mortgages available to fewer borrowers. For example, mortgage lenders report raising FICO scores and lowering allowable loan-to-value ratios in many mortgage loan programs, and many subprime programs have been shut down altogether.

[1] I would like to thank San Francisco Fed staff members John Judd and Judith Goff for excellent assistance in the preparation of these remarks.

Moreover, some markets have become downright illiquid; in other words, the markets themselves are not functioning efficiently, or may not be functioning much at all. This illiquidity has become an enormous problem for companies that specialize in originating mortgages and then bundling them to sell as securities. The markets for selling these securities have all but dried up, except for the lowest-risk, "conforming" agency mortgages that can be sold to Freddie Mac and Fannie Mae. And a market where many firms, including financial institutions, get short-term funding is illiquid as well, namely, the market for asset-backed commercial paper—short-term business loans that are secured by other assets, often mortgages. With liquidity problems in the markets in which many mortgage companies both sell assets and borrow, these firms have faced serious challenges, and a few have gone out of business.

Depository institutions also face some illiquidity, specifically in the funding markets for maturities in the one- to six-month range. Compounding their liquidity problems are concerns that mortgages and other assets that are normally securitized may come back onto their balance sheets and that customers may draw on unsecured credit lines.

To assess how financial conditions relevant to aggregate demand have changed, we must consider not only credit markets but also the markets for equity and foreign exchange. These markets have hardly been immune to recent financial turbulence, but the changes since mid-July, on balance, are less dramatic. Broad equity indices are down, but not sharply. And the dollar has changed little on a trade-weighted basis, as appreciations against the euro and pound—which may reflect safe-haven demands—have been offset by a big depreciation against the yen, probably reflecting a withdrawal from the so-called "carry trade" in which investors borrowed at low rates in Japan and lent at higher rates in the U.S.

As these financial events have unfolded, many explanations have emerged. I have little doubt that scholars will study and debate the causes for some time to come. So I will only offer some tentative thoughts on why all of this happened.

The ostensible trigger seems to have been concern about growing delinquencies on subprime mortgages. There are legitimate and serious concerns about the extent to which subprime delinquencies are traceable to predatory lending practices and a deterioration in underwriting standards over the last few years. However, some of these delinquencies arguably resulted from environmental changes—rising market interest rates, as the Fed removed accommodation in the stance of policy, and intensifying weakness in housing markets, which slowed or reversed the long-standing trend of significant house-price appreciation.

In this new environment, borrowers with variable-rate mortgages have started to see their rates reset much higher than they may have expected, and most borrowers have seen their home equity building up much more slowly than expected or even shrinking. Among these are some—many in the subprime category—who were barely able to make the original terms of their mortgages, in part because these loans incorporated features like "piggyback" loans to cover down payments, loans requiring low or no documentation, interest-only loans, and adjustable-rate loans with the option to make reduced payments for a time resulting in negative amortization. For many of these borrowers, particularly those who bought homes during 2005 and 2006, the environmental changes have been enough to push them to delinquency or default.

While the problems with subprime mortgages have understandably received a lot of attention, it is important to remember that the whole subprime market itself is only a relatively small part—10 to 15%, depending on the exact definition—of the overall mortgage market. How, then, could problems in this relatively small market infect so much of the financial sector, and possibly real economic activity? The answer appears to lie in the characteristics of some of the complex financial instruments that have been developed as a means to diversify and spread risk. These instruments include not only mortgage-backed securities, including subprime mortgages, but also CDOs—collateralized debt obligations that package bonds, including mortgage-backed securities—and CLOs—collateralized loan obligations that package business loans—and a variety of associated derivatives, such as credit default swaps and indices based on such swaps. These instruments are obviously very complex, which makes them difficult to understand and evaluate, not only for the average investor, but even for sophisticated investors. In particular, it is difficult to determine the risk embedded in these instruments and how to price them.

Investors have relied on a variety of means to assess their exposure to them—from high-powered mathematical models to agencies that assign ratings to them. But models are, at best, approximations, and, because these instruments are relatively new, there were not necessarily enough data available to estimate how they would do under the stress of a downturn in housing prices or economic activity. As for the rating agencies, once recent developments began to break, they quickly began announcing sharp downgrades, which intensified awareness of the uncertainty surrounding the risk characteristics of many of these instruments.

As delinquencies have risen in the subprime market, the complex instruments associated with those mortgages have come under question. Moreover, questions have arisen concerning the underwriting standards used by financial firms that received fees to originate and package mortgages for sale rather than holding them for their own account. In consequence, holders of these securities, many highly leveraged, have been forced to sell into illiquid markets, realizing prices that are substantially below their model-based estimates, or to sell liquid assets as an alternative. Significant losses have been realized in the process.

Once other investors saw how quickly and unpredictably such markets could cease to function well, those who used similar complex instruments likely grew concerned about how quickly and unpredictably their own exposures might change for the worse, leading them to pull back, too. One might say that these developments bring us back to Latin 101 and the root of the word "credit." The root is "credo," which means "I believe" or "I trust"—that is, investors' belief was shaken, both in the information they had on the degree of risk these instruments embodied and in the price they were going for, and they are pulling back from these markets, presumably until they understand these instruments well enough to restore that belief.

Even with corrections to credit underwriting standards, it still may turn out that these innovations don't actually spread risk as transparently or effectively as once thought, and this would mean—to some extent—a more or less permanent reduction of credit flowing to risky borrowers and long-lasting shifts in patterns of financial intermediation. It also could mean an increase in risk premiums throughout the economy that persists even after this turbulent period has passed. In a speech I gave a few months ago, I focused on the phenomenon of low risk premiums in interest rates throughout the world.[2] In fact, there was considerable debate about what might be causing the very low price for taking on risk. What we are seeing now could be the beginning of a return to more normal risk pricing. As such, this development would not be disturbing *for the long run*. However, as we are seeing, the transition from one regime to the other can be quite painful.

[2] Janet Yellen, "The State of the Global Economy." Presentation to a conference celebrating Professor Rachel McCulloch, Brandeis University, Waltham, Massachusetts, June 15, 2007. http://www.frbsf.org/news/speeches/2007/0615.html

The Fed has three main responsibilities that pertain to these developments: promoting financial stability to help financial markets function in an orderly way, supervising and regulating banks and bank holding companies to ensure the safety and soundness of the banking system, and conducting monetary policy to achieve its congressionally mandated goals of price stability and maximum sustainable output and employment. With regard to its responsibilities for financial market stability, the Fed recently lowered the discount rate by 50 basis points and encouraged banks to borrow at the discount window, emphasizing the broad range of collateral that is acceptable for such loans. Such collateral includes mortgage-backed securities and asset-backed commercial paper that have become illiquid.

As a supervisor and regulator of banks, the Fed has long focused on insuring that banks hold adequate capital and that they carefully monitor and manage risks. As a consequence, banks are well-positioned to weather the financial turmoil. The Fed is carefully monitoring the impact of recent financial developments on the banking system and on core institutions involved in the payments system. Importantly, the Fed's supervisory role has facilitated the collection of timely and reliable information on developments in banking and capital markets, and the insights gained through this process have been critical in shaping the Fed's response in recent weeks.

For the conduct of monetary policy, the main question is how recent financial developments and other economic factors affect the outlook for the U.S. economy and the risks to that outlook. The reason this is the main question is that monetary policy's unswerving focus should be on pursuing the Fed's mandated goals of price stability and full employment. Monetary policy should not be used to shield investors from losses. Indeed, investors who misjudged fundamentals or misassessed risks are certain to suffer losses even if policy is successful in keeping the economy on track.

With those principles in mind, let me briefly review recent economic developments. The U.S. economy turned in a fairly good performance in the first half of the year. Growth in the first quarter was weak, but it picked up to a robust pace in the second quarter. For the current quarter, payroll employment did not rise as expected, but instead actually fell slightly in August, in part due to a drop in construction jobs. However, recent data on manufacturing output and on orders and shipments for core capital goods have been upbeat, and business investment in equipment and software promises to be a bright spot. Despite the hike in borrowing costs for higher-risk corporate borrowers and the illiquidity in markets for CLOs, 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. Of course, the outlook for capital spending could worsen if business confidence were shaken by turbulence in global financial markets.

That said, financial market turmoil seems likely to intensify the downturn in housing. At the macro level, we would expect some effect on housing demand from the rate increases related to these markets, but the impact from rates alone would likely be modest. More important, in my view, are the effects stemming from disruptions to the availability of credit and the tightening of lending standards that are occurring. The illiquidity in many segments of the market for mortgage-backed securities seems likely to limit credit flows and therefore to have at least some negative effect on real residential construction, depending on how long the disruptions persist. A key point is that, even when liquidity in the mortgage-backed securities market improves, the risk spreads incorporated in mortgage rates will likely remain higher on a long-term basis than they have been in recent years, and this could prolong the adjustment in the housing sector.

Indeed, forward-looking indicators of conditions in housing markets were pointing lower even before the financial market turmoil began. Housing permits and sales were trending down. Inventories of unsold new homes remained at very high levels, and they will need to be worked off before construction can begin to rebound. Finally, most measures of house prices at the national level fell moderately. Notably, despite these declines, the ratio of house prices to rents—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 expect further declines in a number of metropolitan areas this year. The downturn in house prices would likely be intensified by a simultaneous decline in employment, should that occur, since significant job loss would weaken demand for housing and raise foreclosures.

Beyond the housing sector's direct impact on GDP growth, a significant issue is its impact on personal consumption expenditures, which have been the main engine of growth in recent years. The nature and extent of the linkages between housing and consumer spending, however, are a topic of debate among economists. Some believe that these linkages run mainly through total wealth, of which housing wealth is a part. Others argue that house prices affect 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. The key point is that, according to both theories, a drop in house prices is likely to restrain consumer spending to some extent, and this view is backed up by empirical research on the U.S. economy.

Indeed, 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.

Another engine of growth that could be a little weaker going forward due to the ongoing turmoil is foreign economic activity. Foreign real GDP—weighted by U.S. export shares—advanced at robust rates of 3¾ to 4% in 2004 and through the first quarter of this year. This growth was widespread, affecting nearly every continent. With the trade-weighted dollar falling over this same period, U.S. exports have been strong—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. Before the recent global financial turmoil, I had assumed a modest deceleration in world economic activity, which meant that net exports were likely to "turn neutral"—neither retarding nor stimulating growth in the year or so ahead. At this early stage of the financial turmoil, it's very difficult to gauge the likelihood of this "neutral" scenario, but it does seem safe to say that these developments add some downside risks to it.

To sum up the story on the outlook for aggregate demand, I see significant downward pressure based on recent data indicating further weakening in the housing sector and the tightening of financial markets. As I have indicated, a big issue is whether developments in the relatively small housing sector will spread to the large consumption sector, perhaps through declines in house prices. Should the decline in house prices occur in the context of rising unemployment, the risks could be significant.

While I do think that the present financial situation has added appreciably to the downside risks to economic activity, we should remember that conditions can change quickly for better or for worse—especially in financial markets—so it's hard right now to speak with a great deal of confidence about future economic developments. It's also important to maintain a sense of perspective: past experience does show that financial turbulence can be resolved more quickly than seems likely when we're in the middle of it. Moreover, the effects of these disruptions can turn out to be surprisingly small. A good example is the aftermath of the Russian debt default in 1998. Many forecasters predicted a sharp economic slowdown as a result; but instead, growth turned out to be robust.

Turning to inflation, signs of improvement in underlying inflationary pressures are evident in recent data. Over the past 12 months, the price index for personal consumption expenditures excluding food and energy, or the core PCE price index, has increased by 1.9%. Just several months ago, the 12-month change was quite a bit higher, at nearly 2½%. I anticipate that the core PCE price index will edge down slightly further over the next few years. This view is predicated on continued well-anchored inflation expectations. It also assumes the emergence of some slack in the labor market, as well as the ebbing of the upward effects of several special factors—including energy and commodity prices and owners' equivalent rent.

With that view of recent financial developments and the outlook for the U.S. economy, I'd like to turn to Fed policies. It's unusual for me to use the plural—policies—because I'm normally referring only to monetary policy in which the FOMC pursues its dual mandate for the overall economy of full employment and price stability.

However, this time around the Fed took a number of steps to help restore liquidity in the financial markets, some of which I have already mentioned. One step involved a sizable injection of reserves to prevent the federal funds rate from rising above its 5¼% target in the face of huge demands for short-term, liquid funds. In addition, on August 17 the Fed announced that the discount rate had been cut 50 basis points to narrow the spread with the target federal funds rate. The statement also indicated a change to the usual procedure, namely, to allow loans of up to 30 days, renewable by the borrower. Furthermore, the Fed made clear that asset-backed commercial paper, which had become highly illiquid, is acceptable as collateral for discount window borrowing. These efforts to encourage the use of the discount window were designed to promote the restoration of orderly conditions in financial markets by providing depositories with greater assurance about the cost and availability of funding. While helpful, these actions have not, however, served as a panacea.

On the same day, the Fed also issued a new statement on monetary policy, which said, and I quote: "although recent data suggest that the economy has continued to expand at a moderate pace, the Federal Open Market Committee judges that the downside risks to growth have increased appreciably." This assessment apparently is similar to that of market participants. Investors' perceptions of increased downside risks have resulted in a notable decline in the rates on federal funds futures contracts and their counterparts abroad. The statement emphasized that the Committee is prepared to act as needed to mitigate the adverse effects on the economy arising from the disruptions in financial markets.

In determining the appropriate course for monetary policy, we must recognize that most of the data available now reflect conditions before the disruptions began and, therefore, tell us less about the appropriate stance of policy than they normally would. In addition to data lags, appropriate policy decisions must also, I believe, entail consideration of the role of policy lags—that is, the lag between a policy action and its impact on the economy. Addressing these policy complications requires not only careful and vigilant monitoring of financial market developments, but also the formation of judgments about how these developments will affect employment, output, and inflation. In other words, I believe it is critical to take a forward-looking approach—gauging the effects of recent developments on the outlook, and, importantly, the risks to that outlook.

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