



The U.S. Economy and Financial Market Turmoil

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Introduction(1)

U.S. financial markets are currently facing severe challenges. Credit and money markets are under unusual stress. Uncertainty regarding the true value of complex assets associated with mortgages has led the volume of trade in some markets to approach zero. Collateralized lending has also become less attractive, as lenders have grown concerned that they may not be able to sell the collateral should the borrower default. The Federal Reserve has responded to these challenges in timely and innovative ways. Our actions have included traditional monetary policy moves, but we have also implemented new and unconventional tools. This innovation has intensified in response to market events over the past several weeks. Today I will discuss the near-term outlook for the economy and the challenges my Federal Reserve colleagues and I face as we strive to implement a policy that is designed to deliver low and stable inflation along with maximum sustainable employment.

In recent weeks, financial markets have experienced high levels of volatility that reflect magnified uncertainty about future U.S. economic performance. When markets are this volatile, I think it is unwise to guess the level of future economic activity, because the economy can take sudden turns in one direction or another. One way to cope with this uncertainty is to describe two possible paths for the economy. Along the first possible path, financial market

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"Rationally, let it be said in a whisper, experience is certainly worth more than theory."
Amerigo Vespucci

turmoil has a dampening effect on output and employment, but these effects are mild in comparison with periods of weakness experienced by the U.S. economy since the 1970s. I will call this the benchmark scenario. Along a second possible path, financial market turmoil causes severe dislocation, which sends the economy into a prolonged downturn that matches or exceeds previous recession experiences. I will call this the downside risk scenario.

The main challenge in the current environment is clearly to find ways to navigate through very substantial financial market turmoil and the associated uncertainties concerning real economic performance. Many of the initiatives undertaken to mitigate the effects of financial market unrest on the nonfinancial sectors of the economy are targeted efforts aimed at specific problems in financial markets. This is a distinct approach from the Fed's much blunter interest rate policy, which determines medium-term inflation. Overreliance on interest rate policy in this environment does little to solve the problems at hand and, in addition, may cause a new and difficult-to-solve inflation problem in the wake of the current turbulence.

Let me say before I continue that any views expressed here are my own and do not necessarily reflect the official views of other Federal Open Market Committee members.

Current Economic Developments

Second-quarter growth in real gross domestic product turned out to be much stronger than many observers predicted earlier this year. Yet, despite this heartening performance, it now appears that the economy may have slowed significantly in the third quarter. This slowing is associated not so much with financial market turmoil, but instead with the rapid run-up in energy and commodities prices during the spring and summer, along with increasing weakness in labor markets.

One of the most significant recent developments on the real side of the economy has been the steady slowing in the pace of spending by U.S. households. Economists pay close attention to consumer spending, since it comprises about three-quarters of expenditures on real GDP. After increasing by more than 3 percent per year from 2004 to 2006, the growth of real consumer spending began to taper off in the second quarter of last year. In the first half of 2008, consumer spending has increased at an annualized pace of about 1 percent.

The slowdown in consumption spending has occurred against the backdrop of the sharp increase in oil and other commodities prices that began last year. In response to record-high gasoline prices, consumers have changed their buying patterns. Sales of domestically manufactured cars and light trucks, in particular, are on pace to be their weakest since 1991. In addition, record-high gasoline

prices have caused consumers to switch from relatively high-priced, less-fuel-efficient light trucks and SUVs to relatively lower-priced, more-fuel-efficient passenger cars. The end result has been a decline in total expenditures on motor vehicles over the past year. Although the demand for durable goods such as cars and trucks is highly cyclical, it seems likely that higher gasoline prices can account for a large percentage of the recent declines in automotive sales. Recent dramatic reversals in oil prices may mitigate this effect going forward. West Texas Intermediate crude oil has been trading around \$80 in recent sessions, down from a peak of \$145 last July.

Recent developments in the labor markets will likely compound the slowing in real consumer spending over the second half of this year. In September, nonfarm payroll employment declined by 159,000. So far in 2008, the U.S. economy has shed 760,000 jobs. For comparison, nonfarm payroll employment declined by almost 1.8 million jobs, more than twice as much, during the nine months following March 2001, the last recession in the U.S. It remains to be seen whether job losses will accelerate during the remainder of the year and become more consistent with previous episodes. Job losses this year have been largest in the sectors comprising manufacturing, construction, transportation and utilities, as well as professional and business services.

One of the most startling statistics to come out of the August employment report was the unexpected rise in the unemployment rate. Over the past year, the unemployment rate has increased sharply—from 4.7 percent to 6.1 percent—mostly during the summer. The rise in unemployment is consistent with a cyclical slowing in GDP growth, as firms respond to weaker sales by scaling back their workforce. Initial claims for unemployment insurance have risen to levels not seen since the 2001 recession.

Beginning late last year, business capital spending on equipment and software weakened. In the second quarter of 2008, for example, real equipment and software expenditures declined at the fastest rate in five and a half years. For the most part, the bulk of this weakness was concentrated in the outlays for industrial and transportation equipment; business spending on information processing equipment and software has remained brisk. Thus, part of this slowdown is undoubtedly energy related.

One source of strength in the most recent GDP report was the robust export sector, which has been a key part of the economy's resilience in the face of declining employment. Net exports added close to three percentage points to GDP growth in the second quarter. Many forecasters expect this contribution to decline in the third quarter, in part due to less robust growth globally among major trading partners.

To be sure, the timing and extent of a strengthening in the economy will also largely depend on the recovery of the housing sector. Since the first quarter of 2006, the residential investment component of real GDP has subtracted, on average, almost a full percentage point from each quarter's real GDP growth. This has been a very significant drag, and; so, any stabilization in the housing sector should provide a sizable stimulus to overall growth, all else equal. Housing starts are currently at levels not seen since the recession troughs of 1981-82 and 1991, and those lows were on smaller population bases. To the extent that history is a guide, the current housing landscape suggests we are near a cyclical bottom in house construction. By the first half of 2009, homebuilders will probably have worked off the bulk of their excess inventories of unsold new homes, and, after three years, we will finally see an end to the drag from this sector.

The inventory of existing homes on the market, however, remains near record-high levels, and it seems likely that it will take longer to work off that inventory. Sales of previously sold single-family homes appear to have stabilized during 2008. It seems unlikely that existing home sales would have stabilized if buyers were still expecting steep price declines.

These developments broadly suggest an economy growing at less than the average rate over the postwar era. This is consistent with the baseline scenario I mentioned at the beginning of my remarks. But intensified financial market turmoil has raised the risk of the second scenario, one involving a protracted slump for the economy. Let me now turn to a discussion of recent events in financial markets

A Shakeout in Financial Markets

The decline in home prices has been most severe in parts of the West and in the Southeast—places where home prices had earlier posted the largest increases. Substantial macroeconomic effects from falling house prices may eventually filter through financial markets. A large number of financial institutions have had considerable holdings of mortgage-backed securities and related assets on their balance sheets. Total mortgage debt outstanding in the U.S. is about \$14.7 trillion, slightly larger than one year's GDP. The mortgage-backed and related securities had provided holders with a flow of income derived from the monthly mortgage payments of the underlying asset. The recent decline in house prices, along with a slowing economy, destabilized these assets by causing many homeowners to default or walk away from their homes—especially those with nontraditional mortgages. The value of these mortgage-backed and related securities has since eroded and thus reduced the net wealth of those investors and institutions that held them. Because these securities are so opaque, many financial market participants have

questioned the valuations of these securities, and trading volume has fallen off dramatically.

The resulting illiquidity of mortgage-backed securities and related financial instruments has caused severe stress for the U.S. financial system over the past year. Many financial firms simply did not manage risk exposure on these securities well and, as a result, have struggled with losses and write-downs. A financial sector shakeout has ensued, one which was entirely appropriate considering the magnitude of the mismanagement involved. As is normal during an industry shakeout, weaker firms are forced into bankruptcy or merge with stronger partners, and opportunity abounds for those firms that are able to survive and build market share in the post-shakeout industry structure.

The Federal Reserve has responded aggressively in an attempt to mitigate the effects of the shakeout on the rest of the economy. The key concern has been that if important financial market players are failing, the failure should occur in an orderly way with the lowest level of market disruption. In the banking sector, there are well-established procedures for resolving a failed institution in an orderly way. It is very important to recognize that in the non-bank financial sector there are no such procedures. This has kept the Fed improvising, especially during the past seven months.

The Bear Stearns episode provided the first case of a large-scale failure. The novelty of a large investment-bank failure suggested that a Bear Stearns bankruptcy was largely unexpected within financial markets and therefore likely to cause significant market disruption. In that case, the Fed helped arrange a merger with JPMorgan Chase as the stock price of Bear Stearns was declining toward zero.

During the summer, mortgage giants Fannie Mae and Freddie Mac experienced increasing stress in the face of mounting losses and a rapidly declining equity price, which eventually led to an aggressive policy change. Placing these entities into conservatorship was largely a Treasury action in conjunction with the primary regulator, the Federal Housing Finance Agency (FHFA), with only a consultative role for the Federal Reserve. The GSEs were previously implicitly backed by the U.S. government, and the recent action makes that backing completely explicit. The GSE conservatorship removes a key uncertainty from the scene and should help to stabilize markets going forward.

In September, the investment bank Lehman Brothers appeared to be in a position similar to Bear Stearns. The Lehman Brothers situation had been evolving for a year, and at this point, market players had already seen the demise of an investment bank. In this case, counterparties had plenty of time to assess the potential for Lehman to fail. As a consequence, financial market participants were much less likely to have been surprised, and significant

market disruption was judged less probable. In addition, the Fed had implemented additional liquidity facilities in the wake of Bear Stearns in an attempt to mitigate adverse consequences from future failures. Lehman filed for bankruptcy. Since then, important pieces of the company have been sold to Barclays Capital.

One difficulty in dealing with a crisis is the element of surprise. Just as the events surrounding Lehman were coming to a head, solvency problems at insurer American International Group, with \$1.1 trillion in assets, became acute. In the U.S., insurers are regulated on a state-by-state basis with no federal-level regulator. While AIG's stock price had been declining for some time, its demise was rapid and unanticipated. A bankruptcy filing in the immediate aftermath of Lehman was judged likely to cause significant market disruption. The AIG board of directors agreed to a Fed bridge loan secured by the assets of the firm. The terms included the ouster of the CEO and an interest rate set at Libor plus 850 basis points.

It is important to stress that the Federal Reserve's intent in each of these cases has not been to save these firms but to orchestrate an orderly transition for financial markets as these firms exit the scene in their current form. Bear Stearns, Lehman and AIG are all radically changed entities. Stronger existing firms will be the winners as the shakeout proceeds. In a related development, investment bank Merrill Lynch agreed to sell itself to Bank of America. The two remaining large U.S. investment banks, Goldman Sachs and Morgan Stanley, have changed their charters to become bank holding companies. These events have left the U.S. with no large investment banks.

Again, because of the lack of a regime for the orderly resolution of failed institutions in the non-bank financial sector, the Fed was forced to improvise in the Bear Stearns, Lehman and AIG episodes. These improvised actions have had mixed success. In the Bear Stearns episode, there was significant, but manageable, turmoil in the aftermath of the merger announcement. In the Lehman-AIG episode, there was significant turmoil, which has spread globally to seemingly unrelated markets. Part of this was attributable to the largely unexpected nature of the AIG bankruptcy threat within 48 hours of Lehman's bankruptcy filing. Last week, world equity markets declined precipitously in response to the problems in U.S. financial markets.

The continuing turmoil prompted Treasury Secretary Paulson to approach Congress concerning a more systematic method of handling the shakeout in the financial sector. As has been widely discussed, the Congress recently passed, and the president signed, the Emergency Economic Stabilization Act. The original intent of the legislation was to create a market for the illiquid asset-backed securities and related instruments that are at the heart of the present situation. Currently, these assets

have very low prices, the so-called fire sale price, because there are many firms that would like to sell their holdings and there are few buyers in the current climate. But these securities also have a hold-to-maturity price that reflects the likely value of the stream of revenue for a patient investor who is willing to simply hold the asset for a period of time. Under the proposal, the government would play the role of the patient investor, buying the securities at auction and holding them or selling them at a future moment when financial market stress has receded. In principle, this idea could be executed at no ultimate cost to the taxpayer, although taxpayer money would be put at risk. An important part of the concept is that taxpayer money would be used to purchase assets, which would then be sold in the future, recouping most or all of the initial outlay. While there are many challenges ahead for this program, if successfully implemented it will probably go a long way toward liquefying illiquid asset-backed securities markets and so would help make progress toward an orderly financial market consolidation. This in turn would reduce or eliminate the downside risk to economic performance.

A drawback of the auction approach to buying troubled assets is that it will take some time to design effective auctions in order to get accurate pricing in the marketplace. As the legislation was being passed and signed by the president, banks and other financial institutions in Europe began to experience acute problems similar to their U.S. counterparts. The subsequent global sell-off in equity markets suggested that governments would need to take action with more immediate impact to restore confidence in the markets.

One place to look for a model for handling financial crises of this magnitude is the Nordic countries during the early 1990s. For a recent summary, see the speech by my friend and colleague Seppo Honkapohja, a governor at the Bank of Finland⁽²⁾. These countries were hit by severe financial turmoil and sharp recessions, in part associated with currency crises, in the early 1990s. The general response was for the governments to take equity positions in banks and to manage the resulting consolidation in the industry. As Honkapohja documents, the ultimate expense to the taxpayers in these countries was much less than the initial outlay of government funds. Most observers regard the government intervention in these cases as a success.

It is far from clear how financial market turmoil of this magnitude will ultimately affect the real economy. Unchecked, the turmoil could have severe negative consequences. However, the idea is not to leave the turmoil unchecked. The recent legislation along with many other initiatives of the Federal Reserve and the Treasury, in conjunction with governments around the world, are intended to return financial markets to more normal functioning over time. To the extent that this effort succeeds, the ultimate effect of the turmoil could be

muted. In addition, much of the uncertainty surrounding the most vulnerable players in this saga has already been resolved—in particular, no large investment banks remain on the scene and the GSEs have been placed into conservatorship. Turmoil is still significant, to be sure, but some of the largest uncertainties have been addressed.

One way to look at the possible effects of financial market turmoil is to consider recent experience in the U.S. and abroad. By recent experience I mean the last 25 years, during which the economic experience around the world has been more comparable to the current U.S. situation. Analogies to the Great Depression are badly strained as the U.S. economy was very different at that time. For instance, there were no bank failures in the U.S. until 1931, after real output had already fallen 30 percent. In contrast, in the current situation real output has yet to fall while the banking and financial sectors are already under considerable stress. So, the order of events is dramatically reversed. In addition, during the onset of the Great Depression, most major economies were on the gold standard, which limited the policy response. Friedman and Schwartz argued that the Federal Reserve allowed the money supply to decline from 1929 to 1933, significantly exacerbating what otherwise would have been a mild recession. This cannot be said for the current setting, as the current Federal Reserve could hardly be viewed as inactive during the past 15 months. Also, during the early 1930s, the U.S. Congress passed the protectionist Smoot-Hawley legislation, which caused significant deterioration of global trade. For all these reasons, and probably many more, the 1930s is not the right comparison point for the current situation.

Instead, the leading modern example for large economies is Japan. The Japanese economy is technologically and financially very sophisticated, not unlike the U.S. The Japanese stock and real estate markets peaked around 1990, and the subsequent decline caused severe problems for Japanese banks. The policy response to the banking crisis has generally been judged ineffective, and the real economy in Japan was plagued by a decade or more of sub par performance. This seems to be the primary risk for the U.S. going forward.

Other modern examples include the countries most closely involved in the Asian currency crisis of 1997 and 1998. Many countries suffered through severe recessions during that episode. So, between the Japanese experience since 1990, the Nordic countries' financial crises of the early 90s and the Asian currency crisis, there is considerable recent precedent for very negative macroeconomic performance associated with financial market turmoil. Certainly, this is not an exhaustive list, but other examples often involve countries with more specialized problems.

In the modern U.S. experience, we have been more fortunate so far. The 1987 stock market crash—when the Dow fell 22 percent on a single day—has often been mentioned in conjunction with recent events. However, real GDP growth was actually strong during the second half of 1987: Third quarter growth was 3.7 percent, and fourth quarter growth was 7.2 percent. At the time, many suggested that the U.S. was in or would immediately go into recession due to financial market disruption. It did not happen, which provides an object lesson about how difficult it can be to really understand what is driving short-term dynamics in the economy. Similarly, the collapse of Long-Term Capital Management occurred in the second half of 1998, the culmination of a year of turmoil in global financial markets. But U.S. real GDP growth in the second half of 1998 averaged about 5.5 percent. To be sure, there were important policy responses in both 1987 and 1998. Still, combined with an adequate policy response, these were episodes of turmoil that did not have a clear impact on real economic performance.

All of these events offer clues but also differ in important ways from the current episode. We do not know what will happen this time around, and we should be humble in our predictions. Part of the answer depends on how successful the current policy initiatives will be. Still, these examples suggest that there is substantial downside risk. There is some possibility that the turmoil will be mitigated in part on its own and in part because of successful policy, ultimately leading to a relatively benign outcome, where the financial market shakeout unfolds and real economic performance is muted but not disastrous. But there is also some possibility of a very adverse outcome, perhaps similar to Japan's, in which policy initiatives do not work well, the turmoil is exacerbated and the entire economy is drawn into a protracted downturn.

Conclusions

In summary, the U.S. economy by the numbers looks like it is slowing. Many of the most recent events have injected tremendous uncertainty into the national outlook, but we have few hard numbers at this point that directly indicate the effect of that uncertainty. If financial market turmoil can be contained, possibly through aggressive government policy, then a relatively benign outcome is possible in which U.S. economic performance is sluggish but does not involve a protracted downturn.

During the last 15 months, the Fed has been forced to improvise in response to evolving financial market conditions. This is in part because there is no clear method for handling large failing firms in the non-bank financial sector. By contrast, the methodology for closing failed banks and thrifts is well established and indeed served the nation well during the S&L crisis of the late 1980s and early 1990s. The improvised actions have had mixed success,

with manageable volatility following Bear Stearns but substantially higher volatility later, especially on the heels of the near-bankruptcy of insurer AIG. The recent Emergency Economic Stabilization Act was intended in part to provide the tools to enable a more systematic response to financial market turmoil. One way to use these tools is to follow the example of the Nordic countries' response to financial market turmoil during the early 1990s. In considering the nature of the downside risks we face, the most reasonable comparison point may be the experience in Japan since 1990. A well-executed government intervention can avoid the problems that Japan faced and help to stabilize the financial sector along with the U.S. economy.

Footnotes

1. Portions of this speech were delivered as: "[Near-Term Challenges for the U.S. Economy](#)," in Murfreesboro, Tenn., on Sept. 26, 2008.
2. "The 1990's Financial Crises in Nordic Countries," Philadelphia 28 September 2008. The Global Interdependence Center.

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