We gather during economically trying times, both in the United States and increasingly around the globe. In my remarks this morning, I would like to discuss the factors I see affecting the outlook for the U.S. economy and monetary policy. As always, I speak only for myself, and not for my Federal Reserve System colleagues.1

Financial market conditions loom large in any discussion of the economy these days. The heart of the problem, of course, is the home mortgages made from late 2005 through early 2007, near the end of long U.S. housing boom that began in 1995. Since the peak in activity in 2005, housing investment has fallen by more than 40 percent. Average housing prices, as measured by the FHFA repeat sales index, have fallen 6.5 percent since their peak in April 2007. Some markets have experienced more dramatic declines; the home price index for California fell 18 percent, for example. The resulting erosion in home equity for many borrowers has meant that mortgages made near the peak of the boom, especially the subprime and non-traditional categories, are experiencing much larger losses than expected.

It will take years of research to untangle the quantitative contribution of various causal factors to the rise in subprime mortgage lending and the increase in subprime losses, so I won’t attempt such an analysis here. But the list of plausible suspects is clear. First, technological innovation in retail credit delivery allowed lenders to make finer distinctions between borrowers and profitably expand lending to borrowers formerly unworthy of credit. As in any industry in the midst of undergoing innovation, such as credit cards in the 1990s for example, natural evolution can involve overshooting and retrenchment. Related, subprime lending with high loan-to-value ratios was profitable while home prices were rapidly rising, but profitability fell sharply when price trends reversed. Lenders who found past subprime mortgage lending profitable in 2004, 2005 and 2006, may have underestimated the probability of a broad and sustained decline in home prices and how that would affect their lending returns.

Second, the regulatory and supervisory framework surrounding U.S. housing finance may have been insufficiently prepared for the possibility of an adverse housing demand shift of the magnitude and geographic extent that we have seen. Private sector incentives to foresee and protect against such shocks was to some extent dampened by the presence of the federal financial safety net, including the inferred prospect of support for Fannie Mae and Freddie Mac. Official policies aimed at increasing home-ownership also provided at least some positive inducement to risk-taking in housing finance. In addition, the
unscrupulous and fraudulent practices of some mortgage brokers outside of the banking sector may have contributed to the problem.

Third, monetary policy kept interest rates relatively low after the recession earlier this decade. Some economists have argued, with the benefit of hindsight, that tighter monetary policy during that period would have led to better outcomes by preventing core inflation from rising, which would have had the auxiliary effect of limiting the housing boom and thus mitigating the subsequent bust. While I find this view plausible, again, further research will be required to substantiate this hypothesis.

Although this episode will, as I said, inspire a great deal of research in the years ahead, some lessons have emerged already and have motivated corrective action, both by market participants and policymakers. The appetite of banks and investors for nontraditional and subprime mortgages and for the services of independent mortgage brokers has been substantially reduced, and many mortgage companies have gone out of business. Banks and mortgage originators have tightened home mortgage underwriting standards significantly, reflecting both revised assessments of the profitability of more innovative lending approaches and a generally weakening economic outlook. Financial market investors holding complex mortgage-related securitizations have been suitably chastened. The Federal Reserve has tightened standards over unfair and deceptive mortgage lending practices. Supervisory staff have intensified their scrutiny of risk management practices related to structured finance and off-balance-sheet activities, and have worked to strengthen institutions’ capital and liquidity planning. And the U.S. banking agencies have worked together with nonprofits and mortgage servicers to prevent unnecessary foreclosures.

That’s all prologue, however, to the turmoil that has plagued financial markets since the middle of last year, when the potential scale of the home mortgage problem became more widely appreciated. The turmoil intensified the week of September 15, and volatility has been elevated since. Financial market participants have faced three major categories of uncertainty. The first concerns the aggregate amount of losses on mortgage lending. For a given mortgage cohort, it typically takes four years or longer to realize a substantial portion of their ultimate cumulative losses. For mortgages made in 2006 and early 2007, we are, at most, two years into that process, and thus significant uncertainty remains regarding total losses on those vintages.

Second, financial market participants face uncertainty about where the losses will turn up. Mortgage risks were split up and spread widely, both within the United States and in Europe, through securitization and use of the insurance capabilities provided by credit derivative contracts. Moreover, the performance of different mortgage pools can depend critically on subtle differences in the practices of the originating institution and the servicer. As a result, assessing the value of any given mortgage portfolio is a costly enterprise right now. Financial market participants are thus understandably apprehensive about whether a particular counterparty’s mortgage-related losses will erode their capital buffer enough to threaten their viability. This has led to elevated risk premia in interbank credit markets for institutions with at least some presumed mortgage-related exposure.
These premia appear to vary significantly across institutions, however, suggesting a fair amount of public knowledge of institutions’ relative exposures and capital positions.

Third, market participants have at times faced uncertainty about prospective public sector intervention. The disparate responses to potential failures at several high-profile organizations this year may have made it difficult for market participants to forecast whether and in what form official support would be forthcoming for a given counterparty. Shifts in expectations regarding official intervention may have added volatility to financial asset markets that already were roiled by an increasingly uncertain growth outlook.

The striking feature of central bank lending during the recent turmoil is the extent to which it has extended well beyond the boundaries that previously were understood to constrain such lending, both in the range of institutions and the contractual terms on which credit has been provided. Intervention has been driven by a desire to prevent damaging disruptions to financial markets, and thus reduce the overall costs of the turmoil. While this objective is clearly understandable, central bank lending can create the expectation that similar support will be forthcoming when market disruptions occur in the future. Such expectations can themselves be very costly, because they can distort the incentives faced by, and as a result, the choices made by private-sector participants.

The critical policy question of our time is where to establish the boundaries around the public sector safety net provided to financial market participants, now that the old boundaries are gone. In doing so, the prime directive should be that the extent of regulatory and supervisory oversight should be commensurate with the extent of access to central bank credit in order to contain moral hazard effectively. The dramatic recent expansion in Federal Reserve lending, and government support more broadly, has extended public sector support beyond existing supervisory reach, and thus could destabilize the financial system, absent corrective action. Restoring consistency between the scope of government support and the scope of government supervision is essential to a healthy and sustainable financial system. One option is simply to adapt our regulatory and supervisory regime to the new wider implied reach of government lending support. This strikes me as an unattractive option, if for no other reason than the current uncertainty about the outer bounds of that support. Constraining moral hazard in such a regime would be an immense and daunting task. I take it as given, therefore, that the scope of financial safety net ultimately must be rolled back.

Assessing the effects of financial market turmoil on real economic spending is not as straightforward as it might seem. One popular notion is that the credit market disruptions we’ve seen over the last year or so impede the financial sector’s ability and willingness to extend credit to households and business firms, thereby creating an additional drag on spending. The widely observed correlations between economic activity and measures of bank credit extension lend support to this theory. But causation can flow in the opposite direction as well. When overall economic activity seems poised to contract, the outlook for household income and business revenues deteriorates as well, and such borrowers become less creditworthy, all else constant. My reading of the history of U.S. business
cycles is that the direct effect of credit markets on real activity – the so-called “credit channel” – accounts for only a small part of the variation in output over the typical cycle. And my reading of current conditions is that bank lending is constrained more now by the supply of creditworthy borrowers than by the supply of bank capital.

The decline in U.S. housing activity since early 2006 has affected not only credit markets – it has had a significant impact on broader economic activity as well. Residential fixed investment subtracted nearly a percentage point from GDP growth in 2006 and 2007. For a time, the weakness was isolated in the housing market, as the rest of the economy continued to expand at a relatively healthy rate. But late last year, consumer spending began to slow. Household net worth has declined as home prices have fallen virtually nationwide over the last year-and-a-half, and, more recently, equity prices have slumped. Increases in energy prices up through the middle of this year took a substantial bite out of real incomes. Moreover, payroll employment peaked last December, and has since shed 1.2 million jobs. As the labor market has weakened, wage growth has tapered off a bit. Except for the temporary bulge due to the stimulus payments earlier this year, real personal income has steadily decelerated, and is now below where it was a year ago. Given this catalog of adverse developments for U.S. households, it should be no surprise that consumer spending was sluggish in the first half of the year and has fallen significantly in recent months.

This adjustment in consumer behavior has been most pronounced in the auto market. One expects slowing real income growth to lead many households to postpone large durable good commitments, but on top of that, the oil price shock led consumers to shun less fuel-efficient vehicles. As a result, light truck sales have been particularly hard hit, falling 40 percent this year. The recent tumble in oil prices is bringing retail gasoline prices down rapidly, however, and normally one might expect this to reverse the shift toward vehicles with lower fuel consumption. But the heightened volatility in energy prices and the adverse near-term outlook for household income may be making buyers quite cautious right now. And, as if that weren’t enough, the adverse economic environment has made lenders less willing to supply credit to auto dealers and consumers on the same terms as before.

Because households tend to base their consumption plans on their income prospects, any improvement in consumer spending growth likely will depend on a shift to a more optimistic assessment of those prospects. Once households are convinced that an end to the deterioration in labor market conditions and the fall in equity and home prices is in view, however, consumer spending growth will be based on improving longer-run income prospects and is likely to pickup substantially. It’s too soon to tell just when that shift will occur, however.

The evolution of housing market conditions also will be critical to the resolution of uncertainty in financial markets. Housing starts have fallen by two-thirds since 2006 and are now running below the rate needed to keep up with population growth. Thus, from here the market is capable of coming into balance over time even without a significant further decline in starts. And my sense is that we are beginning to see indications that the
drag from housing may lessen some time next year. Existing home sales have risen, on balance, over the last two months, and the inventory of unsold new homes has fallen 31 percent since its peak in mid-2006. I should emphasize that such signs are as yet quite tentative; inventories of unsold, vacant homes are still large in many areas of the country, and, as a result, average home prices still are declining at a steady pace. Having said that, I find it hard to believe new home construction has too much farther to fall. That would imply that residential investment will be falling on a much more gentle trajectory next year and thus will exert less of a drag on GDP.

Another major question for the economic outlook is business capital investment. Business spending on equipment and software fell at an annual rate of 2-3/4 percent in the first half of 2008, and the near-term outlook is not favorable. Many firms are facing dimmer sales prospects, higher funding costs, and more restrictive borrowing terms. Enterprises that are reducing their labor inputs are likely to want to reduce their capital inputs as well. Thus, further softening in this segment of business investment appears quite likely.

The other segment of business fixed investment, spending on new structures, has been booming recently. In 2007 and the first half of 2008, real nonresidential fixed investment grew at a 14 percent annual rate. That category seems to have topped out over the summer, and is certain to decline in coming months. These structures often take a long time to build, and many projects that were boosting spending early this year were initiated well before the turmoil in financial markets began last year. The flow of new projects has diminished considerably, however, and it is clear that nonresidential investment will slow considerably over the next year, with only the magnitude of slowing remaining uncertain.

Foreign trade has been an important contributor to U.S. growth recently. Net exports added over a half percentage point to real GDP growth last year, and 1.8 percentage points for the first half of 2008. Unfortunately, the trade contribution to U.S. growth is likely to decline in the near term in response to diminishing world growth prospects and the recent strength in the dollar. Accordingly, we can’t count on the foreign sector to offset weak domestic demand for goods and services.

Looking ahead, many analysts expect the U.S. economy to regain positive momentum sometime in 2009. That strikes me as a reasonable expectation, for several reasons. First, monetary policy is now quite stimulative. The federal funds target rate is 1 percent, below the expected rate of inflation. Second, the major shocks that dampened economic activity this past year have subsided already or are in the process of doing so. Energy prices, thankfully, have reversed most of the earlier run-up; that will free up a portion of consumer budgets for spending on other goods and services. And as I’ve mentioned, the drag from housing seems likely to lessen in the next year, and in fact, I would be surprised if we don’t see a bottom in housing construction around the middle of 2009. This is the third straight year, however, that I’ve been expecting a bottom in the housing market in the middle of next year, so my outlook is tempered by more than the usual amount of humility.
While the downturn in real economic activity is going to pose challenges for monetary policy in the period ahead, it’s essential that we not let inflation drift from view. In 2006, the price index for personal consumption expenditure (in short, the PCE price index) rose an unwelcome 2.3 percent, above the 1.5 percent rate I would like to see over time. Last year inflation was much worse, with the PCE price index rising 3.5 percent. And so far this year, that index has risen at a 4.0 percent annual rate. Much of that acceleration reflects energy prices, and with oil prices down it would be reasonable to expect overall inflation to subside with a lag. And indeed we have seen more contained inflation numbers for August, September and October.

Many economists are forecasting a decline in core inflation as well in the months ahead, on the grounds that widening economic slack is generally associated with declining price pressures. While this correlation is detectable in many datasets, I would be cautious about relying on it as a causal relationship. In particular, this relationship can shift over time as expectations about the conduct of monetary policy evolve. Those expectations will be influenced importantly by the measure of monetary stimulus provided during the downturn and how long that stimulus remains in place. It may seem premature to be worrying about how inflation behaves after the recession is over, but we need to be sure our policy remains consistent with a strategy that does not allow inflation to ratchet up over the business cycle. As the recovery begins, the path of least resistance is often to hold the policy rate at a low level until it is completely clear that recuperation is complete. The risk associated with that path is that inflation may not moderate obediently during the downturn, and may firm with the ensuing recovery. It is crucial that we not allow expectations of future inflation to creep higher during this recession.

As I said at the outset, these are not the best of economic times. We have weathered economic downturns before, however, both nationally and globally. And there is no sign that the fundamental creative process that drives innovation and improves well-being over time has been mortally wounded. What sets this episode apart is the nature of the turmoil plaguing the financial sector, and the array of unprecedented government lending programs. While navigating the slowdown in real economic growth is a challenge, the larger and more significant challenge will be to re-establish the boundaries around central bank lending and public sector support and accordingly reconstruct the relationship between the public sector and financial markets. How well this challenge is met will determine the extent to which innovation, despite the associated volatility, will continue to contribute to the effectiveness of our financial system and to overall economic growth.

1 I am grateful to Roy Webb and John Weinberg for assistance in preparing this address. This is an updated version of a speech I gave in Jerusalem, Israel, on November 3, 2008.