Thank you for giving me the opportunity to speak to you today. The craft and the discipline of the business economist have long had a special place in the Federal Reserve System. And I am pleased to have the chance to meet with this distinguished group in the profession.

My remarks are my personal views and do not attempt to represent the views of the FOMC.

The U.S. economy has entered its 17th quarter of economic expansion. As has been the case throughout history, this expansion has features that distinguish it from past expansions, and I’ll begin my talk today with a review of some of these features.

Growth in real GDP has been remarkably stable over the past two years, even when compared with the moderation in growth that has occurred over the previous two decades relative to the earlier part of the post-war period. These steady growth rates have hovered in the vicinity of 3.5 percent, which is close to most estimates of the rate of potential growth in the U.S. The robustness of growth is a testament to the resiliency and flexibility of the U.S. economy in responding to adverse shocks.

A key feature of this expansion is the continued strength in productivity growth. The 3.7 percent annual rate of productivity growth the U.S. economy has averaged since the end of 2002 is well above most estimates of the underlying or structural rate of growth in productivity, which tend to be between 2.5 and 2.75 percent, estimates themselves that are much higher than those of a decade earlier and reflect the outstanding productivity performance of the U.S. economy in the last 10 years. Much of the source of the recent productivity growth seems to be in multi factor or total factor productivity—in other words, in increases in the efficiency of business processes and the use of technology.

These developments in productivity growth are important, of course, because of their potentially favorable implications for inflation dynamics and for future income growth.

Overall inflation has risen over the past two years, pushed up primarily by higher prices for energy and other commodities and industrial inputs. Inflation excluding food and energy, however, has been quite moderate, in part due to very modest growth in unit labor costs. Survey based measures of consumer inflation expectations at longer horizons have remained stable despite the large increases in energy prices, though some of them remain slightly above the 1.5 to 2.5 range for the CPI index that some have cited as a reasonable definition of price stability in the United States.

These favorable developments in fundamentals have been accompanied by important developments in financial markets.

Expectations of future inflation have fallen, and there appears to be confidence in continued stable, low inflation. Credit spreads and measures of future volatility derived from financial market data have fallen, suggesting that investors and savers expect the greater realized stability in growth is likely to endure. Real interest rates at longer horizons have remained relatively low, reflecting at least in part that the global supply of savings has increased relative to demand for investment. A range of different asset prices has risen significantly, and the expected volatility of many asset prices has fallen.

These developments in market prices have occurred in the context of important changes in financial intermediation, including the substantial expansion of access to consumer credit and capacity for homeowners to borrow against the equity in their homes, the greater use of financial instruments for transferring and mitigating risk, and the growth of financial flows between countries. And in this context, balance sheets have continued their impressive growth, with assets and liabilities of both households and of economies as a whole growing faster than income.

These broad trends are obviously related. Less overall concern about inflation and real risk, the positive outlook for productivity growth, and the increasing depth and sophistication of financial markets, all might be expected to induce an increase in the scale of gross liabilities and assets relative to income, for leverage and net borrowing to increase relative to income.

While policymakers can witness the movements in key financial market variables, it is difficult to say for sure what their implications are for economic fundamentals, that is, for inflation and output. And even if we had more confidence in the forces behind past movements in asset values, we would still face substantial uncertainty about their future behavior. The relatively low
incidence of large or sustained deviations of asset values from what might turn out to be their fundamental values, what some call inflation. Financial asset prices, by their nature, allocate resources between the present and the future and thereby affect aggregate supply and impact the inflation outlook. Movements in asset prices certainly have the potential to be one of those factors, and are confident in what that move means for the outlook, it should be prepared to adjust policy accordingly. First, in circumstances where the central bank observes a large realized movement in asset prices and is confident in its knowledge of the impact of those moves on the path of aggregate demand, monetary policy may need to follow a different path than might have seemed appropriate in the absence of those developments. In other words, when policymakers have already witnessed a significant move in asset values, and are confident in what that move means for the outlook, it should be prepared to adjust policy accordingly. Note that in order for this seemingly straightforward proposition to apply the central bank must be responding to its assessment of what an already observed movement in asset prices will mean for output and inflation.

Of course central banks must always be prepared to respond when factors threaten to push aggregate demand away from aggregate supply and impact the inflation outlook. Movements in asset prices certainly have the potential to be one of those factors, and the implications of this approach apply in both directions. In other words, central banks have to be prepared to adjust policy when past asset price increases could be a significant factor putting upward pressure on aggregate demand, as well as when past declines threaten to reduce output relative to potential.
Although the potential case for adjusting policy applies in both directions, the implications for policy may differ. Because some asset prices may fall more abruptly than they rise, and because the effects of downward moves in asset prices on demand may be larger due to the greater negative impact of deflation on the net worth of borrowers—witness the United States in the 1930s or Japan in the 1990s, the case for adjusting monetary policy in response to negative asset price shocks is commonly considered more compelling than in the alternative context. But this does not mean that monetary policy should generally ignore the effects of increases and only respond to observed declines in asset prices. The test should be the size and circumstances of the asset price moves and their impact on the forecast relative to the central banks' objectives, not the direction of the asset price move.

Different considerations apply in the circumstances where the central bank is considering how a potential future move in asset prices may affect the forecast. These circumstances call for even greater caution and care. Here is it very important that the forecasts central banks consider in making monetary policy decisions are explicit about assumptions for future asset price movements, the uncertainty that surrounds them, the sensitivity of the forecast to alternative assumptions, and the costs and consequences of alternative paths for monetary policy. Even in circumstances where asset prices may appear to have moved away from fundamentals, and it seems reasonable to consider the implications of some deceleration in the pace of future increase or some decline, central banks need to be very cautious about adjusting policy in anticipation of that event, much less directing policy at inducing it. The substantial uncertainty about the path of asset price movements going forward necessarily reduces the case for altering policy in advance of the move.

Consider the case in which it seems prudent for the central bank to incorporate an assumption for a significant move in the rate of change in future asset prices into its forecasts for output and inflation. If the central bank's assumption is that asset prices are likely to fall over the forecast horizon, perhaps in the wake of a sustained rise in those prices, then it might in turn forecast a softer path for aggregate demand. These changes in the outlook might imply a lower expected path for the target rate than would have been implied by a different assumed path for the behavior of asset prices. If it turns out that the anticipated fall in asset prices does not materialize, the policy constructed under the assumption of a decline will likely have been too easy, and that might itself contribute to further rises in asset prices.

This might sound like a more or less generic statement about the perils of having to make policy based on forecasts, but there is a sense in which the forecasting of asset prices, or indeed even understanding the driving forces behind movements in asset price after they have occurred, is particularly challenging. This is why there is a vast literature focusing on these challenges and characterizing the many "puzzles" of the behavior of asset prices.

More generally, despite the fact that policymakers can’t be completely confident in their assessment of the future path of asset prices, it seems unavoidable that these assessments will factor into policy decisions. This is not to say that central banks should lean against bubbles or against asset price movements themselves. Nor should the appropriate response to a given change in asset prices be to change policy by more than what would be appropriate to address the effects on the central objectives of the central bank. But policy, in some circumstances, will need to respond to asset price movements when those movements alter the central bank's assessment of the risks to its outlook, and that change in the assessment of the risks to the forecast should be part of the central bank’s communication with the public.

This leaves us with no simple or clear doctrine for the role of asset prices in monetary policy regimes. Asset prices probably matter more than they once did, but what that means for monetary policy necessarily depends on the circumstances.

Perhaps it makes sense to conclude with the more general observation that changes in the size of balance sheets increase the importance of sustaining the credibility of monetary policy, because they increase the costs of a loss of credibility or a negative shock to credibility. We live with considerable uncertainty about the sustainability of the pattern of relatively low risk premia and reduction in the cost of insurance against future macroeconomic and financial volatility. That uncertainty necessarily adds to the normally substantial degree of uncertainty we face in making monetary policy judgments. All these factors strengthen the case for being open about what we do not know. And it reinforces the case for preserving confidence in our commitment to keep underlying inflation low over time, and for retaining the capacity to respond with flexibility to the challenges we face in this uncertain world.

Thank you.