Good afternoon. It is a pleasure to be here with the Philadelphia Estate Planning Council to share with you my views on the progress and prospects of the U.S. economy.

Let me begin with a quick view of where I believe the U.S. economy stands at the moment. All indications suggest the current economic recovery has finally begun to gain momentum. Third-quarter GDP was stronger than expected. Other data, such as orders, earnings, and consumer confidence, are improving steadily. Most notably, we are now seeing signs of growth in the labor market, the one area that had been exhibiting fairly substantial weakness since the recession began.

I expect economic growth to continue at a healthy pace as we move into the new year. From an economic perspective, I believe 2004 will be a good year. We can expect growth in both GDP and employment to persist, though it will take some time before the economy reaches full potential output.

With that said, let me try to explain how we got here and how that path will influence the future direction of our nation's economy. In my view, this business cycle has been driven by two distinct types of forces: first, a series of extraordinary events that buffeted the economy in rapid succession; and, second, some long-term secular trends that began working their way through the economy, disrupting the flow of activity as they went.

The first category --- extraordinary events --- includes the bursting of the tech bubble, a substantial stock market correction, a series of corporate scandals and governance issues, the events surrounding 9/11, and of course, the wars in both Afghanistan and Iraq. These disturbances, while painful, are shorter term and their economic impact continues to fade over time.

The second category, however --- the long-term secular trends --- bring long-lasting and far-reaching changes to the U.S. economy. They are transforming the way we live and work as a nation. I believe these trends, which include rapidly advancing technology and an increasingly integrated global marketplace, will be the key drivers of our economy going forward.

I will focus most of my remarks today on these long-term trends. However, since both features of our economy must be considered when setting appropriate public policy, I will conclude with some observations on the challenges that both forces of change have presented to monetary and fiscal policymakers.

**The Current State of the Economy**

Let me begin with a little history. The recent business cycle marked a turning point in our economy. We moved from an era of irrational exuberance to a cycle filled with uncertainty and subject to continuous change.

As you are all well aware, the U.S. economy lapsed into recession in March 2001. The recession officially ended in November 2001. But since that time, the overall economy has followed an uncertain, and at times unsteady, road to recovery. GDP growth has been slow and employment growth proved elusive.

Why has it taken so long for the economy to return to robust growth? Both the recession itself and the protracted recovery have been widely attributed to a confluence of three factors: weak growth in business spending; strong growth in labor productivity; and growing reliance on foreign outsourcing. Yet, in my view, these phenomena are all part of the same story --- the story of the unfolding impact of the technological revolution on our economy.

First consider the impact of this revolution on aggregate demand.
Fundamentally, it was the boom --- and subsequent bust --- of business spending on information and communications technology, or ICT, that generated the most recent business cycle.

In retrospect, business technology spending in the late 1990s represented a mix of both good and bad judgments. Some of the ICT spending turned out to be wise and even prescient investment in productive new capital. Some of it was just investment pulled forward for fear that legacy equipment would malfunction in Y2K. And some of it --- often combined with ill-conceived "dot com" business plans --- reflected overconfidence about the viability of new business models.

In any case, it took the business sector three years, from 2000 through 2002, to digest those investments. From an accounting perspective, it took three years to depreciate the accumulated stock of hardware and software. From an economic perspective, it took three years to put existing capital to its most productive use: reallocating it across firms, and fully exploiting its capabilities to boost productivity and cut costs within firms.

Now, that absorption process seems to have run its course. Businesses are exhibiting a renewed appetite for investment, and our national income accounts are showing evidence of renewed spending in this area. Looking ahead, I expect firms to maintain a healthy pace of ICT spending. As this plays out, growth in real business fixed investment should resume its role as a significant contributor to overall demand growth.

As business investment spending picks up, aggregate demand growth will be more balanced and less dependent upon consumer and fiscal stimulus to support the expansion. All else constant, this improved pace and pattern of growth in aggregate demand will mean stronger growth in demand for labor.

Of course, the caveat here is "all else constant," which brings us to the second chapter in the story: strong productivity growth.

**While the impact of the technology revolution on business investment spending has been uneven, its impact on productivity has been consistently positive.**

With the late 1990s' acceleration in ICT investment came a marked pickup in the growth rate of labor productivity. In fact, strong growth in productivity has persisted, not only through the boom years but also throughout the recession and recovery. Simply put, the business sector continues to exploit the benefits of its investment in ICT at extraordinary rates.

Between 1973 and 1995 productivity growth in the nonfarm business sector averaged 1.4 percent per year. Between 1995 and the present, productivity growth has averaged 3 percent per year and has yet to show any signs of flagging. Indeed, it has been even stronger as of late.

Of course, this is good news for the aggregate economy. Higher trend productivity growth supports higher potential GDP growth and higher standards of living. It makes us more internationally competitive and supports higher salaries for workers.

However, this strong productivity growth, combined with the slow demand growth, has created a very weak job market over the past three years.

Undoubtedly, uncertainties associated with the string of unexpected disturbances curtailed businesses' willingness to add to their payrolls. In addition, slow growth in aggregate demand put downward pressure on prices. The result was stagnation in top line revenue growth which led firms to seek profit growth through cost cutting. Often this was achieved through reductions in labor force.

Nonetheless, from a growth accounting perspective, it was businesses' capacity to expand output while shedding workers, emanating from the remarkable gains in labor productivity, that allowed the recovery to proceed for so long without boosting payroll employment.

Indeed, the stagnation in labor market has been perhaps the most disconcerting feature of the current cycle. This was the second "jobless recovery," and now holds the dubious distinction of being the first "job loss recovery."
Moreover, most economists agree that innovation in, and application of, ICT will continue to drive productivity growth. During the first quarter of this year, when we asked participants in our Survey of Professional Forecasters to project productivity growth over the next 10 years, their median response was 2.3 percent per year. My own view is that underlying productivity may continue to grow at a 3 percent annual rate.

So, allowing for labor force growth of 1 to 1-¼ percent, the economy’s potential output would grow between 3-½ and 4 percent for quite some time, most likely closer to the upper end of this range. Put another way, to mirror capacity growth, including the new entrants to the labor force, we need sustained real GDP growth of around 4 percent. But to re-employ those who became unemployed or underemployed during the past three years, we will need a period of real GDP growth above 4 percent.

Fortunately, I believe this level of growth is achievable as we move into 2004. At the same time, however, I acknowledge that the process of regaining and maintaining a full employment economy will be neither smooth nor painless. The ICT revolution has created changes in the labor market that present challenges, both near term and long term.

Near term, mismatches between workers’ skills and businesses’ requirements could slow the rate at which currently unemployed workers are re-absorbed, relative to previous recoveries. Longer term, the ICT revolution will surely mean significant restructuring in many industries, including the decline of some and the birth of entirely new ones. This has been our experience with previous technological revolutions, and there is little reason to doubt it will happen again this time.

History also tells us that such transformations benefit us as consumers. Prices are lower, wealth is increased, and welfare is enhanced for society as a whole. However, such transformations also create difficulties for many of us as workers when job requirements and job locations change. The transition is not always easy.

Nonetheless, the U.S. economy is remarkably flexible. Over some reasonable horizon, the market will induce the required adjustments. Workers will learn new skills. Hardware and software engineers will develop new tools that match workers’ skills and capabilities. Businesses will revise processes and locate operations to best deploy available labor pools. In the process, they will use both domestic and foreign labor.

**The increased use of foreign labor in production is the third factor behind our, thus far, subpar recovery.**

It is important to recognize the fact that this phenomenon also emerged as a result of the ICT revolution. Improvements in information and communications technology, coupled with the decreasing cost of physical transportation, have not only facilitated, but also dictated, dynamic changes in the global nature of commerce. One noteworthy result is a globally integrated marketplace for goods and services. This, in turn, is creating a global market for labor.

Of course, "offshoring," as it is now being called, has been the trend in much of the production activity associated with manufacturing for a long time. But now it seems to be intensifying, particularly with the opening of the Chinese economy. It also seems to be spreading to the service sector. Lower-skilled, call-center and other service jobs have been migrating to India and elsewhere in the Far East for several years. More recently, the process has been moving up the value chain to higher level professional service jobs, such as accountants, financial analysts, and software engineers.

At this point, we have yet to accurately quantify the impact of the ICT revolution on the offshoring phenomenon. However, this may be less important than acknowledging that the ICT revolution is creating an increasingly integrated market for all types of goods and services.

In essence, the introduction of new and lower cost information and communications technologies is expanding the size of markets. Information can be disseminated and transactions effected between individuals and organizations located essentially anywhere around the world at lower cost than ever before. The bigger the market, the greater the opportunities for specialization and gains from trade.
In addition, new ICT is reducing the cost of coordinating activities between firms regardless of location. This allows for even greater specialization by firms, a more segmented value chain, and even more efficient ways of delivering goods and services.

Even within firms, ICT is reducing the cost of coordinating activities across sites. So internal processes, such as research and development, production, distribution, and service functions, can be further segmented, and each segment can be located at the site of greatest comparative advantage.

As a result of the technology revolution, the demand for labor in the U.S. will become more sensitive to labor market conditions and other economic considerations in a broad array of countries around the world.

The global context of these forces may be broader in scope and the competition more intense than we have experienced in the past, but they are not fundamentally different in kind. Again, I believe the U.S. economy is up to the challenge, given its agility, adaptability, and most relevant to current concerns, the flexibility of the U.S. labor market. Together these features will position our economy to take full advantage of the international gains from trade created by the ICT revolution.

I have spent some time with you today making the case that the ICT revolution has been a fundamental driver of our nation's recent economic performance --- destabilizing business spending, accelerating labor productivity, and globalizing the marketplace --- and that it will continue to shape our performance going forward.

That series of extraordinary events I mentioned at the outset also buffeted the economy and took their toll on the business sector's willingness to spend.

Fortunately, while the business sector faltered, the consumer sector did an outstanding job of sustaining the economy. Indeed, the downturn would certainly have been far worse were it not for the continued growth of consumer spending.

Why were consumers so willing to spend? Clearly, their actions were driven by extraordinarily stimulative fiscal and monetary policy. Tax cuts and low interest rates gave consumers both the means and the motive to spend their way through the downturn.

I expect consumer spending will continue to grow at a healthy pace. However, going forward, the fuel for that growth should be growth in employment and increasing real incomes. As this transpires, the role of policy will shift from providing additional stimulus to supporting sustained growth.

This brings me to my last topic for today: the implications of the current business cycle for the next round of decisions by monetary and fiscal policymakers.

**The Legacy of This Cycle from a Policymaker's Perspective** Let me consider monetary policy first.

Since the so-called Great Inflation of the 1970s, economists and central bankers around the world have held that a stable price environment is conducive to economic efficiency and long-run growth. What we learned in this business cycle is that price stability serves monetary policy well when it comes to short-run stabilization too. Indeed, I believe it was the Fed's 20-year investment in price stability that made monetary policy so effective in this cycle.

With inflation curbed, the Fed had the latitude to bring interest rates to historic lows in response to the decline in demand wrought by the recession. As a result, houses became more affordable, durables were within reach. Household debt burdens are substantially lighter than they would have been without aggressive counter-cyclical monetary policy. Moreover, with inflation expectations well-anchored, the Fed's cuts in nominal rates were seen as declines in real interest rates, and rates were seen as low relative to expected future interest rates. This made monetary policy more effective in stimulating current spending.

Looking ahead, once the current expansion gains a firmer foothold, monetary policy must move to a less stimulative, and then neutral, stance. This will avoid momentum toward accelerating inflation or destabilizing
shifts in long-term inflation expectations. However, any policy adjustment need not take place in the near future, in light of significant excess capacity and benign inflation pressures. Nonetheless, the current level of short-term interest rates cannot be maintained indefinitely.

On the fiscal policy side, the Bush administration came into office intending to permanently reduce tax rates as a strategy for fostering stronger economic performance over the long term. As events unfolded, the tax reductions were accelerated and enhanced in order to provide the economy with much needed stimulus in the short term. Without a doubt, this application of counter-cyclical fiscal policy was extraordinarily well-timed and effective. The aftermath, however, is a federal budget pushed into a deep deficit for the foreseeable future. As we move forward, fiscal policymakers will need to consider strategies for returning to a cyclically balanced federal budget.

Beyond that, federal dollars would be best spent on programs designed to increase our economy’s ability to respond to changing market conditions, both secular and cyclical. Such investments, including programs to educate, train, and retrain workers, and programs to fund basic research and development, will have substantial benefits well into the future.

**Conclusion**

With this said, allow me to sum up. The current economic recovery appears to be gaining traction. I look forward to self-sustaining economic expansion, which ought to proceed at a healthy pace as we move into the new year.

Households should benefit from renewed job growth and continued productivity growth, and their spending should continue to grow. The return of business spending has already helped the technology sector with two consecutive quarters of double-digit growth and enhanced market valuations of their equity. As business confidence returns, the replenishment of inventories will further contribute to a more self-sustaining recovery.

As shorter-term economic shocks recede, the ICT revolution will remain as one of the primary drivers of the U.S. economy. I believe this technological revolution is well positioned to provide a solid foundation for sustained expansion in both output and employment in the U.S. It offers the prospect for the greatest growth in our nation’s living standards in a generation.

Yet, the information and communications revolution --- like all technological revolutions --- has proven to be a positive and, at the same time, disruptive force on the economy both here in the U.S. and throughout the world.

Monetary and fiscal policymakers have gone to great lengths to mitigate its impact as well as the effects of other unexpected disturbances on the most recent business cycle. As economic conditions improve, we will need to re-position ourselves, so that we stand ready to respond to the next sequence of shocks, whenever they come and whatever their source.

This is how the Fed fulfills its role as our nation's central bank: anticipating and preparing for the inevitable changes that confront our economy. It is public confidence in the Fed’s ability to do so that allows us to maintain stability through change.