Remarks on the Economy and Financial Markets

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It's a pleasure to have the opportunity again to speak before the Financial Analysts of Philadelphia. I want to touch on three topics today: the current economic and monetary policy environment, entrepreneurship and equity markets, as well as fiscal policy and the yield curve in fixed income markets. Let me begin with the economic environment.

The Remarkable Economic Environment

I am pleased to say that I can begin my remarks this year with essentially the same opening sentence I used a year ago. The U.S. has been enjoying a remarkable period of economic growth. Last month the current expansion became the longest in U.S. history, and the unemployment rate is the lowest it's been in 30 years. What's more, this expansion has had an average inflation rate that matches the low inflation during the long expansion of the 1960s. This happy combination of strong growth and low inflation has been the result of several factors, some temporary and some more permanent.

I believe that what is "new" about the new economy is really rather old -- it is the resurgence of the supply side. Major changes in technology have spurred strong, and accelerating, growth in labor productivity, which in turn has contributed to strong U.S. economic growth. Since late 1995, labor productivity (i.e., output per worker) has been growing at an average rate that is almost twice as fast as its average growth rate during the previous 20 years.

This is wonderful news for the average American, because higher productivity growth increases aggregate supply and ultimately translates into a higher standard of living. Faster productivity growth in recent years has meant that businesses have been able to keep prices from rising while paying higher wages to workers.

Although the economy has been remarkable and aggregate supply has been expanding rapidly, aggregate demand is growing even more rapidly and pressing on supply. This rapid growth in demand is apparent in almost all sectors of the economy. Especially in recent quarters, growth has been so rapid that it has raised questions about the expansion's sustainability, and in particular whether the economy can continue to avoid a resurgence of inflation.

The job of monetary policy is to foster an environment friendly to sustainable economic growth -- to help the economy reach its potential without contributing to excesses. Even though strong growth of productivity in recent years has led economists to revise upward their benchmark for the nation's potential economic growth to around 3.5 percent, the laws of supply and demand have not been repealed. Sure, the economy's productive capacity is growing more rapidly than it used to; but growth of aggregate demand persistently in excess of the growth of aggregate supply still leads to pressure on prices and a greater risk of higher inflation. The job of monetary policy is to avoid such excesses before expectations of higher future inflation become embedded in the decisions of businesses and households.

To keep the economy on a sustainable growth path and avoid inflation, sometimes interest rates need to rise, sometimes they need to fall, and sometimes they need to remain steady. In recent quarters, risks to the economy have been on the side of stronger-than-sustainable growth and greater inflationary pressures, and consequently the Federal Reserve tightened monetary policy in several steps, with the latest change occurring at the beginning of February.

Looking to the immediate future, the risks appear to me to still be on the side of too much demand pressing on supply. Dealing with this risk in a timely fashion is the best insurance the Fed can provide to help keep the economy growing on a sustainable path with low inflation and low unemployment.

Let me turn now to two other topics dealing with developments in the equity and fixed income markets.

The Entrepreneurial Environment and the Stock Market

At the same time that we have been experiencing the greatest advances in technology since the Industrial Revolution, we have also been experiencing what seems like an explosion in new publicly traded firms. These phenomena are not unrelated. More rapid growth of productivity in the United States has been closely tied to the rapid development and deployment of new computer, telecommunications, and medical technologies. And bringing these new technologies to market has required financial capital.

Although these new technologies are being implemented in old-line companies as well as in new ones, much of the impetus for the introduction of new technologies has come from newly formed companies -- that is, from greater entrepreneurial activity. One sign of this increased entrepreneurial activity has been the large number of initial public offerings (IPOs) of high-tech and "dot com" companies in recent years. But these firms began with other types of financing before they reached the IPO stage -- financing that the U.S. has been quite good at marshaling in recent years.

Of course, there have always been new inventions and new ways of doing things. What is different in the U.S. economy today is the fact that we have developed an extensive infrastructure to help entrepreneurs bring new products, services, and processes to the market -- and to eventually take their firms public. This entrepreneurial infrastructure consists of several elements. Let me mention just a few.

First, the financial element -- we have seen significant growth in various mechanisms for financing new ventures before they get to the stage of offering publicly traded stock. Start-up firms have benefited from an expansion in the level of financing from wealthy individual investors, appropriately called angels, and from venture capital funds whose major sources of money are pension funds, insurance companies, and university endowments.

The more than $6 billion in new funds committed annually to venture capital funds in the U.S. in recent years is small compared with the total amount spent on research and development. But the amount of venture capital was less than $1 billion annually before 1979, and it has doubled since the 1980s. Moreover, the venture fund industry has had a disproportionate effect on innovation in the U.S. economy. It seems likely that the amount of venture capital available to fund new entrepreneurs is increasing even more rapidly than just a couple of years ago.

A second element in the entrepreneurial infrastructure in the U.S. is that we have developed institutions for technical and managerial support of new ventures. For example, two types of institutions that have provided this kind of support are small business development centers and business incubators. At the prompting of the Small Business Administration, 10 business schools at universities on the East Coast started *small business development centers* in 1980. These centers give technical, managerial, and financial advice to small business owners, and they draw on the expertise of various members of the university. From the original 10 small business development centers in 1980, their number has grown to more than 900.

Business incubators offer some of the same resources as small business development centers. In addition, start-up companies housed in a business incubator share services such as secretarial help, copy centers, and conference facilities. These incubators are most often sponsored by state and local government and nonprofit organizations. The University City Science Center in Philadelphia, founded in the 1960s, was one of the earliest business incubators. It is owned by a group of 31 academic and scientific institutions. The center has launched more than 215 successful start-up organizations. Nationally, the number of business incubators has grown from 12 in 1980 to about 600 today.

We can also find examples of other institutions that have promoted the education and development of entrepreneurs, from community colleges to large universities, from local chambers of commerce to large corporations. Many colleges and universities in the U.S. offer courses on entrepreneurship, and a number of journals and magazines are devoted to entrepreneurship. Some governments, businesses, and civic organizations have taken an active interest in helping to provide assistance to entrepreneurs. At the Federal

Reserve Bank of Philadelphia, we host monthly meetings of an entrepreneurs' forum that brings together entrepreneurs and service providers to discuss common issues.

A third element in the development of an infrastructure for entrepreneurship in the U.S. has been the emergence of the professional entrepreneur. Thirty or 40 years ago when someone had a new idea or new invention, he or she might have founded a company, seen it grow to maturity, and remained CEO for the rest of his or her career before leaving the company to the children. Today we are seeing more and more people who start one company, sell it after a number of years, and then start another company or perhaps several more. They are, in effect, professional entrepreneurs. These individuals are willing to take a substantial amount of risk to start up a new enterprise because of the potential rewards -- not only in terms of their annual salaries but also in various types of incentive pay, such as bonuses and stock options.

Let me caution that the development of this entrepreneurial infrastructure in the U.S. economy has not eliminated the risk of new ventures; it has simply made it easier for more people to take that risk. A few numbers illustrate this point. In 1997 there were more than 160,000 business startups in the U. S., but there were also more than 80,000 business failures. Every year *INC.* magazine publishes a list of the 500 fastest growing, privately owned companies in the U.S. Of the 500 companies on the list in 1985, almost 20 percent had disappeared or failed by 1995. The competitive marketplace continues to perform its role of testing new ideas and products. The new infrastructure for entrepreneurship doesn't eliminate that test; it simply allows more new companies to take the test.

The bottom line is that both the economy and the stock market have been significantly influenced by the development of this entrepreneurial infrastructure. Entrepreneurial activity has provided the economy with significant benefits in terms of improving productivity and it has generated substantial wealth. But it also means that some investors are bearing substantial risks in funding these new ventures. That is true not only of participants in venture capital funds, but also of investors in IPOs, as recent volatility in the stock prices of technology and Internet companies has made clear.

Let me now turn to the fixed income markets.

Fiscal Policy and the Fixed Income Markets

Fiscal policy constrained growth in federal spending during the past decade and produced the first budget surpluses in 30 years. That has helped to raise national saving, making more funds available to finance productive investment. The budget surpluses are also leading to changes in the Treasury's management of the federal debt, and that has raised questions about their impact on the Treasury yield curve and on the structure of interest rates in related fixed income markets.

In January and early February, the Treasury announced that it will issue far fewer 30-year bonds in the future, and that it will use some of its surplus to buy back as much as $30 billion of its outstanding longer-term debt. That led investors who want to hold 30-year Treasury bonds to scramble to buy them before they become scarce. The result was to drive up the price of 30-year Treasury bonds - and drive down their yield relative to other bonds. In fact, 30-year Treasury yields fell below 10-year Treasury yields, then below 5-year and, briefly, below 2-year Treasury yields. The yield curve remains hump shaped: the peak is now around the 5-year maturity and the yield on 30-year bonds is substantially below the yield on 10-year bonds.

This inversion of the long end of the Treasury yield curve in February generated turmoil among bond traders and confusion among reporters. Some news articles, for example, have claimed that the inversion interferes with the Fed's ability to tighten monetary policy, which is not the case. One news story even claimed that this particular shape of the yield curve was so unusual that it would confound monetary policy completely. Let me make a few observations.

To begin with, a hump-shaped yield curve is not unusual. It's quite typical for the yield curve to flatten as interest rates rise after an economic expansion is well underway, and then to become hump-shaped as intermediate-term yields rise more than long-term yields. Often when monetary policy begins to tighten in an attempt to prevent overheating, the hump (or peak) in the yield curve tends to move toward the shorter end

of the maturity spectrum. You will find such humped shapes in Treasury yield curves during almost every expansion since the end of World War II.

The yield curves for other debt instruments usually have shapes that are similar to the shape of the Treasury yield curve. But in early February the hump-shaped pattern of Treasury interest rates did not at first carry through to the yield curves for other debt instruments. For instance, the hump shape did not initially appear in the yield curves for certain agency securities nor for corporate bonds, whether highly rated or low-grade. Consequently, there's good reason to believe that the inversion of the longer end of the Treasury yield curve was specific to developments in the Treasury market, rather than a more general reflection of interest rate behavior during a business expansion.

Over the subsequent days and weeks in February, after it became clear that the changes in long-term Treasury yields were not just temporary, the shapes of yield curves for other debt instruments did move closer to the humped shape in the Treasury market. But the hump in corporate yield curves is much less pronounced.

The changing spread between yields on Treasury securities and those on other debt instruments is leading market participants to reevaluate whether to continue to rely on Treasuries to benchmark the prices and yields of other debt. Either Treasuries will continue to be used but with some adjustment for what is considered a "normal" spread over Treasuries, or some other set of debt instruments will come to be used as a benchmark instead. Which approach dominates will depend to some extent on whether the Treasury's debt management plans are revised significantly. That, in turn, will depend on what happens to future budget surpluses.

Will future surpluses be used primarily to reduce the federal government's outstanding debt, or will they be used to increase federal spending or cut taxes, or both? In the past fiscal year we have already seen an upswing in the amount of real federal government consumption and investment, after many years of declining spending. The future direction of fiscal policy is likely to be a major factor this year in deciding the extent of further changes in the Treasury securities market.

What about the story that the inversion of the longer end of the yield curve confounds the Fed's ability to conduct monetary policy? That is not true. Firms still have to pay higher interest rates when the Fed tightens, as you can see from comparing the yield curve for AAA corporate bonds on the Friday before the last FOMC meeting with the AAA corporate yield curve on the Friday after the meeting. That comparison shows corporations' borrowing costs rising all along the curve after the FOMC tightened, despite the changing shape of the Treasury yield curve that week.

Conclusion

In conclusion, let me reiterate that robust growth in the capacity of the economy to produce goods and services has helped keep inflation low. But growth of demand has been even stronger in recent quarters and is pressing on supply. Although the benchmark for the potential growth rate of the economy has been raised, higher growth rates of productivity do not repeal the basic laws of supply and demand. Consequently, monetary policymakers must be prepared to act in a timely fashion to prevent inflationary pressures from undermining this extraordinary economic expansion.