Lessons from Our Recent Business Cycle: A Policymaker's Perspective

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Good evening, everyone. It is a pleasure to be here at Lycoming College and I am honored to participate in the Executive Lecture Series. As my introduction indicated, for many years, I was a finance professor at the University of Pennsylvania. Then, in the summer of 2000, I became president and chief executive officer of the Federal Reserve Bank of Philadelphia. It has been an interesting five years.

When I took the job, the U.S. economy was on a remarkable run. We were in the ninth year of an uninterrupted economic expansion. Output and productivity growth were at their highest in a generation; unemployment and inflation were at their lowest. We had weathered the Y2K conversion with surprising ease, and prospects for continued growth were solid.

As things turned out, the economy was headed for a turning point. The stock market decline was the first in a series of events that pushed the economy into recession and then into an unusual recovery. Even now, as the economy has moved ahead into the expansion phase of the cycle, unique events — this time in the form of record hurricanes Rita and Katrina — continue to shape its path.

And so tonight, I will use my time with you to reflect on the current business cycle and some of the lessons I have learned from the experience thus far. I will focus on how the series of recent events, as well as ongoing trends, have affected both the economy and the conduct of monetary policy in this cycle.

As you all can appreciate, it is important that we learn from the experiences of the past. As the saying goes: "Those who cannot remember the past are condemned to repeat it." So, I welcome the opportunity to review the recent business cycle and examine it in some detail. Hopefully, some of the lessons we learned from our recent past will be incorporated into the policy decisions we make in the future.

Nonetheless, before we start, I must remind you that every business cycle is different. Each is the unique product of:

(1) a relentlessly evolving economic structure,
(2) some surprising new developments, and
(3) a sequence of policy actions attempting to stabilize the situation. This most recent experience is no exception.

Examining the Context

To discuss the most recent business cycle experience, one must start at the beginning — with the revolution in information and communications technology and its dramatic effect on the economic structure of the U.S. Cheap hardware, sophisticated software, and extensive networking capabilities — both Internet and Intranet — began transforming business processes in earnest in the latter half of the 1990s. Of course, this was a worldwide phenomenon, but it clearly had profound effects on the U.S. economy.

History tells us — and our most recent experience confirms — a technological revolution of this magnitude does not produce a smooth economic progression. It is, by its nature, disruptive to the existing order of things. That was true in the past and has proven to be true this time around as well. Nonetheless, the application of new information technologies has brought real economic benefits to our economy. As these technologies were introduced into organizations and infused into business processes, productivity measurably accelerated.

At the same time, however, it spawned unrealistic expectations that were manifested in a stock market bubble and overinvestment in new capital. When the bubble burst and the investment boom deflated, aggregate demand decelerated rapidly, ultimately driving the economy into recession.

The technology revolution has also been an important contributor to globalization — a second fundamental factor of structural change driving the economy's evolution in this business cycle. By slashing communications costs, new technologies made the markets for financial assets, goods and services, and now even labor more globally integrated. Globalization was driven by other forces as well. Freer trade among nations and, even more fundamentally, the triumph of the market system over centralized planning were both movements that spurred global integration.

Like the introduction of new technologies, the globalization of the marketplace has been and continues to be a good thing. It fosters greater specialization and gains from trade, affording everyone higher living standards. These benefits are genuine and worthwhile, but they do not come without some costs. The adjustment costs are significant, and in an environment of rapid change, they are ongoing.

I will say more about technology and globalization in a few minutes. But first, let me turn to the second ingredient of any business cycle, that is, the arrival of new developments and unexpected events. We often refer to these events as economic shocks.

Shocks to the Economy

There were several new and surprising developments during the most recent business cycle. In 2000, the U.S. stock market declined precipitously and the tech bubble burst. This led to a decrease in national wealth and had a negative effect on the economy as a whole.

This was followed by certainly the most profound event affecting the course of the recent business cycle: the terrorist attacks of September 11, 2001. It goes without saying that September 11 stands as one of the most shocking and tragic episodes in our nation's history.

The physical effects of September 11 were readily apparent. That said, from a purely economic perspective, the immediate impact on the productive capacity of the U.S. was relatively small when measured against our collective resources — our labor force and our capital infrastructure. Nonetheless, the impact on the demand side of the economy was immediate and profoundly contractionary. We were absorbed by what happened, and we tried to figure out what it meant for our country and ourselves personally. Meanwhile, many cancelled air travel and hotel reservations and put all but essential spending on hold.

All things considered, consumer spending came back relatively quickly. But for businesses, it was a much different story. Already left with an overhang of equipment from the investment boom of the late 1990s, businesses confronted these new uncertainties about the future and saw new reasons to defer and delay investment spending.

The events that followed in the aftermath of September 11 — the anthrax attacks and then the wars in Afghanistan and Iraq — only served to heighten these uncertainties.

Meanwhile, as the U.S. economy began on its path to a slow recovery, accounting scandals and corporate governance issues created new uncertainties, and what some referred to as another "soft spot" in the economy. Scandals surrounding well-known organizations Enron and Worldcom – and closer to home, Tyco and Adelphia — undermined confidence and created mistrust of large corporations in the U.S. psyche. This further heightened investor uncertainty and weakened both households' and businesses' willingness to spend.

Beyond the financial markets' reaction, these revelations triggered reforms legislated under the Sarbanes-Oxley Act. Compliance with the law focused companies' attention and resources on their audit, accounting, and governance processes, and it remains a topic of conversation in the corporate suites and boardrooms around our nation. While this may have been appropriate, it also diverted companies' attention from new investment projects and slowed plans for future expansion.

Completing the list of shocks is an unprecedented sequence of natural disasters — hurricanes Katrina and Rita. Katrina was the most destructive natural disaster in U.S. history both in human lives and in loss of property. It disrupted the flow of trade through the port of New Orleans and the flow of petroleum products and natural gas from the all-important gulf region. Two weeks ago, Rita attacked the oil and gas production facilities in the gulf that Katrina missed. As recent news reports suggest, the damage from Rita was less than expected, and its effects are likely to be short-lived. Nonetheless, the unprecedented evacuation of millions of people and the associated personal and economic disruption have added more uncertainty to the region's economy and the domestic petroleum industry centered there.

In some ways, these hurricanes were reminiscent of the events of 9/11. In both cases, the images of human tragedy and destruction remain with us. But in economic terms, the impact of the hurricanes is quite different. With 9/11, the impact was primarily on the demand side of the economy; with the hurricanes, the impact is primarily on the supply side. As is typical of natural disasters, the hurricanes destroyed or damaged much of the affected areas' real capital, that is, homes and home furnishings, places of business, vehicles, equipment, and critical elements of the regional infrastructure. As a result, normal patterns of employment and production have been disrupted, and the region's employment and output have fallen. Difficult as this period is, these effects are temporary. Gradually, the lost capital will be replaced. Employment and output will come back on line. Indeed, the rebuilding effort itself will generate additional economic activity in the region for a time.

Of even greater significance for the national economy in this particular case is the impact of the two hurricanes on energy production. In this sense, they generated what economists would characterize as a classic supply shock — that is, a sudden and significant curtailment in the availability of some important economic resources – and with that, a sharp increase in their prices. In this case, the resources were gasoline, fuel oil, and natural gas. I think we all have been taken aback by the high cost of filling up our gas tanks recently, and soon we will likely be contemplating the high cost of heating our homes this winter. Businesses too are feeling the pinch of higher energy costs as they produce and transport goods and try to bring their products to market.

Even prior to recent events in the Gulf of Mexico, oil prices had risen considerably, partly due to increasing international demand associated with the global economic expansion and partly due to concerns about potential disruptions in supply from the Persian Gulf. Given these tight market conditions, a significant disruption to production was bound to have a sharp impact on prices. Some of the initial price spike has dissipated, but I think most forecasters would agree that the baseline projection for oil prices over the next year or so has risen as a result of recent events. This inevitably will mean somewhat less growth and somewhat higher inflation in 2005 and early 2006 than we otherwise would have had.

Policy During the Cycle

Thus far, I have talked about the structural changes and surprising developments affecting the shape of the current business cycle. But how has the third factor, namely, policymakers' actions, affected economic dynamics over the past few years?

Here, I would contend that remarkably aggressive policy action was a defining characteristic of this business cycle. Indeed, monetary and fiscal policy worked together particularly well this time around to provide ample and rapid stimulus during the economic downturn.

Let us step back for a moment and recall that the National Bureau of Economic Research has determined that the U.S. economy fell into recession in March 2001. On the monetary policy side, the Fed had begun reducing the fed funds rate two months earlier, in January 2001, and had dropped it 300 basis points by August. On the fiscal policy side, the Bush administration's first round of tax cuts was enacted in the spring of 2001, and the first tax rebate checks were in the mail by July. With the benefit of hindsight, the timing of this fiscal stimulus was quite fortuitous.

I think a case can be made that, had it not been for September 11, this double dose of strong stimulus might have averted a recession altogether. I said so then, and I remain of that opinion.

In any event, the recession occurred, and the recovery was attenuated in its aftermath. In response, both monetary and fiscal policymakers reacted by providing yet additional rounds of stimulus. These policy actions reduced the associated slide in business investment spending and certainly helped buoy consumer spending during this difficult time. The robustness in consumer spending kept the economy growing while businesses positioned themselves to re-engage. They subsequently returned, spending into the recovery at double-digit rates.

The result has been a clear improvement in economic performance over time. Last year, the U.S. economy turned in its best performance since 1999. Output growth of nearly 4 percent and the creation of over 2 million net new jobs signaled the economy had regained its balance and was back on a path of sustainable expansion.

And so, the Fed began to reduce the degree of monetary policy accommodation, raising the federal funds rate in a sequence of measured steps. With growth continuing at or slightly above the economy's long-run potential, the Fed has continued along this path toward policy neutrality thus far this year.

At its September meeting, the FOMC moved its target for the federal funds rate up another 25 basis points to 3-3/4 percent. In the press release announcing the action, we said the economy appeared poised to continue growing at a good pace before Hurricane Katrina hit. We acknowledged the devastation and disruption that the hurricane caused to the economy of the gulf region and to the U.S. economy as a whole, but we also expressed our view that the impact on the pace of economic activity at the national level was not likely to persist. Moreover, the impact of the disruption on the price level warrants careful monitoring. Higher energy and other costs have the potential to add to inflation pressures, which, if unchecked, could threaten price stability. Thus, given our dual mandate to ensure both sustainable output growth and price stability, we chose to respond to this classic supply disruption by continuing to move the federal funds rate up at a measured pace.

I stand by that view and look forward to the rebuilding and redevelopment of the region – a process that has already begun.

Lessons Learned

With that, let me now turn to my original purpose, stated at the outset, and try to extract some lessons from our recent experience – lessons that I hope we can apply as we address the policy challenges that lie ahead, both in the near term and in the next business cycle, whenever it may come. In that regard, allow me to offer you five distinct lessons that I garnered from the experiences of the recent past.

Lesson # 1: Technological Innovation Can Drive a Cycle

The first lesson that I take away from an examination of our most recent economic episode is that new technologies and investment in new technologies can be powerful drivers of business cycle dynamics. The most recent business cycle was an investment-driven one. Growth in investment spending strengthened and sustained the expansion of the 1990s. Then the collapse in business investment spending generated the recession and attenuated the recovery. Finally, the return of business investment spending ushered in the broader economic recovery beginning in 2003.

At the same time, the increased productivity experienced in the late 1990s, due to the large investment in information and communication technology, allowed the U.S. economy to produce high levels of output while not experiencing inflationary pressures.

The dynamic at work was that the new, profitable investments created an increase in productivity, which translated into increased profits, and thus more investing and consuming. At the same time, the increase in productivity growth helped keep down unit labor costs and prices. This led to a period of strong growth and low inflation. In retrospect, business technology spending in the late 1990s represented a mix of both good and bad business judgments.

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 accumulated stock of hardware and software. From an economic perspective, it took three years to put existing capital to its most productive use by reallocating it across firms and fully exploiting its capabilities to boost productivity and cut costs within firms.

The time it took for firms to begin investing again may have been amplified by the large negative shocks I spoke of earlier, and businesses may have been reluctant to increase investment in this environment of uncertainty. But whatever the cause, variation in business spending caused variation in economic activity.

Now, the forces are aligned for steady growth in business investment spending. Firms have had time to fully digest their previous acquisitions of capital. Profits have been strong. The economic outlook is positive, and some of the previous risks and uncertainties are dissipating. Indeed, firms are again investing, positioning themselves for greater efficiency and greater productive capacity going forward. At this stage, steady growth in business investment spending and, with it, solid gains in labor productivity will support overall economic growth on a sustainable basis.

Lesson #2: Globalization is an Important Factor in Economic Dynamics and Inflation

A second lesson this most recent business cycle brought into focus is that global dynamics play an important role in the path our domestic economy will follow. There has been considerable discussion concerning the increased role of globalization and its effect on developed economies. This cycle has spotlighted three distinct but interrelated effects of this phenomenon.

The first of these is the traditional one that focuses on the competitive pressures that globalization has brought to the market for goods and services. Here, the impact of the current account on domestic production has been an essential ingredient of the dynamics of the U.S. economy.

In this cycle the debate expanded to a second area, namely, the labor market, to include the “outsourcing” or “off-shoring” of labor services. This trend is tied to the technology revolution. Improvements in information and communications technology are creating a globally integrated marketplace — not only for goods and services but also for labor. Of course, such "off-shoring" has been the trend in much of the production activity associated with manufacturing for a long time. But it seemed to intensify in this cycle, particularly with the opening of several newly developing economies. It also seems to be spreading to the service sector.

Increasingly, then, U.S. firms compete with firms around the world in the markets for raw materials and final goods and services, while U.S. workers compete with workers around the world for positions in a widening array of occupations and industries. From the macroeconomic perspective, this globalization of the marketplace and the increased degree of competition it brings are powerful forces that can alter the wage and price dynamics of the U.S. economy. Indeed, they have done so over this cycle, persistently dampening upward price pressures.

The third important aspect of a global economy from a U.S. policymaker’s perspective is the globalization of capital markets. Indeed, it has substantively affected both the dynamics of trade and domestic production in this cycle.

Investors, believing the return on capital in the United States to be relatively attractive on a risk-adjusted basis, funneled a large fraction of global wealth into the U.S. capital market. Global investors purchased large quantities of dollar-denominated assets, keeping the dollar’s exchange value high through the tech boom — even while the economy went into recession and the current account turned decidedly negative.

The trade-weighted exchange value of the dollar appreciated 35 percent from 1995 to 2001 and stayed strong through 2002. This had a two-prong effect on the U.S. economy. First, it drove up our trade deficit to record levels. Second, it kept a relatively tight lid on inflation by putting low-priced goods on the market in the U.S.

Over the past two years or so, the trade-weighted dollar has been on a downward trend, suggesting that the persistent outflow of dollars associated with the trade deficit may be weighing a bit heavier on international investors’ portfolios. Gradually if this long-term trend continues, the depreciation of the dollar will translate into lower prices for exports from the U.S. and higher prices for imports into the U.S. Thus, the pattern of output and prices in the U.S. in this cycle has been, and will continue to be, affected by the global economy.

Lesson #3: Countercyclical Policy Can Be An Effective Demand Force

The shape of this business cycle was substantively affected by countercyclical government policies. Aggressive use of both monetary and fiscal policy clearly reduced the severity of the recession and accelerated the course of the recovery.

On the monetary policy side, the Federal Reserve reduced its target federal funds rate by 475 basis points – from 6.5 percent to 1.75 percent — in the recession year of 2001. When the recovery threatened to stall, the Fed once again reacted, dropping the target fed funds rate to just 1 percent, its lowest level since the 1950s.

The countercyclical monetary policy the Fed implemented gave consumers the opportunity to borrow at relatively low interest rates, and they certainly seized it. Households increased their purchases of homes and durables at record rates, dampening the breadth and depth of the past recession. They also sustained that growth, which gave business investment both time to recover and a reason to invest into a better future. To me, this demonstrates that, while the precise channels through which monetary policy operates may vary from cycle to cycle, the significance of its impact on the pace of overall demand growth does not. Thus, if used judiciously, it has the power to cushion swings in demand and diminish the severity of business cycles.

But it is also clear that monetary policy's capabilities are limited. We may be able to limit the severity of the cycle, but we cannot eliminate it. There are too many powerful forces at work in the economy for that.

And as the recent hurricanes remind us, an aggregate demand management tool is not very effective when the economy is hit with a shock from the supply side. When a region's real capital is destroyed, stimulating more spending across the whole country will not bring that region's capital back any faster. When the production of a key resource like energy is curtailed, increasing overall spending will not suddenly bring the production facilities back on line. In short, when real resources have been lost, and the economy's capacity to **supply** goods and services has been reduced, increasing **demand** cannot undo the problem. Indeed, it can do more harm than good. As we have seen with oil and gas, the supply side impairment itself automatically puts upward pressure on prices. Simultaneously stimulating demand would only exacerbate those price pressures.

I will return to the issue of monetary policy's impact on price dynamics and price expectations in a moment. For now, suffice it to say that monetary policy is not a panacea; it is a tool that needs to be handled carefully.

Fiscal policy also played a key role in the dynamic of this cycle. Well-timed tax cuts and tax rebates helped sustain consumer spending during the recession and the early stages of the recovery. However, the application of fiscal stimulus is notoriously hard to time properly. The tax cuts enacted in this cycle had been proposed not as countercyclical measures but as part of a long-term shift in tax policy. Their timing, nonetheless, was fortuitous.

Going forward, fiscal policy is facing another type of challenge. Economists have long recognized that it is extremely difficult to remove fiscal stimulus once the economy is on the road to recovery. The reality is that once tax cuts are put in place, they are difficult to rescind. On the other side of the ledger, the pressures for additional government spending do not necessarily dissipate simply because the overall economy is doing well. In our current context, consider the range of demands facing the federal government by hurricane relief and recovery, the ongoing war in Iraq, and aging baby boomers. Indeed, it remains to be seen whether expansive fiscal policies can be reversed, and the federal budget can be returned to balance as we move through the expansion phase of the cycle. Nonetheless, as an economist, I see the value of fiscal integrity, and this requires a cyclically balanced federal budget.

Lesson #4: Monetary Policy Works Best in a Stable Price Environment

The next lesson I would like to offer is that we have learned that monetary policy works best in a stable price environment, that is, an environment in which current inflation is minimal and people's expectations about future inflation are well-anchored.

In an environment of stable prices, the central bank can respond to weakness in aggregate demand by reducing short-term interest rates and this will not raise inflation expectations. Rather, people expect that once the economy picks up, the central bank will return interest rates to more normal levels to ensure continued price stability. Thus, they perceive the lower market interest rates to be a **temporary** reduction in **real** interest rates, and so see it as an opportune time to shift spending forward. By doing so, they dampen the recession.

This played out quite well in the recent cycle. The core PCE was within a 1.5 percent to 2 percent band heading into the recession and has remained in that range during the recovery and expansion. Equally important, people's expectations about future inflation seem to remain well-anchored. Our own Bank's Survey of Professional Forecasters, for example, registered absolutely no change in economist's long-run inflation forecasts over this cycle.

This was true even while the Federal Reserve reduced the fed funds target rate in the aggressive manner I have laid out. In fact, not only did the Federal Reserve reduce rates to historically low levels, we also indicated that we would keep them low for the foreseeable future. And we actually did keep the target fed funds at 1 percent for an entire year. Then, when it was clear the expansion was on solid footing, we began raising our target fed funds rate, and we indicated our intention to restore monetary policy to a neutral stance at a measured pace.

Thus far, we have moved along that path, and long-run inflation expectations have remained stable. I take this as an indication that we are meeting people's expectation that the Fed would raise rates as necessary to ensure continued price stability. It is important that we fulfill that expectation if we want to maximize the effectiveness of monetary policy the next time we go into a downturn.

Lesson #5: Expectations Matter

This brings me to my last lesson, something I have been saying for some time. Expectations matter and they play an important role in the conduct of national monetary policy.

Let me explain why. The goal of the Federal Reserve is to create financial conditions that foster maximum sustainable economic growth. To achieve this, the Fed must make two important contributions to the economy. First, it is charged with providing essential price stability — meaning little or no inflation. Second, it attempts to offset shifts in demand that deter the economy's ability to reach its potential. These goals are compatible, but each receives different emphasis as the situation warrants.

As a central banker, I recognize that long-run price stability is always of utmost importance. This means not only a stable price level in the near term but also the expectation of stable prices over the long term. Only in such a stable price environment can individuals make good decisions about what to buy, where to work, and how much to save for the future. Only in a stable price environment can businesses make good decisions about what to produce and how to produce it, and about how and where to invest in new capital for the future. And it is through the amalgamation of these good decisions that a market economy achieves its full potential. It is for this reason that central bankers often talk about the need to establish credibility and the public's confidence in our long-run commitment to price stability.

The Fed can maintain the credibility of its commitment to price stability and avoid sharp changes in public expectations about monetary policy by being as transparent as possible about its own decision-making. As a result, information about the Fed's policy goals, its assessment of the current economic situation, and its strategic direction are increasingly a part of the public record. For some time, the Federal Open Market Committee has released statements after every meeting. But, very recently, the FOMC has begun releasing the minutes of each meeting prior to the next meeting. They report not only our decisions concerning immediate action but also our sense of the key factors driving near-term economic developments and the strategic tilt to our actions going forward.

I believe these steps in the direction of greater transparency have served the Fed well over this cycle and will continue to do so—perhaps no more so than in the months ahead as we navigate a fundamentally sound economy through the cross currents created by nature's turmoil in the gulf region. Before the hurricanes struck, the economy was clearly on a sustainable path of expansion. While the recent disruptions and dislocations in the gulf may slow the rate at which the economy grows for a time, I believe the expansion is strong enough to withstand them.

On the other hand, we must keep in mind that with expansions inevitably come increasing inflationary pressures. In the near term, overall inflation will be affected by the substantial increase in energy prices. To keep cyclical price pressures and any transitory spike in energy prices from permanently disrupting the price environment, the Fed will have to continue shifting monetary policy from its current somewhat accommodative stance to a more neutral one.

But as I have said in the past, the precise course we take with monetary policy must be contingent upon the precise course the economy takes as we move ahead. To the extent that the future course of monetary policy becomes less obvious, forthrightly communicating not only the actions we take but the reasons we take them will be essential to maintaining our credibility.

Conclusion

With that let me conclude. I hope I have convinced you that there are useful lessons to be learned from the dynamics of the recent business cycle in the U.S. While every cycle is unique, each also highlights some enduring realities that bear remembering. Indeed, it is careful attention to both aspects of our experience that moves forward both the science of economics and the art of economic policymaking.

I recognize that no matter how much we learn, the central bank's power will always be limited. I do not think we will ever reach a point where we will eliminate the business cycle. But we may be able to move closer to conducting optimal monetary policy in a world where change is relentless and surprising new developments continue to unfold.

Thanks for listening. I would be happy to take your questions.