

**"What Monetary Policy Can and Cannot Do"**  
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I am happy to be part of the panel this morning addressing this fundamental issue: what monetary policy can and cannot do. I look forward to a lively discussion. In my prepared remarks I will first try to stake out the common ground -- the ideas on which we can all readily agree. Then, I'll talk about the more contentious issues -- the areas in which I think there is legitimate room for disagreement -- and offer some of my own perspective on these issues as well. I'll conclude with some thoughts about the implications of all this for the conduct of monetary policy.

I think most Fed policymakers -- indeed, most professional economists today -- would agree that: (1) the goal of monetary policy is to help create an economic environment that fosters maximum sustainable growth, and (2) the most important contribution the Fed can make to that environment is to provide price stability.

Behind this philosophy of appropriate monetary policy goals lie some important economic principles on which, again, I think there is broad agreement.

The first economic principle is that price stability is crucial to a well-functioning market economy. Prices are signals to market participants. A stable overall price level allows people to clearly recognize shifts in relative prices, and adjust their decisions about spending, saving, working and investing in welfare-enhancing ways. Inflation, by contrast, jumbles and distorts price signals, and generates bad economic decisions.

The second economic principle is that price stability is a contribution to financial stability and attendant economic growth that only monetary policy can make. We know that relative prices will fluctuate in response to shifts in the supply or demand for particular products, but it takes a

persistent influx of excess money and credit to sustain a general inflation. At the same time, money is neutral in the long run. That is to say, changing the supply of money does not affect the pool of real resources available to economy, and so ultimately affects only the price level.

To these two principles I will add two empirical observations about which I hope we can also agree.

The first is this: for the past twenty-two years, the Fed has focused on the goal of price stability and has been relatively successful in achieving it. We took the economy from the double-digit inflation of the late 1970s to a core inflation rate in the 2 to 3 percent range. This is a range approaching essential price stability, that is, inflation low enough to no longer significantly influence economic decisions.

Equally important, as the downward trend in market interest rates attests, we have succeeded in reducing inflation expectations. Market participants not only see stable prices today, they also expect stable prices to persist for the foreseeable future. This is evident from a number of sources. Not surprisingly, our own Bank's Survey of Professional Forecasters is my personal favorite. Long-term inflation expectations, measured in our survey as the average rate of change in the CPI over the next 10 years, have held steady at 2.5% since early 1999. Establishing and maintaining confidence in the Fed's goal of reaching for price stability is crucial to fostering productive saving and investment decisions.

The second empirical observation on which I think monetary economists will agree concerns the Fed's policy strategy. We talk about monetary policy, recognize that inflation is a monetary phenomenon, and express belief in the neutrality of money. But the mechanism used to achieve our goal of price stability no longer involves setting targets for monetary aggregates. Indeed, the entire disinflation period coincides with the abandonment of one monetary aggregate after another, as none exhibited a predictable velocity.

Rather, the Fed's policy strategy has been to move the fed funds rate in the direction we think necessary to achieve our inflation target and bring aggregate demand into balance with the economy's long-run potential supply. This is the essence of the so-called Taylor Rule.

The principles and observations I've just enumerated deliver a straightforward answer to the question of what monetary policy can do. Monetary policy can and should strive to establish a stable price environment, and the Fed has made considerable progress toward that goal by pursuing a persistent, if not particularly precise, strategy over the past twenty years.

Of course, this is where the controversy begins. Having acknowledged that monetary policy can and should provide long-term price stability, the question arises: can monetary policy do more? Some would say monetary policy cannot do more. Advocates of this view believe that attempting to do more is unlikely to improve economic performance in the short-term, and in fact, may even impair economic performance in the long-term.

Others would say that monetary policy can do more. It can go beyond stabilizing prices in the long term and help stabilize the real economy's performance in the short term. That is to say, they believe monetary policy can be used to manage overall demand with sufficient precision over sufficiently short periods of time to reduce the volatility of output or employment in the face of demand or supply shocks. Is this so?

Unfortunately, to my mind the answer is not a simple yes or no. It depends on the characteristics of the shocks and the state of economic science.

An analogy is helpful here. Suppose I ask you the question: "Can doctors cure people?" You might respond, "Doctors can help people suffering from a variety of illnesses. In some cases, they can completely cure the patient of the illness. In other cases, they can mute the symptoms. In still others, they can do very little. I expect that over time, as medical knowledge and technique improve, doctors will be able to treat more illnesses and treat them more effectively. But even at my most optimistic I doubt that we can ever conquer all of the maladies facing humanity."

The situation is similar for monetary policy. Monetary policy can be used to eliminate or at least mute the impact of some shocks to the economy, but not all. And, over time, as economic knowledge and policy techniques improve, policymakers' capacity to stabilize the economy should and has increased.

I think the medical analogy is useful. But it is just an analogy. Economics is not medicine. The speed with which the two disciplines make progress and the ultimate bounds on their capacity to improve welfare are not necessarily the same. I think we all stand in great awe of the accomplishments that medicine has achieved in the last 50 or 100 years. Furthermore, we all anticipate tremendous progress in medical science in the years ahead.

The past and likely future course of monetary economics is not so clear. I think monetary economics has made significant progress over the years. We are surely better at responding to demand side shocks than we were in the 1930s. We are also better at responding to supply side shocks than we were in the 1970s.

On the other hand, how closely can we calibrate the proper monetary policy response to sudden demand or supply disturbances? I think the answer is not all that closely. Look for example at the Fed's response to the productivity growth surge of the past few years or to the recent stock market correction? Not surprisingly, with the benefit of hindsight, the calibration was not perfect. Can we reasonably expect to operate at a higher level of precision in the near future? I do not believe so.

As policy makers, we face considerable limitations on our capacity to assess, analyze and shape economic conditions. I think we are limited in three fundamental ways.

First, our capacity to measure and benchmark the economy's performance is limited. What is the current economic situation? How close are we to the economy's supply potential? How robust is demand relative to that potential? These are questions we can answer only imprecisely.

As professional economists, we all know that our measurements of current economic conditions are subject to almost constant revision. The point I want to emphasize today is that these revisions can be substantial enough to change policymakers' perception of the need for or at least the extent of policy action.

This is an issue that we in Philadelphia have spent considerable effort to analyze. Currently, our Bank is in the midst of a research project called the Real Time Data Set for Macroeconomists, being conducted by Dean Croushore and Tom Stark of our Research Department. The project assembles macroeconomic time series as they were recorded at specific points in time, and explores the implications of data revisions for economic forecasting, hypothesis testing, and policy making. We are hosting a conference on the subject next month. For my purposes today, suffice it to say that examining these time series of different vintages provides an interesting perspective on monetary policy makers' situation.

For example, in October 1992 policymakers were contemplating action to stimulate the economy because they were concerned that the recovery from the recession of 1990-91 was stalling. To someone looking at the real GDP series we are using today, this anxiety would seem strange. The data show that real GDP grew at 3.8 percent in both the first and second quarters of 1992 and at 3.1 percent in the third quarter. But policymakers' concerns seem much more reasonable when you look at the real GDP series they were using back in the fall of 1992. That series showed growth of just 2.9 percent in the first quarter of 1992 and 1.5 percent in the second quarter. Data on the third quarter had not been released yet, but forecasts based on the historical data suggested that economic growth had not picked up from the second quarter's slight pace. From that perspective a stalled recovery looked like a real possibility. The point is that the data on which we rely in real time can be imprecise enough to distort the tenor of our policy deliberations and the apparent wisdom of alternative policy actions.

Aside from such basic measurement problems, there is the issue of getting good readings on the economic parameters by which monetary policymakers get their bearings: a benchmark for potential output on the supply side, and for the appropriate real interest rate on the demand side.

On the supply side, consider the current discussion about the U.S. economy's long-run capacity for growth. The remarkable gains in productivity that occurred in the latter half of the 1990s came as something of a surprise to economists. The persistence of those gains has convinced most of us that technological innovations have elevated underlying productivity growth significantly from that of the prior two decades. I personally believe that productivity growth will remain elevated as firms learn to make better use of the technology they purchase. But the truth is that the current state of economists' knowledge about the interplay of technology, innovation, and productivity does not afford us much more than a good guess as to the pace and pattern of potential supply growth going forward.

On the demand side, policy makers face a similar knowledge gap. Since the instrument of monetary policy is the fed funds rate, the strategy of monetary policy is to set the short-term real interest rate at an appropriate level relative to its long-run equilibrium value. What is that equilibrium value?

It is not a constant, of course. It is the outcome of myriad individual saving and investment decisions, themselves predicated on factors subject to numerous fluctuations, such as changes in stock market wealth, perceived business opportunities and fiscal policy. As a practical matter, the equilibrium interest rate may turn out to be relatively constant over time, or subject to relatively easily predicted shifts. But, again, the state of our knowledge is limited. To put this issue in a current context, we might all agree that the recently enacted Federal tax cut package has increased the equilibrium real rate for the economy, but I think we would be hard pressed to agree by how much or for how long. Or, I could have made a similar reference to the effect of the recent wealth contraction and its effect on interest rates.

So, to summarize, one fundamental limitation on monetary policy makers' capacity to stabilize the economy in the short-run is our limited capacity to measure or gauge economic performance very precisely, particularly in real time.

A second fundamental limitation on monetary policy makers' capacity for economic stabilization is much broader. It is the limited capacity of economic science to model people's economic behavior.

I believe market expectations are rational in the long run. But in the short run the marketplace is beset by waves of optimism and pessimism that move expectations irrationally. We should not lose sight of the fact that market participants are human beings, subject to emotions that can cause them to over-react or under-react to events. The result can be a significant change in spending that is neither sustainable nor socially desirable. The problem is that economic science provides little guidance as to their occurrence, impact, or likely persistence of such episodes. So it is difficult for policymakers to frame a response to them.

I do not think we should ignore indicators of consumer and business confidence. If a shift in confidence is likely to introduce a substantial change in overall demand, then monetary policy can and should respond with the aim of restoring demand growth to a pace consistent with potential supply. But I do not think the Fed has or should routinely take policy actions to boost expectations or bolster confidence.

My third and final limitation on policy makers' capacity to stabilize the economy in the short run is one that is familiar to you all: monetary policy is a blunt instrument with an impact that is subject to long and variable lags. As I said, this is hardly news to anyone in this room. Indeed, it would hardly be news anywhere in America today. In recent months, it has become a constant mantra in business news broadcasts that Fed interest rate cuts can take six to nine months or more to begin boosting the economy.

What I want to call your attention to today is the irony that, while there seems to be broader recognition that monetary policy is a blunt instrument, there also seems to be more strident calls for the Fed to use it with surgical precision. Financial market participants seem to expect prompt and precisely calibrated monetary policy actions that yield predictably timed and measured economic results. Such expectations are just not realistic. The danger I see in such unrealistic expectations is that not meeting them -- which is inevitable -- could unnecessarily traumatize

financial markets and undermine broader public confidence, thereby unnecessarily debilitating the performance of the economy.

With that, let me now turn to the third, and last, topic I want to address this morning: what are the implications of all this for the Fed's conduct of monetary policy?

First and foremost, as I said earlier, monetary policy can and should provide a stable price environment. The Fed has been making substantial progress toward this goal in the U.S. over the past several decades. Its precise methods and strategies varied, but focus and persistence were primary ingredients in the Fed's success.

I think monetary policy can and should also contribute significantly to the short-run stability of the real economy. However, we must admit that the state of our economic knowledge and the efficacy of our monetary policy tools are limited in some fundamental ways. We cannot eliminate the business cycle entirely. What we can do is mute the impact of large and persistent negative shocks to the economy. The way to do this is to take full advantage of the knowledge and policy leverage we have available. I think the Fed has done this relatively well in recent years, and continues to do so.

I have been participating in FOMC meetings for just over a year now as a Fed president. Over this period I have seen that in making monetary policy decisions the Fed uses the organizational structure of the FOMC to its best advantage. Reserve Bank presidents are constantly collecting up-to-date intelligence on current and likely future economic and financial conditions from their Bank's board of directors and through the contacts they make in the everyday course of operating a Reserve Bank. The insights from this direct contact, coupled with the information from surveys like our Bank's Business Outlook Survey, sharpens the picture we get from the other available statistics. I believe the composite picture of national economic conditions that emerges as the Presidents and Governors convene around the FOMC table is as accurate and up-to-date a representation as occurs anywhere in government or the private sector.

Nonetheless, not all uncertainties are resolved around that table, and I think the decisions that the FOMC makes reflect a prudent approach to dealing with the uncertainties remaining. We generally move in careful increments at a measured pace. That kind of persistent, incremental action in what we perceive to be the right direction is likely to contribute more to economic stability than aggressive attempts at fine-tuning. Implementation of a monetary policy committed to price stability and achievable real sector stabilization ultimately generates the reasonable market expectations and public confidence we seek.

Looking ahead, we will continue trying to increase our knowledge and improve our policy strategies. Whether we can, in fact, achieve essential price stability and increase our capacity to stabilize the real economy, only time will tell. Meanwhile, in the interest of maintaining public confidence, I think it is important for the Fed to establish realistic public expectations about what monetary policy can and cannot do. For that reason I think the topic of today's panel is particularly valuable. I appreciate the opportunity to offer you my thoughts, and I look forward to hearing yours. Thank you.