

## Timothy F Geithner: Uncertainty and transparency in the conduct of monetary policy

Remarks by Mr Timothy F Geithner, President and Chief Executive Officer of the Federal Reserve Bank of New York, at the Financial Services Leadership Forum Breakfast, New York City, 31 May 2006.

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At the Jackson Hole Symposium in 2003, Alan Greenspan remarked that "uncertainty is not just an important feature of the monetary policy landscape; it is the defining characteristic of that landscape." Historically, this pervasive uncertainty was associated with a tendency toward opacity on the part of central bankers. But in recent years we've seen a rather dramatic reversal in this tendency as central bankers have come to recognize the potentially valuable role that communication with financial markets and the general public can play in the achievement of monetary policy goals.

While transparency has emerged as one of the hallmarks of modern central banking, so too has an appreciation for the challenge of communicating about policy under uncertainty. This challenge can be substantial. It means conveying not only the most likely trajectory for key economic variables, but also the uncertainty around that trajectory and perhaps some indication of how policy might react under the myriad ways that the uncertainty could be resolved. I want to devote my remarks today to exploring what it means, and what it does not mean, for a central bank to communicate in an effective way about policy in the face of uncertainty.

The issue of communication is particularly relevant in the current economic environment. For much of the past three years, financial markets have reflected a high degree of certainty about the near-term outlook for monetary policy in the United States. Market expectations in the weeks preceding each of the last 16 Federal Open Market Committee (FOMC) meetings attached a probability close to one that the FOMC would raise the target for the federal funds rate by 25 basis points. Also, there was very little probability attached to inter-meeting moves over this period, or to moves in increments larger than 25 basis points. And, although market expectations about how far the FOMC would ultimately move were revised significantly over the course of this period as the economic outlook was revised, these changes occurred without the Committee needing to deviate from the near-term path.

This period of unusual certainty in the path of the fed funds rate was the result of a confluence of factors. When the Committee first moved to tighten policy in June 2004, the fed funds rate was at the historic low of 1 percent, and it was clear that policy would have to move a substantial distance to get back within the range of plausible estimates of the neutral rate. Over the course of the following months the incoming data tended to reinforce the case for a progressive move up in the target rate. And, the Committee made a conscious decision to signal that in view of the likely path of growth and inflation further tightening of monetary policy was necessary and could be achieved at a relatively gradual pace.

We are now in the process of emerging from this rather exceptional period, and this provides us with an interesting context in which to reflect on uncertainty and how it affects the conduct of monetary policy and communications about monetary policy.

The degree of confidence in the sign and shape of the near-term path of the fed funds rate we've seen in recent years is unlikely to be a common feature of monetary policy in the United States or in other countries. The simple reason for this is that the economic circumstances that precipitated the policy were also not typical. There are likely to be times when incoming data deviates substantially and persistently from our forecasts. In those situations, policymakers have to examine whether they have significantly misestimated certain fundamental features of the economy, such as the NAIRU or the trend productivity growth rate, that might alter the appropriate course of monetary policy.

Central banks everywhere conduct policy in a state of limited knowledge about the economy and how best to achieve their objectives. The sources of uncertainty they confront are many and varied.

Sometimes, what we think we know about how the economy works turns out to be wrong, either because certain features of the economy have changed, or because our understanding was not right in the first place. It was once widely held that monetary policy could achieve somewhat lower rates of unemployment by allowing somewhat higher rates of inflation, and that it could do this without risking a

substantial acceleration of inflation. This view proved to be mistaken because it did not correctly account for the role inflation expectations played in inflation dynamics.

Economic concepts that are critical to our understanding of the economy may be difficult or impossible to capture in practice. One such concept is the neutral or equilibrium interest rate, which is the rate that, if sustained over some period of time, is likely to be consistent with an economy growing at potential with low inflation. Plausible estimates for the prevailing level of this rate have a range of at least 100 basis points, and the center of the estimates tends to move around quite a bit.

Another concept that is difficult to estimate precisely is the economy's potential, or sustainable, growth rate. The acceleration in productivity growth in the United States in the late 1990s, for example, led us to revise our estimates of how fast the economy was likely to be able to grow at that time without undermining price stability.

We also face considerable ignorance about the precise channels through which policy actions ultimately affect the economy, as well as how long those effects will take to show up and how large they will be when they do show up. As you would expect, this makes it difficult to assess in advance, or even in real time, the amount of loosening or tightening that is likely to be necessary to achieve the goals of central banks.

Even if we had precise knowledge of key economic relationships, our ability to assess economic conditions in real time would be impeded by data limitations. Though most modern central banks implicitly or explicitly target some measure of inflation, the host of issues surrounding the proper definition and measurement of inflation for policy purposes is daunting. In general, most economic data are subject to sampling error and so cannot simply be taken at face value. Also, many of the series we rely on are subject to revision as more or better information becomes available, and potentially can even be redefined in a way that makes the history of the series less useful for interpreting current movements. Finally, data are often reported with a significant enough delay to limit their use as a read on current conditions.

But, even if we knew the model and data with certainty, it is impossible to perfectly predict the evolution of factors that are largely beyond the influence of current monetary policy but that would likely affect our policy today if we knew for sure how they would look tomorrow. One way to say this is that we simply cannot know what types of "shocks" are likely to hit the economy or when they will hit. And even as they impact the economy, the appropriate policy response may not be obvious because it may be difficult to assess in real time the probable duration of the shock and whether it is demand driven or supply driven.

Even at a one-year horizon, which for policy purposes is not a very long time, there is considerable uncertainty surrounding forecasts of GDP growth. For example, the Survey of Professional Forecasters reports that on average 50 economists attach a 90 percent probability to an outcome for real GDP growth for 2007 that ranges from 1.0 percent to 5.0 percent. The width of this band of confidence or uncertainty is similar to that in the published forecasts of many central banks.

The types of fundamental uncertainty I just reviewed are always present, but their impact on the appropriate near-term trajectory of rates, and hence on the degree of confidence the central bank can convey about that trajectory, may vary substantially over time.

I want to mention a few other concrete examples of the uncertainty we currently face. The latest wave of global economic integration has influenced inflation and output dynamics around the world in ways that may be hard to understand fully in real time. Technological progress, along with the transition to greater labor force participation in emerging and developing economies has probably served to keep inflation low in many other countries and has served to increase the rate of growth in potential output globally. But the rapid growth in the market sectors of emerging and developing economies may also contribute to more rapid growth in global demand and inflation pressures. This changing configuration of world markets complicates the task of forecasting inflation and output within national economies.

Energy prices have surprised us over the past few years, in terms of the extent of the rise in prices, the increase in volatility, and the limited negative effects to date on global economic growth. Our capacity to project future energy prices has proven to be very limited, as has our ability to convincingly ascertain the extent to which temporary supply factors, rather than an unrecognized strength in global demand, accounts for the energy price trajectory we've witnessed recently. The consequences of these limits to our knowledge may be even greater given the extent of the price increases already experienced.

The unprecedented level of the U.S. current account deficit and dramatic rise in U.S. indebtedness adds to the normal degree of uncertainty that surrounds any medium-term forecast because of the dynamics that could accompany the path to a more sustainable pattern of capital flows.

The process of adjustment that appears to be underway in the U.S. housing market, occurring as it is after a sustained and very substantial decline in the household savings rate, provides more than the usual challenge in predicting the future strength of consumer spending.

It is also hard to assess the degree to which the current constellation of global monetary conditions has influenced the behavior of long-term interest rates. This makes it harder to assess the appropriateness of the current stance of monetary policy. And it may also mask some of the pressures on risk premiums we might expect to see given the deterioration of the U.S. long-term fiscal situation and the magnitude of the U.S. current account imbalance.

In reviewing these dimensions of uncertainty, I want to emphasize that the fundamental conditions of the U.S. economy, and much of the world economy, are very strong today. But these aspects of uncertainty help illustrate what makes monetary policy interesting, and they help explain why central banks may confront wide bands of uncertainty around even a strong central outlook. They also emphasize the importance of the process we use to make decisions about policy in a state of limited knowledge.

Policymakers can use a range of approaches to deal with uncertainty. In addition to making a very substantial investment in trying to capture changes in economic activity that may not be fully evident in the national data, we typically spend a lot of time looking at the assumptions that underpin the central forecast, and the sensitivity of that forecast to the possibility that those assumptions prove wrong.

We regularly and systematically examine a range of alternative scenarios that attempt to capture a broad range of different paths for the main forces operating on the economy. These scenarios include those that seem highly implausible but might prove very damaging, as well as those that seem more plausible but might alter the outlook less. To complement this, we look at the implications for monetary policy of alternative scenarios for the outlook—what should we do if the world moves in a different direction. And we also look at the impact on the outlook for growth and inflation of different paths for the fed funds rate.

These approaches help illustrate the size and sources of uncertainty we live with at any moment. They do not give us the capacity to attach precise probabilities to alternative scenarios or to quantify with precision the implications, but they help frame a discussion of the material risks to the outlook and the potential consequences of different types of policy mistakes. And they can help inform choices about how central banks should affect expectations about future interest rates.

Along with these analytical tools, many central banks have adopted a decisionmaking structure that is designed to bring a diversity of independent perspectives to the table. Although the FOMC's discussions begin with the presentation of a forecast prepared by the staff of the Federal Reserve Board, the committee members bring to the discussion substantial information based on independent efforts to understand the underlying dynamics of demand and inflation and their implications for monetary policy. This can provide a stronger foundation for decisions, particularly where uncertainty is inherently great.

Central banks have adopted different approaches to this challenge, even as there has been broad convergence toward the model of independent central banks, with explicit mandates that include price stability and greater disclosure and transparency.

The central banks that publish quantitative forecasts for growth and inflation now typically show the confidence bands around their forecasts. In some cases, these forecasts use, as a conditioning assumption, financial market expectations for the path of short-term interest rates. In others, the central bank publishes a forecast that includes the central bank's assessment at that time of the likely path of monetary policy over some horizon. In the former case, the implications of the forecast for monetary policy are left implicit. In the latter case, the likely path of monetary policy is made explicit, but that path is heavily qualified or conditioned to make it clear that that expected path of short-term interest rates will change as conditions change.

The FOMC's approach to communication differs in interesting and important ways from these other models. Although the Committee has introduced a gradual but marked increase in the degree of communication over the past two decades, it provides information about its forecast in quantitative terms less frequently and with less detail than has become typical of many other central banks. And

yet, because of the unique circumstances over the past two to three years, it has provided more information about the near-term path for monetary policy than has been the practice of many of our counterparts.

These differences in approaches to communication do not seem to reflect fundamental differences in perceptions of the degree or nature of uncertainty. The proponents of the regimes with the most explicit forecasts and greater disclosure about the future path of interest rates do not claim to have greater confidence in their ability to forecast. They do express, however, greater comfort with some of the potentially adverse consequences of such approaches, the tendency, for example, for observers to gravitate toward the central tendency of the forecast and to look past the uncertainty bands and qualifications. And they express less concern that these approaches to communication will end up limiting the flexibility of central banks to react as circumstances change without inducing damaging volatility into markets.

And so, even as central banks have moved in varying degrees toward greater clarity about their goals, forecasts and policy decisions, they have also moved to being more explicit about uncertainty and about the need for flexibility in how policy should adjust over time.

This reflects an evolving appreciation that there are limits to transparency. Transparency in monetary policy cannot mean that the central bank conveys more confidence in the outlook for growth and inflation than it can reasonably have, and it cannot provide more assurance about the likely future course of policy than it actually has.

This seems self evident. And yet as central banks have moved to communicating more and disclosing more about monetary policy, transparency in monetary policy has been associated with rising expectations for clarity about the path of target interest rates over time. It might seem desirable in an ideal state of the world for expectations in financial markets about the future course of policy to closely track in real time those of the central bank. But given the degree of uncertainty that surrounds monetary policy making, this is unlikely to be possible, except in special circumstances.

There will be circumstances when it is appropriate for the central bank to send a signal about the target rate that extends well beyond the immediate horizon. These circumstances are not likely to arise frequently, and will be appropriate in particular conditions when the benefits afforded by the effect on expectations clearly outweigh the cost imposed by the loss to flexibility.

Central banks should be clear about what they are trying to achieve. They should be open with the knowledge and insight they possess. And they should provide the public with clarity where it is attainable. But they also need to convey the limits to their knowledge and avoid providing a sense of certainty they do not, or cannot, possess.

Uncertainty strengthens the case for being open about what we do not know, and exploring the robustness of our decisions to a range of alternative scenarios. But uncertainty also reinforces the case for clarity in communications about the objectives that guide policy and the rationale for our decisions. Perhaps most crucially, this means 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.