Mr. Svensson: When it comes to the issue of whether central banks should respond to the terms of trade, oil prices, asset prices, exchange rates, etc., there is a simple but powerful way to think about it that always gets it right. This is what Chairman Bernanke calls “forecast-based policy” in his 2004 speech (as a governor) “The Logic of Monetary Policy.” It is what I call “forecast targeting” or “flexible inflation-forecast targeting.” It is simply the principles of good monetary policy, which aims at stabilizing both inflation around an inflation target and the real economy.

Because of the lags between instrument changes and the effects on inflation and output, good monetary policy has to rely on forecasts. Good monetary policy consists of choosing an interest-rate path such that the forecast paths for inflation and the output gap look good. “Look good” means inflation going to the inflation target and the output gap going to zero at a reasonable pace, in a reasonable compromise between stabilizing inflation and the output gap.

Suppose now that the central bank is in such a situation, having chosen an interest-rate path such that the inflation and output-gap forecast looks good and that everything looks fine. Suppose then that a terms-of-trade shock, or some other disturbance happens. Then, at
an unchanged interest-rate path, the inflation and output-gap forecast shifts and no longer looks good.

Good monetary policy then consists of adjusting the interest-rate path such that the inflation and output-gap forecast again looks good. This simple way of thinking tells you when and how to respond to shocks. You basically filter all the shocks through the forecast. This is one way to clarify this issue of how to respond to the different shocks Mr. Rogoff talks about—globalization shocks and others.

These principles of good monetary policy are already being applied by a number of leading central banks—most explicitly by Norges Bank, the central bank of Norway. If Chairman Bernanke follows his own previous speech, these principles may also already be applied at the Fed. Unfortunately, the unnecessary and excessive secrecy that surrounds the Fed makes it difficult for outsiders to know this. The five-year publication lag of the Green Book and Blue Book is excessive; a two-week publication lag would be more appropriate.

Mr. Meyer: Mr. Rogoff, when you talk about the implications of a flatter Phillips curve for monetary policy, you tend to emphasize that it should make central bankers more vigilant and perhaps, therefore, increase good inflation outcomes. What happens if central banks find themselves outside their comfort zones? Does it increase the incentive to follow opportunistic strategies and to stay there? Can it lead, therefore, to worse economic performance?

And, second, could you elaborate on this story that individually central banks seem to have less control over domestic inflation, but collectively they continue to have control? What does that mean? I didn’t understand that point. And how do you reconcile the story that they can control inflation with monetary policy, but they have less control over their domestic real long-term interest rates?
**Mr. Knight:** Mr. Rogoff, you argue that individual central banks have less control over market-determined, longer-term interest rates in their own countries as globalization proceeds. You also say that this reduced control doesn’t mean that collective action by central banks is ineffective. I wonder if you could elaborate on these points. The question is, If there is a big economic shock—just to take a totally hypothetical example, let’s say an unwinding of global current account imbalances—what would be the appropriate cooperative set of responses for central banks in that environment?

**Mr. Dudley:** I want to raise two questions, one on profit margins and the other on the issue of recession risks. We have been talking about globalization, but we haven’t talked about profits at all. One of the oddities right now is supposedly globalization leads to more competition, yet we observe corporate profit margins globally are at very elevated levels. The question is, Is globalization a factor here? And, second, is it temporary or is it permanent? Because if it’s temporary, that is good news in terms of the inflation outlook. As profit margins come down, that will provide some support to lower inflation. But if it’s permanent, we don’t have that support. Also, whether it’s temporary or permanent has important implications for equity prices, of course.

A second issue I want to raise briefly is this whole issue of recession risk. The Great Moderation implies that recession risks have come down. That also implies, though, that when recessions occur, that is a bigger surprise for markets. It implies a bigger widening in risk premiums when recessions actually occur. That suggests to me that recessions are going to have more of a financial component to them than in the past. The last two U.S. recessions and recoveries are very much consistent with that—1991 credit constraints impeding the recovery and, obviously, the 2001-2003 weakness in the stock market. I would be interested in Ken Rogoff commenting on that.
Mr. Taylor: I think the volatility measures quarterly, even annually, don’t completely capture this phenomenon of improved macro performance. It’s really as much these very long expansions and very short and historically mild recessions, it seems to me, that are equally remarkable. Clearly, the measures are related, but they are not exactly the same. That is why sometimes it is better to think of this phenomenon as the long boom because, since the early 1980s, the United States has effectively had just one long boom, with a couple of historically very small recessions.

The other thing about it, if you look at this way, you see improvements in monetary policy spread around the world. As Vittorio Corbo was saying, look throughout Latin America. You are beginning to see the same improvement. We haven’t had, fortunately, an emerging market crisis of any magnitude since 2001-2002. It is the same kind of phenomenon that you are seeing—no recession around the whole world for the same reason.

A second point on exchange rate volatility: It seems to me there is a lot of evidence recently of decline in volatility. Dino Kos has written about this. It is focused more on the implied volatility measures. It is a more recent phenomenon, so it doesn’t have to be related to the macro phenomenon. It definitely seems to me something new, and maybe it’s too early to call it a great anything. If it persists for another few years, we will be calling it a great something. I’m not deciding what it is now.

One reason for this, perhaps, is related to monetary policy in the financial markets. There has been absolutely no intervention in these markets. September of 2006 will be the sixth anniversary since the United States and the European Central Bank (ECB) and the other G-7 countries, except for Japan, have not intervened in exchange markets. So, it’s a different world, and that might be a factor to take into account.

Mr. Weber: I’d like to go back to something that Gene Grossman started yesterday when he said, “It’s no more goods. It’s services.”
Is really the distinction between goods prices, commodity prices, and asset prices, for example, a relevant distinction? Charlie Bean mentioned the fact that oil, for example, was driven by the same factors—globalization as a declining factor in the commodity prices that we’ve seen. The question is whether oil is also not an asset price, in particular, as recent activity of hedge funds has been seen there. For things like housing, it is pretty clear. One of the challenges we face with monetary policy is we shouldn’t let relative price changes affect our objectives. And for oil, I think this is exactly one of the issues. If it also has an asset price dimension, it becomes even more apparent.

For housing, it is the way we measure it. If you take owner-occupied housing and if there is a period where asset pricing on housing goes up and there is huge demand for that but you measure it as rental prices, then the increase in demand for housing you buy lowers the demand for housing you rent. The rental price may actually be suppressed by a relative demand shift. When, as the housing market cools, you go back into more rental accommodation. It puts upward pressure on the housing prices. That basically then flows into core measures of inflation, so it creates an upward pressure in a period where you achieve the cooling of an asset price. But your core measures or headline measures of inflation get distorted by this very relative demand shift, and that is something that is a problem. We shouldn’t react to monetary policy with monetary policy to relative demand shifts. We actually can’t. There is a good reason why we have to do a very disaggregated analysis of what is driving various changes in our core objectives we look at. This is one reason why we, for example, in the ECB look at the very disaggregated first- and second-level analysis of what drives prices. It is very important if you want to react with monetary policy to certain developments that you understand what are the drivers of these. I think this is something that, for me, the increasing interaction of commodity prices and asset prices is something we have to keep up with. Globalization adds to these problems. It also may be helpful to us because our problems become increasingly alike. This is an aspect where maybe, Ken, I would ask you to elaborate on a bit more in the paper. You touch on it, but I find there are a lot of dimensions you could improve on that.
Mr. Corbo: Ken made a comment on how we should consider demand trade shocks in our framework and that we should be aware of them and so on. I would say that the practice is that most central banks today take them into account just like other shocks, as long as inflation expectations are well-anchored and as long as there is no second-round effect by taking into account both the width of our target and the length of the policy horizon. So, we react only when we think they are going to affect our inflation forecasts, as Professor Svensson was telling us. There is nothing new. We must take them into account. We don’t react as long as it doesn’t affect our forecast of inflation. That is done in Chile and Brazil and in central banks that use a flexible inflation target.

Mr. Rogoff: First, thank you to Charlie for his excellent discussion. I will expound on one thing he said, which is that obviously one of the issues is communication.

Lars Svensson speaks about how good monetary policy involves communicating the forecasted output gap to the public. That is quite a communication challenge when we don’t have a clue what the output gap is and how it’s changed by globalization. The public finds that inflation is something they can understand.

Central banks definitely do need to work in the direction of what Lars is talking about. Indeed, everyone is moving to a regime of greater transparency. But I don’t think it will solve all problems by any wild stretch of the imagination.

Larry Meyers, perhaps you misunderstood the paper. I so argue that central banks can control inflation fine, but this is a separate issue from real interest rate convergence. The United States is arguably now smaller as a share of the world income pool, and thus has an effect on the overall effect level of interest rates.

Mr. Knight, I only have time to give a glib answer to your question of what the collective response should be to a U.S. current account
collapse. In sum, I am a bit skeptical about how much collective response actually can achieve if central banks are already doing a good job balancing their national output and inflation targets. There is a huge academic debate about that and it depends on nuances like what the degree of pass-through is, what goods prices are sticky in terms of, and factors like that. I’d have to admit that some of the recent debate pointed out interesting qualifications to results in my early published work on this topic. Presumably, a sober central banker would want to achieve some degree of coordination if the current accounts unwind.

Bill Dudley asked a series of challenging questions, to which I can’t do justice. I will say that we don’t necessarily have less frequent recessions, as much as milder recessions. That is part of what we’re seeing in The Great Moderation. Also, I don’t think if in 2008 and 2009 there is a mild downturn, that’s going to prove such a big shock to the world’s asset markets.

John Taylor also made a number of good points on exchange rate volatility. First of all—and I do cite Dino’s speech in the paper—if you look at options measures of volatility over the last very few years for bilateral rates, they have gone down. But over a longer horizon, if one looks at volatility in bilateral rates, they went up in the 1980s, and then they have been coming down since, albeit not so sharply. On multilateral rates, it is much less evident. Statistically, it is too soon to come to judgment on the very recent downturn in exchange rate volatility; is it structural or simply cyclical. We have seen a clear structural change in output and consumption that is confirmed by every conceivable statistical test. When one performs similar tests on exchange rates, the results are far less clear. You can see that also looking at the graphs.

I’ll try to take your point into account, Mr. Weber, when I rewrite the paper. That is something that I should pay more attention to—the fact that volatility of asset prices can, in some cases, translate into the volatility of individual goods prices that matter a lot. So, you can’t
just make a sweeping statement not to worry about the volatility of asset prices because that can translate into volatility of goods prices.

**Mr. Cotis:** I would like to raise a point about optimal monetary policy under uncertainty. In this case, it is uncertainty about the outlook for the terms of trade. Say you are in a situation where you don’t know whether you are facing a discrete oil shock or a sustained trend increase in oil prices. The question to Ken is, What is the optimal monetary policy answer?

**Mr. Meltzer:** Charles Bean and Axel Weber emphasized the point I wanted to make: the difference between price level changes and sustained rates of change. It is also in Ken’s paper. But I would like to raise a question with the central bankers as to why they don’t do a better job of explaining that to market commentators and journalists. It is only 200 years old, so it is about time that people learned that distinction. It also might be useful to point out to them that there are real costs to the economy of trying to use monetary policy to offset real shocks that affect the economy that will disappear over a reasonably short period of time.

On the question of volatility, I have only this to add to Ken’s list: There surely is a short-run response to the volatility to the many statements that are made by Federal Reserve officials in their almost-daily speeches.

**Mr. Bollard:** Just continuing the intergalactic theme, during a week when a panel of astronomers has declared that Pluto is no longer a planet because it is too far away, it is too small, and it is the wrong shape, that probably would send a shiver of fear through some of my small, open economy colleagues. Speaking from a country which is too small, too far away, and probably the wrong shape, I guess I’d urge you, and perhaps others in the room, to push more along the lines of what globalization and its impact on monetary policy might mean for small, open economies, which are pushed to pursue monetary conditions that are divergent from G-3 economic conditions. Does this need to be
addressed by thinking more about relative prices in working rules or in policy targets? Or do we just have to think more about the fact that monetary policy for small, open economies is not perfect, isn’t going to be, and it is going to be quite harder in divergent circumstances, and get real about that sort of thing?

**Mr. Rogoff:** In the interest of time, all three of the last questions raised good points for future topics for this conference. I don’t think I can give one-sentence answers. On Jean-Philippe Cotis’ question, I’ll say one thing, which is we certainly couldn’t answer this in a model. An example of what you are talking about, you may have had oil in mind. What if it keeps rising? Conversely, what if China grows at a mere 4 percent for a while, instead of 10 percent? At this point, that is going to constitute a very negative shock, compared with what people are expecting. Before, it was a surprise when they kept being 6, 7, 8, 9, and 10 percent. At this point, it can go the other way. We need to think about long-term trajectories, as you are suggesting.