

General Discussion: Understanding the Greenspan Standard

Chair: Roger W. Ferguson, Jr.

Mr. Fischer: It's a great pleasure to be here, to have read this really interesting and well-written paper, and to listen to the comments. I would like to add three comments, and I have one question, which we all presumably are asking. How much of what has happened is because of the Greenspan Fed's monetary policy—that is, in terms of the better performance of the U.S. economy?

There is a lot that has happened in the economy in the last 20 years. I don't suppose you'd attribute the improved performance to better fiscal policy, so we could leave that out. But we have a much more flexible economy than we used to have. We have much better developed financial markets, and we have globalization. And we also have the fact Allan Meltzer alluded to. Monetary policy in countries that have had rules—he mentioned the United Kingdom, but you could turn to Australia, Canada, and quite a few developing countries—also has done much better in the last decade.

Maybe what we have here is a matter of trying to figure out what is a “rule” and what isn't a rule. My suspicion is that Greenspan Fed monetary policy is a rule that is applied with excellent judgment and that very similar results, in terms of improved performance, have been attained elsewhere, but possibly not quite as good.

Secondly, on the international front, there is a big question as to what future Feds are going to have to do. The global economy lucked out in 1998. I believed at the time that, if long-term capital management hadn't gone under and if the U.S. financial markets hadn't looked in such bad shape, the Fed wouldn't have had an excuse to act. Once the U.S. economy was threatened, it was able to do things that were useful for the global economy and maybe more important than Allan Meltzer suggested. That wasn't just a short-term problem. That was the short-term problem that could have developed into a long-term problem.

I have a third point, since we are all looking to history. I was reminded, while reading the Blinder-Reis paper, about Keynes' essay on Newton in which he says people think of Newton as the first of the modern scientists. Actually, he was the last of the alchemists because he spent a lot of his time studying alchemy. As I listen to the emphasis on the role of judgment and how you didn't need a model, how you shouldn't have a rule, etc., I am thinking that was more of the old central banking, probably being done by one of the leading modern central bankers.

Mr. Ortiz: I wanted to first say that I enjoyed reading the paper a lot. It was fun, and I think that it transpires that the authors also had fun writing the paper.

Let me make a brief comment on John Taylor's point on the international role of the Fed. The paper points out that it is not in the formal charter of the Fed to play an international role. Well, that is true for all central banks in the world. I don't know of any central bank in the world that contains a charter that says you should try to take into consideration what is happening outside your boundaries in order to formulate monetary policy. The paper goes on to say, "Well, maybe there should be some addition in the charter to clarify the role of the Fed." Although the paper recognizes that, of course, the U.S. Congress would be very reluctant to do that. Frankly, this is quite unnecessary. In practice, the international role of the Fed has been quite well-established, and obviously there is no need to change any

sort of charter. It is well-known that the welfare of the international economy is important for the conduct of monetary policy and for the U.S. economy.

Let me give you an example of how this has changed. In 1994, the Fed raised interest rates by 300 basis points in a quite unexpected fashion, which now is recognized as an important cost of the Mexican financial crisis of 1995. Of course, it was very difficult to recognize at the time because at the same time domestic considerations were making a lot of noise. It obviously was not only the Fed's move that precipitated the crisis.

Nonetheless, if you contrast that with the rise in interest rates in the current cycle, there has been much more transparency, and the intention to raise interest rates in a moderate fashion has been telegraphed and transmitted to the markets. It has led to extremely different results. This episode of rising rates actually has been assimilated by markets in a much easier way.

My second point is that policymakers in the emerging markets have learned to cope with situations of uncertainty and volatility. Back in 1995, Mexico and all other emerging markets were under fixed exchange rate regimes. I won't go into that, but there has been a change in the management of monetary policy worldwide and, in particular, in the emerging markets.

Mr. Feldstein: I want to comment on the issue of the Greenspan approach to risk management. I think the chairman's description of his approach, which we heard today and earlier, is the right way to deal with uncertainty. But I don't think it corresponds to the way that Blinder and Reis describe it in their paper. I don't think what the chairman said corresponds to the matrix they reproduced in the handout or to the notion of *satisficing*. As Alan Greenspan described it again this morning, what he is doing is looking at the complex world of many possible states of nature and choosing a

policy that minimizes expected losses, rather than focusing on the most likely outcomes.

That corresponds in a probabilistic context to the basic ideas of Bayesian decision theory. That is what I said in my comment on Alan Greenspan's remarks at the American Economic Association (AEA) meetings a few years ago that Blinder and Reis quote in the paper. I stressed in those remarks that no one literally identifies all of the possible states of the world and assigns a subjective probability to each of them. That is not to be taken as an explicit description of the way anybody makes decisions; it is an allegory, to use their word.

It is clearly what Alan Blinder described this morning as the way he thought about the deflation risk problem—basically two primary states of the world. We could be sliding into deflation, which would bring with it very serious consequences, or we could be moving in an easy money context to higher inflation rates. The probability of deflation was small, but the outcome would be very bad. Therefore, the Fed pursued an unusually easy policy. That corresponds exactly to how a Bayesian decisionmaker would think about the problem.

Mr. DeLong: There was one sentence in Blinder and Reis' paper that I wished had been expanded into a page, a section, or possibly a book. It was something like: "We are perfectly comfortable with the long-standing practice of railing against excessive fiscal deficits." That is something that needs more attention because, in the long run, the Federal Reserve must fail to provide price stability if nominal government debt growth significantly exceeds the growth of real GDP. Our high politicians have dismantled the institutional and bureaucratic procedural mechanisms used to protect us, whether nominal bracket creep before 1980 or the Budget Enforcement Act of the 1990s. Unless these institutions can be rebuilt, which may require a more active and aggressive Fed willing to give harsher lectures to high politicians about fiscal fecklessness, future FOMCs may well face incredibly painful dilemmas with no good options.

Mr. Mishkin: One of the ways I would have characterized a key success of the Greenspan Fed is the establishment of a strong nominal anchor. That is the secret to good monetary policy. When you have done that, you have won 95 percent of the battle. Then, of course, the details still matter.

You can establish a nominal anchor in two ways. One is you can do it through actions and words. In fact, the Greenspan Fed has been brilliant at this. Clearly, another alternative is to do it through an institutional framework such as inflation targeting. That is another alternative that has been quite successful in other countries.

Related to establishing a strong nominal anchor with inflation targeting, you see criticisms that are leveled against rules—particularly, Alan Greenspan has criticized very actively the danger of using rules and slavishly operating as you would with a hand calculator. Those criticisms apply very strongly to what we call “instrument rules.” Because the economy can change and there is a lot of uncertainty about the parameters, if you follow an instrument rule, policy can go far astray.

Those criticisms do not apply to target rules in which you are much more explicit about what the goal of monetary policy is in terms of inflation control. In that sense, there is a very strong distinction between instrument rules and between inflation targeting-type target rules, which actually have a lot of discretion and require tremendous judgment—all the things that the Greenspan Fed has had to do. Criticisms against instrument rules are very valid, but they don’t apply to inflation targeting frameworks that require a lot of discretion. But discretion that is constrained—something Ben Bernanke and I have emphasized in the past—can ensure that people understand that the nominal anchor is very strong and will stay strong.

Mr. Budd: The issue I want to discuss very briefly is touched on in the third section of the Blinder-Reis paper. It is also one that has been raised elsewhere, including by Stan Fischer, which is the global aspect

of the Greenspan era. Not only has the United States had a great economic performance in terms of price and output stability, so has much of the rest of the world. To what extent should we thank Alan Greenspan for that?

Stan Fischer made the reasonable point that there have been other important developments, such as globalization, financial liberalization, and so on. One obvious way in which we must thank him—again as Blinder and Reis point out—is that stabilizing the United States is very helpful for everyone else because the United States is so big. We certainly have had that benefit, even if, at times, the policy changes that the United States takes to stabilize itself may be awkward for other people. That generally hasn't been a problem for Europe.

Second, there is interesting disagreement now between Blinder and Reis and John Taylor on the question of whether in 1998 what Alan Greenspan and the Fed were doing was at least partly helping the world specifically, rather than simply doing what was needed for the United States.

Third, and this extends the point that John Taylor did make, I certainly believe Alan Greenspan has set a personal example and a style, which have been copied around the world. That has been extraordinarily important. There also has been considerable copying of the institutional arrangements, as people have set up policymaking committees. The Monetary Policy Committee (MPC) is an obvious example in the United Kingdom. The Japanese people, not unlike the European Central Bank, have tended to set up institutions that look rather like the Fed or the FOMC.

Doing this in the United Kingdom has been brilliantly successful, though there are differences. We do have an inflation target. I remember Marty Feldstein, a few years back when inflation targets were being discussed, saying he thought these were probably appropriate for less-developed economies. So, we have been happy to do that.

There is another difference—what Blinder and Reis call the “extreme personalization” of monetary policy. The great Mervyn King has brilliantly and typically allowed it to be known that he was outvoted at the last MPC meeting. That is important in emphasizing the British system is a committee system. I know that Alan is always very modest in his remarks about the importance of the whole Federal Reserve System, but in the United Kingdom, we are not trying to develop a system, which might rely on the genius or the gifts of one individual.

The common theme has been what Mervyn King has called “constrained discretion.” It is discretion, but it is constrained. It is constrained in the United Kingdom because we have a clear inflation objective. Alan Greenspan and the Fed have used it in a masterly way. The rest of us have done our best to imitate it with great benefit.

Ms. Woodall: I wonder if it is really fair to generalize from the experience of the bursting of the stock market bubble to claim, more generally, that the mopping up strategy is always the best way to deal with all bubbles. If you take a risk management approach to how you should deal with asset bubbles, then given that the costs, the benefits, the uncertainties, and the risks may vary in different circumstances, perhaps there is a stronger case for leaning against housing bubbles than leaning against stock market bubbles. In the paper, you go through the three main economic costs when bubbles inflate and burst. Namely, they distort resource allocation, affect output and inflation, and threaten financial stability. Arguably, all three of these are greater in the case of a housing bubble, partly because of the greater debt involved and the greater wealth effect. And, in many countries around the world, we see a bigger distortion in resource allocation in terms of more resources being devoted to the property sector.

So, I would like to hear some response from Alan Blinder or from Ricardo Reis on whether it is fair to generalize. Then, I have one last point. Of course, the trouble with generalizing and arguing that it is

always best to mop up after a bubble bursts, rather than leaning against it, is the moral hazard issue. If everybody always expects central banks to mop up afterwards, doesn't that make bubbles more likely?

Mr. Sinai: I have a comment for Alan Blinder and Ricardo Reis, on preemption as a component of the Greenspan standard, with which I concur. As you note, one of the most significant achievements of the Greenspan era was the 1993-1994 episode of preemption (called that by the Federal Reserve). We had 1989-1990, in which somebody might argue we had a very mild recession. So, the attempt to preempt the coming recession that was made was not a failure. The federal funds rate was reduced before we had negative real GDP, and this is the first time in history that happened. That was preemptive. Fed Policy in 1993-1994 was obviously preemptive. In 2001 and 2002, you might describe policy as preemptive against deflation risk. In the current situation, 2004-2005, you might describe it as a preemption of the risk of accelerating inflation by removing policy accommodation at a measured pace or as preemption to maintain price stability. Preemption can be replicated and carried on.

Mr. Trichet: First of all, this session is absolutely fascinating, and I want to praise the paper and expositions. They are extremely stimulating. I would just like to say a few words about rules versus discretion, which is at the heart of our discussion.

I want to echo two remarks. One was made by John Taylor on Alan's participation in the G-7 and other international meetings. I have had the great privilege of participating in all 18 years of the G-7 meetings. But the big difference between Alan and me is that I have had three different jobs. I was undersecretary of the treasury of my country, governor of the national central bank, and then the president of the European Central Bank. So I have, if I may say, a multi-ocular vision of your splendid exposition. What John said is more than true. You were always during these 18 years at a level of lucidity, which was admirable, including your recognition of what was happening in the

United States in terms of labor productivity and productivity in general. I have to say, again, looking at it with hindsight and from three different angles in 3D, what you did and are doing today (we'll have a G-7 in a few weeks) in the global economic meetings and the G-10 meetings in Basel in particular is wonderful. Thank you very much for all that.

The second remark I want to make—I am echoing an element of Blinder and Reis' paper—refers to the measured pace with which transparency is improving in the Fed, and in particular the May 1999 evolution. Can I suggest very cautiously that in January 1999 something new happened? It was the concept of real-time transparency, which was introduced by the ECB. For a lot of very good reasons, we had to do that. We could not escape being a real-time transparent central bank, but I trust that it was observed immediately by the market because it was not the state-of-the-art transparency of central banks at the time. So, it was very bold. I take it that the pressure of the market played a certain role in calling the Fed for more transparency in real time.

Ms. Rivlin: I wanted to ask explicitly about inflation targeting because the Fed has been “odd man out” in not having an explicit inflation target. Target is not a rule, but, in the opinion of the commentators and conceivably the chairman, would it in hindsight have helped or hurt if Congress—as it once threatened to do—had imposed an inflation target of, say, 2 percent in core inflation or something like that? Would it have made it easier for the Greenspan Fed or harder over this period, or would it have made no difference?

Mr. Taylor: Let me respond to Alice Rivlin. The period we are studying here represented a decline. There was some disinflation going on. In that period of time, it was necessary to have this kind of a focus on price stability as a first priority, but not necessarily have it numerically through a target. That has worked very well. In fact, a related point here we should emphasize all the time is that focus on price stability has had tremendous benefits in terms of economic

stability. An extreme way to put it is there really is not a tradeoff in that sense. The more that point can get across, the more the value of having price stability as a high priority will be incorporated in people's thinking throughout our society.

Mr. Meltzer: Just a quick comment to Pam Woodall. It is not the job of the central bank to prevent people from making mistakes. It would be useful if, in your comment, you would make a distinction between whether the stock market increase was real or nominal; whether it was due to the fact that people thought that productivity growth was going to be very high and that profits were going along with it; or whether it was going to be due to inflation. I don't think the central bank knew that at the time or that anybody else did (perhaps you did). It also would be useful to discuss, as people fail to do when they talk about this, the social cost of preventing people from buying stock or houses at the risk of a potential recession in the United States or the world economy because you are trying to do something that central banks are not well-equipped to do.

Mr. Blinder: I want to make just a few basic points. The first pertains to the issue of what is and what isn't a rule. Alice Rivlin said it best at the end: A *target* is not a *rule*. Rick Mishkin was talking about how "target rules" are better than "instrument rules." Given what he means by that phrase, I agree with him completely. But I don't like calling target rules "rules" because—as Mishkin said—they require a lot of discretion. And for that reason, they are much more sensible than rules.

Allan Meltzer, in his discussion, came very close to talking about dividing the line between rules and non-rules as follows: Anything sensible is on the rules side and anything nonsensible is on the non-rules side. That is not where I'd like to draw the line.

To me, a rule is something that tells you what to do under certain circumstances, and I believe I could support that interpretation if I had my dictionary here with me. In that regard, John Taylor is

completely right. The Taylor rule is not meant to be interpreted literally. John Taylor has said that before, and I've said that myself. It is a kind of a norm to check yourself against, and around which there is an allowance for discretion.

A question arose as to why price stability was not on the list of major principles defining the Greenspan standard. Here, you have to read the endnotes. One of them says (and I paraphrase) that loving price stability is such an obvious principle of central banking that we didn't see any point in putting it on a list characterizing Greenspan. It will characterize every central banker in this room. That is why price stability wasn't on the list, not because it was not important to what Alan Greenspan has done.

There is a similar terminological issue having to do with risk management versus optimization. It is easy to fall into the trap of saying you are an optimizer any time you do the best you can. Well, if you take that definition, as Richard Nixon would have said, "We're all optimizers now." It has to mean more. The theory of the consumer, for example, places constraints on cross-derivatives. If your theory of optimization places no restrictions on behavior at all, then you have no theory. Thus, I would argue against Marty Feldstein's view as quoted in our paper. (Marty, this may be unfair. I picked you out because you were a discussant of the Greenspan paper. But lots of people have said the same thing.) Bayesian updating has a specific meaning in statistics. On the other hand, "Bayesian" can be used as an adjective by way of analogy. I do believe that is the way Chairman Greenspan uses it. I know it is the way I use it all the time. All of us, unless we are completely stubborn, update our prior beliefs as new data come in. In that sense, we are all Bayesians. But that is different from following Bayes' rule in trying to solve an optimization problem.

The last quick point pertains to Jean-Claude Trichet's remark. In mulling over why the Fed made the big change in transparency in May 1999, it did occur to me, and it was suggested by somebody, that being embarrassed by the ECB's greater transparency—if I may put it

that way—was a motive. I don't know if that was the case; I was not on the FOMC in 1999. But lots of people in this room were, and I would like to hear from some of them on that. If I had some documentary evidence, I would be happy to amend the paper accordingly. But you cannot find any in the Federal Reserve transcripts.

Mr. Reis: Let me emphasize again the first point Alan Blinder made, which came in several of the comments on rules versus discretion. If you wanted, you could have written our paper without changing the substantive content—and this certainly goes along with the disagreement John Taylor had—saying mechanical rules were not what Greenspan followed, but that instead he used principled discretion. Most of the comments I heard would fit here and so does our use of the residuals of the Taylor rule. What we did in the paper was look at deviations from the mechanical rule and see whether they obeyed something like sensible principled monetary policy. We looked at those deviations to see when they occurred. They occurred precisely when things that are not in the mechanical Taylor rule—things such as concern for international factors or financial stability—should have affected monetary policy and will show up there as a form of (principled) discretion.

I have two more brief points. First, on the lag of the Taylor rule, actually you can do everything we did without the two lags and nothing changes. So, it is not important at all.

Very quickly on housing bubbles because I've been doing research on the topic in the past six months (so, I'm particularly interested in it). Yes, housing bubbles can be as costly as or more costly than stock market bubbles. But in the paper, the two objections we make to responding to bubbles is 1) it is hard to detect them, and 2) the Fed really does not have the best instruments to directly address them. They are as true as or even truer of housing bubbles than they are of stock market bubbles. Having said that, regardless of whether you think the recent surge in housing prices is a bubble or driven by fundamentals, it does not mean that the Fed should not be worried about it. Indeed, it

might even be more worried about it and want to react to it. After all, housing prices are real prices, affecting decisions today. Whether they are driven by some fundamental or by some bubble, current housing prices affect my decision today of whether to buy or to rent. In doing so, they affect decisions. And decisions affect economic activity, so the Fed may need to be concerned about house prices.

Mr. Frenkel: We've talked about international dimensions—what is called Greenspan's era—but the international dimension was defined as the effects of U.S. monetary policy on the performance of the other economies, whether it is Latin America, Asia, the Russian crisis, or the like.

I would like to introduce another dimension of the international dimension, which is really the impact of Fed strategy on the strategy adopted by other foreign central banks. That is an important twist in a rather relevant dimension. At least in the case of Israel, where I'm more familiar, it was a very important one. For a long time, the message was that the Fed has exported the credibility of monetary policy to the rest of the world and to the rest of the monetary authorities.

I must say that when one looks at the language and the style of the liberation of, say, the Israeli corresponding FOMC, one sees there a lot of concepts that we did import. The notion of trying to be ahead of the game, the debate about type one and type two errors, the cost of a mistake, and the like have now become part and parcel of some of the monetary strategies that other central banks have adopted.

As a minor, small anecdote, I can tell you that—at least in my case—in 1994, when we had to raise interest rates to an extraordinary degree, Prime Minister Rabin was very concerned. He went to see Greenspan (not that I knew about it at the time). When he came back, he said, “My goodness, all of you central bankers talk the same. You really talk like him.”

Let me say one word about central bank legislation and the objectives of central banks. Here there is a dimension that differs in some countries than in the United States. In Israel, central bank law was very similar to the one that the United States had—motherhood, apple pie, standards of living, and everything under the sky. We have found it to be extremely important to change the law of the central bank in order to better focus the objectives of the central bank and to increase, thereby, its transparency, accountability, and the like. It is still in the process.

Now, obviously, many countries in Europe did the same. In the United States, the choice was *not* to do it. I recognize some of the political reasons for it. Although I assume that if a Martian came down to earth and was not reading the U.S. Federal Reserve law and tried to draft it based on the behavior of the central bank, it still would come up with a very typical central bank law with great focus on price stability. How come we have one major country with very undefined or poorly defined central bank laws, as far as objectives of the central bank, and yet in others we have found it to be different?

Finally, let me say one word about asymmetry. We spoke about the asymmetry or symmetry of being too high inflation or too low inflation, namely, deflation. In the inflation targeting approach, I can see here a difference between a country that has a disinflation process and a country that wishes to maintain price stability. When you maintain price stability, obviously there is a significant symmetric cost if you are moving one way or in the other way. But what if you are in the process of disinflation? In our case, we were at 18 percent inflation, and we ended up with price stability. Along the way from 18 to 1 or 2 percent inflation, we did it quite significantly in the downside. This asymmetry, which was highly criticized, was not a bad thing. As long as you move in the right direction, we really don't know what the optimal pace is, especially since behavioral functions change along the way. In this regard, going too quickly—so to speak—in the right direction, isn't as damaging or as symmetric of a cost as going in the wrong direction.