Mr. Crockett: We have negotiated a slight extension to this session, so we do have a few minutes for questions and I have already got about three or four people on my list. First is Allan Meltzer.

Mr. Meltzer: I would like to start with a comment on Currency Boards by saying that, from the time of John Stewart Mill onward, it was recognized that there was no long-run advantage or disadvantage to fixed or floating rates. The question is the short run. Can countries be better off?

What I missed in the discussion from all of the panelists is the choice between deflation and devaluation. Deflation is, after all, the alternative to devaluation. If we are going to get real exchange rate adjustment, we have to do it either by deflation or devaluation.

It seems to me that people have ignored deflation, particularly in the case of Japan. They have said, “Well, Japan perhaps is right. How could anyone have raised the interest rate to 8 percent in the 1980s?” I do not think that is the correct question. The question is, are you better off, either yourself or your neighbors, if you devalue or if you deflate? Japan, after all, by choosing a policy of deflation, ran into the problem of some rigidity in wages and prices. And, consequently, it runs into the problem of continued recession in Japan. This also was not to the advantage of its neighbors.
The issue is whether it is less costly for a country to deflate than it is to devalue. And that will depend very much on whether it takes its prices from the rest of the world or whether it has some domestic influence on prices and wages, so it does not take them from the rest of the world. And I think the answer to the question of whether countries will end up with fixed pegs or whether they will end up with floating rates will depend very much on which is going to be cheaper for them—devaluation or deflation.

Mr. Mishkin: One of the issues that came up in the discussion here was the whole question about whether flexible inflation targeting can actually deal with asset price collapses. I think the answer is yes, but you have to think of a more sophisticated kind of inflation targeting, which is, in fact, something that is starting to happen at central banks and is also part of what even non-inflation targeting central banks think of all the time, which is to not only to worry about your point forecast but to worry about the distribution of your inflation forecast. And, in particular, even in central banks that are not formally inflation targeting, like the Federal Reserve, there is always a discussion of the balance of risks. And a very important way to think about during monetary policy is to think of the balance of risks. In that context, if you have a sharp asset price collapse, which, in fact, because of previously weak balance sheets, means that you may end up with a financial crisis. Then, indeed, what you do want to do is to have a very strong monetary policy response and a very sharp drop in interest rates. And the justification for it is that, indeed, you now have a significant probability of having very strong deflationary impulses. And, indeed, what you want to do is take out insurance against those deflationary impulses.

In that context, dealing with these asset price collapses can be dealt with in terms of a flexible inflation target. Indeed, I would interpret the way the Federal Reserve dealt with these events that occurred in the fall of 1998 as actually being completely consistent with that. There was a sharp decline in the federal funds rate. It was taking out insurance against a financial crisis and, indeed, I think that helped also to prevent deflationary impulses.
I think a more sophisticated way of thinking about inflation targeting, which is exactly where central banks like the Bank of England and the Central Bank of Sweden are headed, will be a way of dealing with this.

**Mr. Barnes:** I would like to press this issue of moral hazard as it relates to asset prices and monetary policy a bit harder. It was briefly touched on by Rudi Dornbusch but not really explored. If it is widely accepted that central banks should not and will not target asset prices but they will stand ready, as Fred Mishkin implied, to deal with the negative consequences of a sharp drop in asset prices, clearly this creates the impression in investors’ minds that the upside is relatively clear and the downside is protected—a classic moral hazard situation.

With hindsight, Mr. Yamaguchi suggested that perhaps the Bank of Japan could have done more to advise investors of the risks—the jaw boning approach. But the problem is that the markets have learned to watch what the central bank does, not what it says. And if words are not followed by actions that can actually fuel even more investor euphoria because it suggests that the central bank is somehow handicapped.

Alan Greenspan said that it is the markets that are asymmetric not policy, because prices rise steadily but can fall precipitously. That is, indeed, true. But this market asymmetry seems to me endogenous to the whole moral hazard problem. I know there is no easy solution to this, but I would be very interested in the panels’ view if this is something we just have to live with or whether there really are some solutions.

**Mr. Angell:** I would like to comment about equity bubbles, real property bubbles, and price level targeting. With price level targeting bringing the inflation rate down will cause equity prices to be higher and price to earnings ratios will rise. Price level targeting, however, can cause real property prices to be lower. What we have to understand is that all equity bubbles tend to be preceded by disinflation turning into deflation, which causes equity prices to be higher. So, we have kind of a trade-off. Would we prefer in the United States to maintain about a 2 percent or 1½ percent inflation and have the present P/E
ratios close to 30? Or would we prefer to go, as I would, to a 1 percent price level target rate of inflation? And if that happens, surely price to earnings ratios will rise. Now, if you prefer lower equity prices and lower P/E prices, I would suggest that an inflation target of 3 percent or, surely, 4 percent would clearly take price to earnings ratios down below 10 and equity values as low as you would like.

Mr. Kaufman: In these closing moments of this wonderful conference, I would like to make a final appeal that the academics in this room, as well as the central bankers, do raise the importance of financial asset values in monetary policy deliberations. As Andrew has already indicated, perhaps we do not know what a bubble is. But when you look back over the last three or four years, there is an expectation of price increases in financial asset values in the markets that only parallels the 1920s. There are other manifestations of this, as we know by now that the household sector is very much dependent on increases in financial values. The corporate sector is very heavily leveraged in the United States, and it is hidden by the fact that we have had these increases in equity values.

Last year, we had an interesting example in which central bankers made a rescue. That is being applauded, and it was a wonderful rescue operation. But so far, there is no indication that that rescue operation can work perfectly well in the future. If you look back, first of all, no one has raised the question: Why did we need the rescue? Where was the supervision over financial institutions and markets? How much has it improved since then to assure us that such an event will not materialize anytime soon?

The dilemma is as financial asset values have continued to bubble after that event, we have had higher values. Now, that raises the difficult and perplexing issue for monetary policy that in the event this bubble does break and it intercedes, at what level will it intercede? When it is clear that there is a deflation? When it is clear that perhaps there is a financial mishap? When will it intercede? Will it intercede to hold the values high? If those values remain relatively high then, of course, we continue the bubble and bubble some more. That is a serious issue I think for central bankers.
The underlying dilemma is something that is very difficult for all of us. The financial bubbling euphoria is popular with everyone. Everyone that is a consumer, that is a businessman, that is a politician. The question before us really is can central bankers withstand that kind of popularity? Can they do things that are difficult to do, just as it was in the 1970s? The problem then was different, but it took us a long time to unwind inflation because central bankers had a difficult time in dealing with it.

Mr. Feldstein: I want to come back to the issue of the inflation target. I think Mervyn argued very convincingly that an inflation target of zero is feasible and that an unchanged price level as a long-term goal can be built into that process. Nevertheless, as you said Andrew, most central banks target an inflation rate, if they have an implicit target, of more than zero—about 2 percent.

After listening for two days, I have become more convinced than ever that if there is to be an inflation target, it should be zero and not 2 percent. My reason is not Milton Friedman’s case about money demand. I think that is quantitatively very small. I think the tax effects are much more important. Even a 2 percent inflation rate causes a very substantial increase in effective tax rates on investment income. It turns a 40 percent statutory rate into a 60 percent effective tax rate on real interest income. That leads to increased dead weight losses that are substantial and permanent.

That is what I came here knowing and believing. What I heard from Alice Rivlin, though, raised an important issue that makes zero a much better explicit inflation target than 2 percent. If a central bank sets an inflation target of 2 percent and finds itself at zero or 1 percent, which is certainly no longer just a theoretical possibility, it is then required to manage monetary policy to raise inflation. Although the public may support reversing actual deflation, it is not going to support or understand a policy of moving away from price stability toward higher inflation. If there is to be an inflation target, and that is clearly up in the air in the United States but not in a number of other countries, I think it should be zero.
Mr. Hausmann: Let me start by pointing out that everybody on the panel said that the world was moving toward fewer currencies. Would that be a better world? And as so, should this process be encouraged? Should policies be designed to promote it? Would such an anticipated process not create a stabilizing transversality condition that would facilitate convergence as it did in Europe? Would emerging market countries be better if this process happened sooner rather than later?

Second, I think that the Bernanke and Gertler paper, by including balance sheet effects in inflation targeting setting, makes an important contribution. It would be great if it could be extended to shed light on the consequences of floating when there is a large stock of foreign currency denominated debt. How is inflation targeting likely to work in countries that suffer from original sin?

It seems reasonable to expect that countries suffering from original sin are likely to have very volatile shorter term interest rates, as the central bank will be concerned about dampening exchange rate movements through an interest rate defense. But if the short-term rate is very volatile, it will be very difficult to develop long-term fixed rate domestic currencies markets and, thus, achieve redemption.

Are countries that have decided to float adopting policies to overcome original sin? Is the IMF helping them develop a coherent strategy to get out of original sin? And if they are unable to do so, would floating with inflation targets lead to high volatility and stunted growth?

Mr. Heller: In a discussion of exchange rate systems by central bankers and monetary economists, I think it is natural that we focus on capital flows. By doing so we are also neglecting some very powerful arguments pertaining to the real economy that can weigh in on the debate between fixed and flexible exchange rates.

First, there is a degree of openness in an economy. The more open the economy, the more it is exposed to foreign price fluctuations. And, in the extreme, if the foreign trade sector is as large or bigger than the
domestic trade sector, domestic price stabilization is inseparable from exchange rate stabilization.

Second, as the trade pattern becomes more concentrated on one country, the argument for fixed exchanged rates, pegging in terms of that one countries’ currency, a Currency Board, or dollarization become more powerful compared with countries that have more diversified trade patterns. In case of diversified trade patterns, it becomes much more difficult to make the decision as to which country’s currency to adopt or which currency to peg to.

Therefore, open and concentrated trade patterns are more favorable for fixed rate systems. Closed and diversified economies are more favorable for flexible rate systems. I think that those arguments should be added to the monetary ones.

Mr. Shigehara: During the discussion yesterday and today, one issue that we have not really addressed squarely is the significance of the independence of the central banks. Since the discussion of this about ten years ago, it has been the tendency to have an independent central bank. The issue to be addressed now is not whether central banks should be independent or not, but independence in terms of what?

Setting inflation rate or price level targets could be in the hands of the central bank or could be in the hands of the government. And I think it would be more effective if the targets are set in a contractual way between the central bank and the government.

A more technical operational issue concerns decisions on how to operate policy instruments to achieve inflation targets. I think there is a general tendency that operational independence has been given to the central bank. One issue, which still remains, is exchange rate policy—whether it should be in the hands of the central bank in technical ways or in the hands of the government.

When we talk about independence of the Bank of Japan, operational independence did not exist fully at the time when the bubble started to
be created. In such a situation, all of the jaw boning by the Bank of Japan about the potential danger of stock and real estate price increases was not taken seriously by the market where the prevailing view was that interest rate policy was subordinated to exchange rate policy in the hands of the government, which took a different view on interest rate policy in terms of international coordination and so forth.

Under the new law, the Bank of Japan is now independent in terms of deciding on monetary policy, but exchange rate policy has remained in the hands of the government. There is the risk of a conflicting signal coming to the market from the government side that makes exchange rate policy and the central bank.

**Mr. Breimyer:** I am suggesting an amendment to the basic preference function. We have a loss function embedded in the Taylor Rule and a Federal Reserve preference function for low inflation and high output that lies behind it. But, obviously, financial market stability is also relevant. In fact, from an historical standpoint, the Federal Reserve was founded in response to the financial crisis of 1907. Concern about financial market stability is still a major factor—demonstrated just a year ago. Recognizing its importance explicitly makes sense and moves the discussion away from the conceptual to the operational. It also emphasizes our lack of knowledge, as the presence of financial market instability implies an extreme case of decision making under uncertainty. This opens the discussion to the presence of Type 1 and Type 2 errors, which is germane. If we are trying to evaluate how the Federal Reserve is achieving its different objectives, the explicit inclusion of financial market stability in the Federal Reserve’s preference function provides for a richer discussion, although a more challenging one.

**Mr. Kohn:** Reacting a little bit to Marty’s comment and also perhaps to Mervyn’s before that, I would not be so relaxed about central bank inflation targets that embody rates significantly below 2 percent. Maybe 1 percent is okay, but when you start getting down to zero I worry about the problem of the zero bound on interest rates and I have not really heard anything today or yesterday that made me worry that much less about it.
The problem with the zero bound is that there is a small chance of a major problem occurring once a century or once every fifty years with major social and economic disruptions if the central bank cannot stimulate the economy. This could have very large costs if you really get stuck at the zero bound. Mervyn’s solution for that was pre-emptive policy—good pre-emptive policy. And I think that would be a good way of avoiding some of the effects of serial demand or supply shocks. But I worry about another type of shock, which is policy error—not that anyone in this room would commit that. However, your predecessors did and your successors may, and Mervyn and a number of you noted that it is very difficult to judge the unemployment gap, the rate of growth of potential output, and the changing structures of markets, both domestically and internationally.

Consequently, I think the feasibility of doing very good pre-emptive policy consistently over time, while it is something we should strive for, may not happen and that raises the possibility of getting into a situation where you are at the zero bound for nominal interest rates. I would be less relaxed than Marty, even recognizing the tax consequences.

**Mr. Visco:** Again, my comment is on the liquidity trap problem. It has been suggested that, in extreme circumstances, one should use unconventional monetary policy measures. This has been discussed at the OECD in our reviews and it has been discarded as risky. There are moral hazard problems if the central bank starts buying private debt and if you finance the exception you may get used to it.

I do not have anything to say regarding the further deprecation from current levels that Stan mentioned. But it seems to me that too much has been requested of monetary policy in Japan. How one gets out of a liquidity trap with monetary policy measures is a strange issue. One gets out of a liquidity trap by increasing demand—at least that is what we learned from the one who introduced the topic. This may be done by increasing public expenditures or by increasing the animal spirits, more confidence, and this is what we requested to Japan. We requested structural reforms in the areas that would restore confidence. I think asking for unconventional interventions might be counterproductive in the long term.
Mr. Makin: I am struck by the concluding panels’ topics and their suggestion for plenty of new challenges for monetary policy. As Andrew spoke, he referred first to the possibility of an asset bubble in the world’s largest economy and to the possibility of deflation and the liquidity trap in the world’s second largest economy.

The best recommendation I can make for monetary policy for dealing with an asset bubble is tighten slightly and pray. And my recommendation for a liquidity trap is to ease aggressively and pray. I think the effects of these measures on economies will provide plenty of new challenges for monetary policy.

Mr. Eichengreen: In 1933, Keynes wrote an article called National Self-Sufficiency in which he argued that goods should be homespun whenever possible. That would not be a very respectable argument nowadays. But people are still making it, substituting the word “investment” for the word “goods.” That is really what people are saying when they say limit that capital inflow. Limit that current account deficit. It is at root an argument for capital controls and people may be more or less comfortable with it, but they should be aware, I think, of what they are arguing.

Another point, I read the recent evidence about crises exactly the way Stan does — that pegged rates have been a very good predictor. I worry now that the next generation of crises that the fund will have to deal with will come in countries that are classified by the fund as floating. Countries that have fragile financial systems, because of currency mismatch among other things, and that are reluctant to let the floating rate move and, therefore, are stripped of their reserves and then end up with a serious financial sector problem that the multi-laterals will have to deal with.

Mr. Freedman: First, I have a comment on Marty Feldstein’s point about the difficulty of getting back to the center of the band if it is greater than zero. In fact, we have had no trouble with that. When the inflation rate got down at or below 1 percent, the interest rates were brought down with the intention of trying to get back toward the center of the band. That was well accepted. Indeed, the advantage of having
the lower bound is simply that you can then lower interest rates without people thinking that you are giving up the inflation fight.

If I may, Andrew, you mentioned stagflation. I think that is a crucial issue that we have not really talked about and that ties up with the nature of the measure of core in terms of the target. If you have a situation in which you have defined your target to exclude certain kinds of shocks and if, and this is very crucial, those kinds of supply shocks do not lead to an endogenous wage price spiral, then we may be able to escape some of these problems, because the real problem, of course, is shocks that do lead to wage price spirals. I would like to add one minor warning. If you have a price level target, then, as I mentioned earlier, the definition of what you are aiming at becomes much more delicate.

Mr. Crockett: Thanks very much. I will give both Stan and Jacob one minute to make any key points to what has been said or put to them as questions. Stan is first.

Mr. Fischer: The only point I would like to make is “What a difference a year makes.” Last year at this time the world economy looked very fragile indeed—and we owe thanks to the United States and European central bankers, some of them at this conference, for the fact that it looks much better today. However, although the international financial markets are much less tense, we are not yet out of the woods. Emerging market spreads are still extremely high, way above where they were before the Asian crisis, and higher even than before the Russian crisis. This continues to be a difficult period for many emerging markets and other developing counties, especially in Latin America.

Mr. Frenkel: First, on the moral hazard that was raised before, we have witnessed many situations where governments are paralyzed because of the too-big-to-fail syndrome. We have to remember that all those that are too big to fail started out as too small to be bothered with, which means it requires a change in the attitude of all of us, including regulators. If you ask regulators what their biggest nightmare is, their answer is that they will have to close a bank or that they will have to clean something up. And this intrinsically creates a tendency that small problems are not always being handled in good time.
Second, regarding inflation targets, who should set the target? We know the distinction between instrument independence and goal independence—Stanley coined it. In our case in Israel, we have found it extremely important that the government sets the target because once the government sets the target, then the fight against inflation is not the esoteric ambition of the central bank but rather it becomes a genuine goal within the wider context of policy.

Mr. Crockett: Thank you very much, Jacob. Well, that is the end of this morning's session. Before we break for lunch, it is my very pleasant duty to say thank you to a number of people on behalf of all of us here. First, thanks to the panelists and paper presenters for a really outstanding job of stimulating, once again, a fascinating and marvelous discussion.

Second, of course, thanks to Tom Hoenig and all the people at the Federal Reserve Bank of Kansas City who have done such a good job in making this conference so successful.

Lastly, and certainly not least, I would like to recognize Roger Guffey and Tom Davis who are, in a sense, the founding fathers of this conference and without whom we would not all be here today enjoying what is both intellectually fascinating and stimulating discussion in an environment where we enjoy ourselves, make new friends, and renew old friendships. May it go on for many years.