How Have Central Banks Reduced Inflation?
—Practical Issues

Chairman: Gordon Thiessen

Mr. Thiessen: Thanks very much, Josef. I won't make any comments, but I will open the floor for discussion. There is a question back there.

Mr. Barnes: Donald Brash quoted falling bond yields as an indicator of declining inflation expectations, and clearly this has occurred in every industrialized country. However, if you look at the standard deviation of bond returns, you see that bond volatility has been extremely high in recent years. I don't think it is plausible to say that is simply fluctuations in real rates. Clearly, bond investors are the real skeptics in terms of believing that price stability is close at hand and I wondered if the experience in New Zealand sheds any lights on this. Has bond volatility declined in line with declining bond yields? Or are they still high as in other industrialized countries?

Mr. Thiessen: Let's gather a few questions, and then let the panel comment. One right at the back.

Mr. Darby: This panel reminds us of the variety of monetary experience. And Donald Brash's remarks particularly brought us back to the charming situation of a subset of countries in which we are worried about the bias in measures of price inflation. That is our problem compared to some of our fellow countries. This morning, Chairman Greenspan emphasized, particularly with his examples in

the medical and software areas, the bias in measures of inflation. That illustrates one of the important things about biases—they are not constant. They change. Lynne Zucker and I have examined, for example, movements in where our science is working—what fields. In the recent National Research Council report compared to the one from a dozen years ago, we see a vast movement of our scientific input toward the biological sciences, precisely areas where any advances are not measured. We still have the hospital day problem for that whole side as we begin to talk about curing cancer, curing AIDS. Those are not counted as productivity increases or output increases. So not only do we have a problem of a bias, but particularly a changing bias—in this case an increasing bias in the CPI. So I think that is another issue to lay on the table. Not only do we need to estimate that bias, but we need to deal with the changes in it.

Ms. Gronkiewicz-Waltz: I have shared the experience of Jacob and Josef for the past years. I have a question for Josef. I haven't noticed that much flexibility in your bank, and I wanted to ask why, because when we started to be more flexible, some of our problems disappeared.

Mr. Hale: In analyzing the capital inflows that you referred to last year, do you distinguish in your policy decisionmaking between foreign direct investment and portfolio capital flows? And could you elaborate perhaps on the composition of them? And for Don Brash: Could you explain to us why you think New Zealand's index-linked bonds yield almost 6 percent, compared to a 3 to 4 percent range for Britain, Canada, Australia, and Sweden?

Mr. Sinai: I have one question for Jacob and then one for the entire panel. How is Israel responding to the generic issue, at least for inflation targeting purposes, of shocks—if there have been shocks, whether from the demand side, supply side, or exchange rate side—where most recently the financial shock or problem or crisis of the Provident Funds difficulties, whether it was a central bank response that may or may not have deviated with the inflation targeting goals. And, as a related central bank question really for all, when there is a crisis shock in Orange County, a stock market crash, exchange rate

crisis, Mexican government default risk, financial fragility, and any of these kinds of things happen, is the way to treat it on a case-by-case situation? Or is there some general approach of dealing with the generic issue of shocks that you would offer up?

Mr. Thiessen: Let's let our panelists respond to that group of questions; then if we have time, we will go back for another set. Josef, why don't we start with you?

Mr. Tosovsky: I will start with the question which was directed to me from Hanna Gronkiewicz-Waltz. Concerning our exchange rate policy, I would say we are flexible in using the band. In fact, we introduced a band when the expectations on appreciation and devaluation were more or less balanced. I would say we surprised the market, because it was done just before the elections and nobody expected us to make a move at that time. We haven't intervened in the market for at least two or three months. Now the supply and demand for foreign exchange is quite balanced in our country. Inflow is just consumed by deficits on the current account. My third comment is that there is a small tendency to appreciation and it accelerated yesterday. We are now in the revaluation part of the band—4.5 percent from the center parity. We didn't want to intervene up to now, because once the central bank intervenes, we show our cards. We would give the signal of the level we would like to defend. We want to create the Damocles' sword for potential speculation at least by rhetoric that we will use the whole band—7.5 percent—up or down, because our interest rate differential between our money market and especially the money market in deutsche marks is about 8.5 percent. Hence there is still potential for speculation on interest rate differential should there be low exchange rate risk. The second question was from David (Hale). David, we have been analyzing the inflow of capital very carefully. We have been analyzing when buying permanently, intervening on the market, and buying excess foreign exchange from the market, and our reserves were growing. We were basically making calculations of what are our reserves and what are our borrowed reserves. And, of course, we had specific details of direct foreign portfolio investment. The majority of the money came from long-term investors that made

some huge investments. For example, Czech Telecom represented 17 percent of the inflow of capital and that percentage amounted to \$1.3 billion (U.S.). And there were other examples. So we took this into consideration. I could even evaluate the proportion of short-term hot money, because once we widened the band, we surprised the market and some investors started immediately to liquidate their portfolios. So within the first three days after the introduction of the band, we lost \$660 million from \$14 billion. This is probably the size of the short-term speculative capital which was in our reserves. In other words, we don't think we are exposed too much or in too fragile a position in this respect.

Mr. Thiessen: Jacob Frenkel.

Mr. Frenkel: Concerning the question Allen Sinai asked about difficulties for monetary control or for monetary policy when there is capital market turmoil—in particular, when holders of Provident Funds want to cash in. In the last two months, the name of Alan Greenspan was mentioned in the Israeli press more than any other time, because everyone said, "Well, last time it happened in 1987, Alan Greenspan did so-and-so." At the Bank of Israel, we have announced that we will provide the necessary liquidity for Provident Funds, if they need to mobilize resources in order to repay the holders of Provident Funds. At the same time, we have announced that we have the monetary instruments to reabsorb all of the monetary injections that may result from it. It was very important that the two announcements be made simultaneously—one to calm capital markets and the other to avoid the message that inflation might be at risk. And, indeed, both of them have been made. I want to discuss a question that David Hale raised, which was about the composition of capital inflow. When you raise interest rates significantly, of course, it induces capital inflow, which is a problem if you do not allow your exchange rate to vary. If you do not allow your exchange rate to vary, then you basically give a sure bet of interest rate differentials that everyone can use to come in and make a killing. Again, this is the reason why in the Israeli case we allow the exchange rate to vary fully within the band—literally up to the boundaries of the band, so as to manifest whatever maximal risk

premium that can come up in order to make sure that it is not just interest rate differentials that cause it. Last year about two-thirds of our capital inflow was the short-term variety and one-third was foreign direct investment. This year the proportions have switched—four-fifths are real investment and only one-fifth is short-term.

Mr. Brash: Several points have been raised relevant to New Zealand. First, does our experience with bonds tell us anything about the question of bond volatility and the relationship with inflationary expectations? Unfortunately, I don't think it does because the bond rates in New Zealand today are largely a function of what is happening on Wall Street. If U.S. bond rates move, ours tend to move to a similar extent after adjusting for the somewhat higher holding costs because of much higher short-term interest rates and some additional risk premium. So we don't learn much independently by looking at the New Zealand market. On the question of why indexed bonds are yielding close to 6 percent at the moment, I think there are two reasons why they are yielding markedly more than, for example, in the United Kingdom. I think the principal reason is the difference in tax treatment. In the United Kingdom, as I understand it, the inflation increment in the indexed bonds is not subject to tax; in New Zealand it is, as indeed it is in Australia. And for that reason, yields in New Zealand and Australia are similar. The Australian yields are lower, but there is not nearly as much difference as there is between the New Zealand yield and the U.K. yields. I must say, I was very keen on having the inflation increment not taxed. I thought there should be an instrument which was effectively yielding a post-tax real return. I was finally persuaded by the Treasury that the taxavoidance opportunities raised by exempting the principal adjustment made it difficult to proceed that way. The difference in tax treatment is the main reason for the difference in yields. I think the second reason is frankly we have a very small history of issuing. I think we have had only four tenders to date, and there is a significant illiquidity premium as well. Mr. Chairman, if I could just make two other comments. First, about handling shocks. We were one of the few central banks which in 1987 did not ease in response to the share market fall, and we were subject to very severe criticism in New Zealand for that. I think it illustrates Mervyn King's point that when

you are in a very early stage of disinflation, you have much less flexibility to respond to these kinds of shocks than you have when you have a long track record as the Fed has. So, for better or worse, we did not show much flexibility at that time. My final point on the exchange rate: I guess we would all have to accept that if you get strong capital inflow, you almost certainly are going to get an appreciation of the real exchange rate one way or the other. And, it seems to me, you either get that through an increase in the nominal exchange rate with the domestic inflation rate held low, or you get it typically by trying to hold the nominal exchange rate down with consequential increases in domestic liquidity and domestic inflation, unless you are very successful indeed in sterilizing that capital inflow. In New Zealand we clearly preferred the rise in nominal exchange rate with low domestic inflation. But undoubtedly if the capital inflow becomes volatile, you push your real economy around in a way which is less than fully desirable.

Mr. Thiessen: I don't want to try and summarize the sessions this morning, but I think there are some interesting themes that come through. Certainly, from a practicing central banker's point of view, the use of targets to control inflation has made most of us who have those targets feel that monetary policy does indeed work better. It makes it easier to explain what you are doing and why you are doing it. It does not avoid having to make some difficult decisions about how you respond to shocks, how quickly after you have been pushed off your targets you should go back. But keeping the focus of monetary policy on long-term price stability, on the inflation-control targets that you have defined, I think, on balance, gives you the right kind of response over time. The other interesting issue that a number of people have mentioned is the focus on transparency. Since we all want to make our monetary policy objectives more credible and the responses in markets more appropriate, I think the focus on transparency is an interesting one, and one that is quite widespread in central banks now. I'm struck by the major change that has occurred over the last ten years or so in terms of central banks wishing to make clear—as Don Brash was saying—what they are doing and why they are doing it. While I think that whole process has been working reasonably well for us, I don't think it really deals with the

hard question that Alan Greenspan raised for us—which is the issue of defining your price stability more precisely than most of us have felt comfortable with up until now. He and perhaps others of you have mentioned that challenge. I think that is an issue we need to deal with in the period ahead.