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1 Price Stabilization in the 1990s: An Overview

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The excellent organization of this conference on price stabilization makes my job of summarizing easier. I should therefore begin by thanking the Institute for Monetary and Economic Studies at the Bank of Japan for the superb intellectual co-ordination both before and during the two productive days of the conference.

Each session focused on a particular set of topics: the first on the recent *history* of inflation and the potential sources of the observed changes of inflation; the second on the technical issues regarding the *measurement* of inflation and the indicators of future inflation; and the third on the broad *policy* issues of how inflation can be reduced and price stability maintained. For the most part, the papers held to that division of topics quite well, with three interesting exceptions – Michael Parkin in his historical review of inflation in North America delved into the positive analysis of monetary policy; Kazuo Ueda, in his review of inflation in Japan, discussed the rules versus discretion debate; and Kenneth Rogoff provided some history on exchange rate volatility in his policy paper.

The discussion of papers at the conference was lively and stimulating. In my overview, I will try to emphasize the areas where the discussion led to a consensus, and areas where there still appears to be disagreement.

I. HISTORY AND SOURCES OF INFLATION

Michael Parkin began the session on the history of inflation with the United States and Canada. He described the gradual, upward movement in inflation in the 1960s and 1970s and the rather abrupt decline in the early 1980s. The remainder of the 1980s were a period of steady inflation of around 4 to $4\frac{1}{2}$ per cent. Eduard Bomhoff's paper showed the same pattern of inflation in most of the European countries. Maxwell Fry's paper on the eight Pacific Basin countries that he chose to look at shows a pattern which was remarkably similar, including the pattern of a relatively low and stable inflation rate in those countries during the 1980s. There was one significant exception to this pattern of inflation in the countries studied at the conference and that was Japan. Kazuo Ueda showed that high inflation in Japan ended in the mid-1970s rather than the early 1980s as in the other countries. It stayed at a relatively low and stable rate through the late 1970s. I will come back to this in the discussion of policy.

What were the proximate sources of these patterns of inflation? All authors focused on monetary factors and, in particular, the money supply. Michael Parkin showed that changes in the money supply were the source of inflation in the US and Canada; Eduard Bomhoff found the same thing for Europe, and Maxwell Fry reported similar results for the Pacific Basin countries. Moreover, there was no disagreement about that general fact in the comments on the papers.

There was disagreement, however, about the stability of money demand. Questions were raised not only about past stability but also about prospects for stability in the 1990s, which is the main practical concern for policy purposes. Maxwell Fry's regressions, Chow tests, and residual sum tests for structural stability showed a surprising amount of monetary stability in the eight Pacific Basin countries that he looked at. Glenn Stevens pointed out, however, a potentially telling criticism that the structural stability tests have very weak power when there are large variances of the residuals in the equations. Perhaps comparisons with the developed economies or an examination of regressions in the individual Pacific Basin countries would show less stability.

Eduard Bomhoff studied the stability of money demand using the Kalman filter technique, but here again, there was considerable disagreement in the commentary on the paper. Anthony Coleby disputed the stability of money demand in the UK as did André Icard in France. Georg Rich also discussed the possibility that the financial integration in Europe could reduce the stability of money demand in the 1990s.

Michael Parkin attempted to go beyond the proximate monetary sources of the inflation and looked also at underlying causes. If changes in money growth reversed the changes in inflation, then what caused the changes in money growth? Parkin put forth the provocative idea that the rise and subsequent fall of inflation in the US and Canada could be due to a time inconsistency problem originally formulated by Finn Kydland and Edward Prescott in the 1970s. If policymakers cannot commit themselves to a policy, they may get stuck in the sub-optimal high inflation equilibrium, according to Kydland and Prescott. The pattern of inflation might be explained by a pattern of the natural rate of unemployment which has rough similarities to the movement of inflation. The same idea could potentially be applied to the other inflation experiences in Europe and Asia.

There was considerable discussion about this hypothesis and little consensus was reached. Robert Gordon argued that the high inflation in the 1960s and the 1970s was due to the faulty inflation-unemployment models, originally put forth by Walter Heller, James Tobin, and Arthur Okun at the Council of Economic Advisers in the Kennedy Administration. David Laidler, Allan Meltzer, and I argued that changes in the estimates of the cost of inflation were a factor. Costs of inflation were higher than was previously thought, and better – usually lower – estimates of the costs of disinflation came to be more widely accepted. Those factors could explain the rise and subsequent fall of inflation. Anthony Coleby's comment on the UK situation emphasized a change in the intellectual underpinnings of policy in the late 1970s and the early 1980s in the UK.

Other factors were mentioned that might be the cause of change in monetary policy. Stephen Axilrod talked about the changes in the relationship between wages and unemployment in the US. He attributed this in part to the declining power of labour unions, pointing to the tough stand that President Reagan took in the air traffic controllers' strike. André Icard pointed to the importance of a change in indexing formulas in France as a factor reducing the costs of disinflation in the 1980s in France. In sum, there are many plausible explanations of changes in monetary policy to be tested along with Michael Parkin's provocative explanation.

There were two questions about the history of inflation which apparently went unanswered at the conference and which will require more research. First, Richard Syron asked why have so many countries chosen, in a revealed preference way, to have an inflation rate for an extended period of time in the 1980s of around 4 per cent rather than a lower rate? Perhaps some of the debate discussed below on the pros and cons of an inflation rate going below 4 per cent gives a partial answer.

A second set of issues that will need to be studied further is the very recent history of inflation in the late 1980s and early 1990s. Have we seen an attempt to hold off a rise of inflation in the US and

Canada in the 1987–8 period which brought on monetary tightening and slow-down in economic growth and recession? Or was this an attempt to lower inflation below the 4 to $4\frac{1}{2}$ per cent range? What are the implications of this more recent – even current – experience for policies of zero inflation or price stability in the 1990s?

II. MEASUREMENT AND INDICATORS

Robert Gordon's presentation on the technical issues on the measurement of inflation provided a pleasant lull in the historical and policy debate at the conference. There was, I think, a tremendous amount of agreement on his findings. Gordon's implicit estimates of the bias in the measurement of inflation appear to be relatively small. The numbers that were discussed hovered around $1\frac{1}{2}$ per cent or $2\frac{1}{2}$ per cent. Richard Davis suggested numbers between 1 and $1\frac{1}{2}$ per cent as the adjustment factor. Many central bankers at the conference then joined in to say, 'Well, that's what we mean by zero price stability; around 2 per cent fits into our way of thinking'. Donald Kohn referred to proposed legislation in the US Congress that takes a more diffused stand on what price stabilization means. It does not mean literally zero per cent.

The only serious disagreement about measurement issues in this session was whether monetary policymakers in the US and the UK were fooled by the CPI measures which included mortgage interest in the late 1970s and early 1980s. The representatives at the conference from the Bank of England and the Federal Reserve denied that they were fooled. But perhaps the question is only of historical interest: Everyone said that they would not be fooled in the future!

Robert Rasche's discussion of indicators generated more disagreement. Rasche put forth the view that neither exchange rates, commodity prices nor the term structure are of much value as indicators of inflation. But Rasche placed more confidence in P^* – a transformation of the broad money supply – as an indicator of inflation. Robert Gordon's comments that, 'It's appalling that people focus on P^*', and Takatoshi Ito's statement that, 'We have yet to find the star on the inflation front', reflected some disagreement on P^* as an indicator. Donald Kohn mentioned that some of these indicators rejected by Rasche are of some value even if not taken literally as indicators of future inflation. Peter Nicholl argued that the exchange rate movements are sometimes good indicators of future inflation, and Morris

Goldstein suggested that a combination of these indicators (interest rates and exchange rates) might indeed be effective.

The only thing that I would say was missing from this discussion, and which, I think, is important for monetary policy analysis, is whether structural models rather than the indicators might be useful for formulating policy or for projecting inflation. Of course, models were used implicitly by Kumiharu Shigehara in his presentation of the OECD simulations, and Donald Kohn discussed the use of models; but it was not a focus of attention in the papers presented or in the commentary. Perhaps this is another area for future research.

III. POLICY

The policy issues focused on three broad areas: (1) the rules versus discretion debate and credibility issues; (2) international policy coordination and exchange rate stability; and (3) the question of zero inflation targets, and the advisability of having a zero inflation goal.

On the rules versus discretion debate, David Laidler's paper concluded, 'We are left with relying on discretionary policy in order to maintain price stability, and the best we can do to ensure that it is properly used is to protect those in whom it is vested from incentives to do otherwise.' Michael Parkin's oral remarks at the conference were consistent with that view, and I think there was a considerable amount of general agreement at the conference.

However, there was an important semantic problem: what does one mean by a systematic policy as distinct from discretionary policy? Jack Beebe and Kumiharu Shigehara raised the issue in comments on Kazuo Ueda's paper. They noted that Japanese monetary policy did deliver a low inflation rate much earlier than the other countries, and apparently was doing something 'right'. That policy achieved credibility fairly early on and operated in a relatively systematic way. So, relegating Japanese policy during that period – or the policy of some other central bank in the 1980s – to pure discretion seems not to reflect the systematic policy that was being pursued. There was something more here than pure discretion; a policy which was 'somewhat' credible, a policy which was 'somewhat' systematic.

I think this is more than a semantic issue. We need to find ways to characterize good economic policy. An economic policy which is up for grabs, so to speak, each day or each month, or where the central bank might react differently in some unknown way to change an economic circumstance is not a good policy. Economic theory shows that things work better if there is more certainty about the conduct of monetary policy. A good policy is characterized by more systematic responses to economic shocks, recognizing of course that ultimately the decisions are being made by individuals, indeed by many of those present at the conference. Policymakers consider the data as it comes, and, clearly, policymakers must have some discretion. None the less the actions that are done well are usually done systematically.

On the policy of zero inflation, there was not a complete consensus at the conference. Stanley Fischer's and Robert Gordon's negative responses to Michael Parkin's strong statements about 'zero inflation as a goal in Canada, the intellectual consensus in Canada', indicated considerable disagreement. Allan Meltzer was somewhat supportive and Donald Kohn was very supportive of these goals. At least among the participants at the conference, however, there were still some questions about the advisability of going all the way to zero inflation.

IV. CONCLUSION

In conclusion, I would like to emphasize the key areas of agreement reached at the conference. First, there was a consensus that changes in inflation can be traced to changes in money growth regardless of the reasons for the change in money growth. Second, there was agreement on the importance of credibility for monetary policy; no-one spoke against that. Third, there was very little disagreement about the importance of low and steady inflation, whether it is 3 per cent – Stanley Fischer put an upper bound of 4 per cent – or whether it is 1 to $1\frac{1}{2}$ per cent. Finally, there was no disagreement about Donald Kohn's point that monetary policy will work better if economic policy more generally works better. This means a more open trade policy, sounder fiscal policies, and a more deregulated or restructured financial environment. Governor Mieno began the conference by emphasizing the importance of supplementing monetary policy with good economic policy generally. I think that is a good place to end my summary as well.