Part VIII. Conclusions: What Have We Learned?

Our case studies indicate that both the adoption of inflation targets and the design choices for that framework have made a difference in the operation of monetary policy. The design choices of the targeting countries have tended to converge over time with regard to the operational design questions posed in Part II, suggesting that a consensus is emerging on best practice in the operation of an inflation-targeting regime. Where the design choices have differed, however, the experiences in the countries examined provide some insight about what has resulted from the different choices. In general, the public announcement of numerical targets for inflation has been very effective in balancing the needs for transparency and flexibility in monetary policy.

The areas of operational design that show a convergence of practice include the use of inflation as the target variable. Despite all the rhetoric associated with the pursuit of price stability, all the targeting countries examined here have chosen an inflation target—ranging from 0 to 4 percent annual inflation—rather than a price-level target. This choice reflects concerns that a price-level target may require deflation when prices overshoot the target, an outcome that could entail far higher costs in output losses than are acceptable. Reversals of past target misses, which would be required by a price-level target, do not appear to be necessary for the maintenance of low inflation. Relatedly, targeting countries that have chosen target values for inflation greater than zero make the possibility of deflations less likely. It is important to emphasize that maintaining an inflation target at a level even somewhat greater than zero for an extended period, as the Bundesbank has done, does not appear to lead to instability in inflation expectations or diminished central bank credibility. Even with a positive inflation target, admission of occasional errors does not appear to be damaging.

These design choices are also consistent with building a high degree of flexibility into the inflation-targeting regimes in all the countries studied here, in which central bankers do demonstrate concern about real output growth and fluctuations. This is seen particularly in the gradualism all targeting countries have exercised when disinflating, as well as in the treatment by some countries of the inflation target's (implicit or explicit) floor on price movements as a stabilizing factor. While the targeting countries differ in the degree to which they emphasize particular indicators of inflation in their decision making, all rely on an inclusive information framework untied to specific intermediate target variables. All of these design choices support the contention in Bernanke and Mishkin (1997) that inflation targeting should be seen as a framework rather than a rule.

In addition, all of the targeting countries allow for deviations from their targets in response to supply shocks. Usually, the central bank will take action at its own discretion, when such a response is not already built into the target definition, and then explain its actions. Only in New Zealand has an explicit escape clause been invoked to justify such actions, although the Reserve Bank of New Zealand has also engaged in the more discretionary forms of response. Actual inflation targets have been moved over time by all targeting countries, whether up—as in the case of Germany after the 1979 oil shock or New Zealand after the 1996 election—or down—as in all countries considered as disinflations proceeded. As long as target movements are announced sufficiently far in advance, there is no sense that the target is being moved to meet the short-run outcome; target movements are perceived as adaptations to economic conditions. The key to the exercise of discretion in a disciplined manner has been the central banks' ability to convey to the public the distinction between movements in trend inflation and onetime events.

The second main area in which targeting regimes have converged relates to their stress on transparency and communication. The central banks in targeting countries communicate by responding to elected officials' mandated as well as informal inquiries. Even more important, the central banks keep the public informed about their policies and performance by making frequent speeches on the strategy of monetary policy, as in the Bank of Canada Governing Council's concerted public outreach campaign, and by periodically issuing lay-oriented publications, such as the Bank of England's *Inflation Report*. Both of these efforts are designed to explain clearly to the public the goals of monetary policy, the long-run implications of current policy, and the strategies for achieving inflation targets. Even the fully independent Bundesbank, which enjoys strong public support, has always made great efforts along these lines.

Indeed, the intensive efforts by the central banks we study here to improve communication have been crucial to the success of the targeting regimes. Increased transparency and communication make explicit the central bank's policy intentions in a way that improves private sector planning, enhances the possibility of sensible public debate about what a central bank can and cannot achieve, and clarifies the responsibility of both the central bank and the politicians for the performance of monetary policy with respect to inflation goals.

Another feature of all the targeting regimes discussed here is the increased accountability of the central bank. This feature is most evident in the case of New Zealand, where the Reserve Bank is accountable not only to the general public, but also (and even more directly) to the elected government, which can insist on the dismissal of the Governor if the inflation targets are breached. In the other targeting countries, the accountability of the central bank to the government is less formalized, but because of the increased transparency of the targeting regime, the central bank is still highly accountable to the general public and the political process.

As seen in the cases of Canada and the United Kingdom, as well as in the Bundesbank's long experience, even where a rigid format of performance evaluation and punishment is not present, successful performance over time against an announced clear baseline can build public support for a central bank's independence and its policies. Inflation targeting may thus be seen as consistent with an appropriate role for a central bank in a democratic society: though inflation performance may improve by insulating a central bank from short-term political pressures on interest rate decisions, a central bank can only sustain such performance by remaining highly accountable to the political process over the medium term for achieving appropriate, stated goals. When monetary policy goals and performance in meeting them are publicly stated, they cannot diverge from the interests of society at large for extended periods of time.

Another design choice common to the inflation-targeting countries is the decision to formally adopt the new regime only after achieving some success in lowering inflation from high levels. This reflects a tactical decision that it is important to have a high likelihood of success in meeting the initial inflation targets in order to gain credibility for the inflation-targeting regime. It also reflects the reality that credibility gains in the form of changes in the output-inflation trade-off or other economic structures will not occur immediately. Inflation targeting has been successfully used to lock in the benefits of previous disinflations in the face of imminent onetime shocks, as we saw in the United Kingdom's exit from the European Exchange Rate Mechanism and Canada's 1991 fiscal developments.

Although there are many similarities among the design choices of the targeting countries studied here, there are also some important differences. For example, the targeting countries differ on the precise *measure* of inflation that should be used for the target. Some countries use the headline consumer price index (CPI) as the price index in the inflation target because it is readily understood by the public, while others exclude items from the CPI index to allow for monetary policy accommodation of first-round effects of temporary supply shocks. In the cases of Germany, Canada, and the United Kingdom, the emphasis has been on simple target definitions, accompanied by potentially complicated explanations of deviations from target, while in New Zealand the reverse course has been pursued (although the long-run goal remains underlying inflation). The primary danger for any target series, however defined, is to sacrifice transparency for policy flexibility. So long as a target series is neither adjusted too frequently nor set too far from headline inflation, so that the definition remains clear in the mind of the public, the exact choice of series is not that critical.

Indeed, this balancing of transparency and flexibility relates to the manner of producing the measured inflation series as well as to the definition per se. To permit flexibility in its inflation-targeting regime, New Zealand has allowed the agency that is accountable for meeting the targets (the Reserve Bank) to measure and make adjustments to the target variable as well. In contrast, the other countries studied separate the agency responsible for meeting the targets from the agency that measures the target variable. Although allowing the central bank to measure and adjust the target variable has distinct advantages in terms of increased flexibility, it has the undesirable effect of decreasing transparency, which can weaken the effectiveness of the inflation-targeting regime.

Another major difference in the design of inflation-targeting regimes is that some countries have a target range for inflation while others, such as the United Kingdom, now have a point target. The apparent advantage of a range is that it gives the targeting regime more explicit flexibility and conveys to the public the message that control of inflation is imperfect. Nevertheless, as we have seen in countries targeting an inflation range, and as we know from the similar experience of exchange rate targeting, the bands tend to take on a life of their own, encouraging central banks, politicians, and the public to focus too much on the exact edges of the range rather than on deviations from the midpoint of the range. Furthermore, because a high degree of uncertainty is associated with inflation forecasts, it is very likely that even with entirely appropriate monetary policy, the inflation rate may fall outside the target range. This control problem can then lead to a loss of credibility for the inflation-targeting regime.

In addition, firm bands can also lead to an instrument-instability problem, particularly if the time horizon for assessing whether the target has been met is short—say on the order of a year. This problem occurs when efforts to keep the targeted variable within a specified range cause policy instruments, such as short-term interest rates or the exchange rate, to undergo undesirably large movements. The control and instrument-instability problems have been comparatively more difficult in the case of New Zealand.

One solution to these problems is to widen the target range, as New Zealand did in October 1996. However, if the range is made wide enough to reduce the instrument-instability and control problems significantly, the targeting regime may lose credibility. This would be particularly true if the public focuses on the edges of the range rather than the midpoint, with an upper limit that might then be intolerably high. The act of widening the range (as distinct from moving the target level in accord with events) might be seen as a weakening of resolve in and of itself.

Another solution is to use a point target rather than a range, as the United Kingdom decided to do in 1995 and as the Bundesbank has done for inflation since 1975. To avoid control and instrument-instability problems with a point target, however, it is imperative that the central bank communicate clearly to the public that a great deal of uncertainty exists around the point target. This communication imposes a greater burden on the power and persuasiveness of the central bank's explanations for deviations from target than exists with a range. At the same time, the central bank's actual flexibility to cope with target misses without damage to credibility is greater as long as the explanations are believed. With a point target, success is not measured by hitting the target exactly, but rather by how consistently the central bank gets close to the target over a medium term.

The analysis in this paper suggests that targeting inflation—whether directly, as in New Zealand, Canada, and the United Kingdom, or as the basis for a monetary targeting regime, as in Germany—can be a useful strategy for the conduct of monetary policy. Since the defining feature of the monetary frameworks in all four countries is the publicly announced numerical target for medium-term inflation, we do not draw as great a distinction between these two types of targeting regimes in operation as many do in theory. Transparency and flexibility, properly balanced in operational design, appear to create a sound foundation for a monetary strategy in pursuit of price stability, without requiring the imposition of unnecessary rule-like constraints on policy.

That said, as our case studies suggest, inflation targeting is no panacea: it does not enable countries to eliminate inflation from their systems without cost, and anti-inflation credibility is not achieved immediately upon the adoption of an inflation target. Indeed, the evidence suggests that the only way for central banks to gain credibility is the hard way: they have to earn it.

Still, we have seen that inflation targeting has been highly successful in helping countries such as New Zealand, Canada, and the United Kingdom to maintain low inflation rates, something that they have not always been able to do in the past. Furthermore, inflation targeting has not required the central banks to abandon their concerns about other economic outcomes, such as the level of the exchange rate or the rate of economic growth, in order to achieve low inflation rates. Indeed, there is no evidence that inflation targeting has produced undesirable effects on the real economy in the long run; instead, it has likely had the effect of improving the climate for economic growth. Given inflation targeting's other benefits for the operation of monetary policy—it increases transparency and communication, accountability, and the institutional commitment to low inflation—it is a monetary policy strategy that deserves further study and consideration.