# Comments

**Ricardo Hausmann:** Academic economists always want more evidence to support a claim, while policymakers have to make decisions in real time without the benefit of hindsight. One such decision is the choice of exchange and monetary arrangements in a changing world. Klaus Schmidt-Hebbel and Alejandro Werner have written a very good paper that stands in between these two extremes. They assess the performance of a relatively new approach to monetary policy in Latin America: inflation targeting. They perform a wide set of tests with relatively short datasets, and they address some of the controversies in the literature. Their main conclusion is that so far, so good. Inflation has been brought under control at relatively low cost, inflation targets are becoming more credible, and the targets tend to prevent price shocks from affecting core inflation. In this process, exchange rates are being allowed to fluctuate more freely, which would indicate that if a so-called fear of floating exists, it is waning.

One important question to ask is what exactly is inflation targeting in practical terms? In the tradition of Monsieur Jourdain in Molière's *Tartuffe*, it is easy to be excited by the knowledge that one speaks prose. By the same token, countries are waking up to the realization that they have been inflation targeting for some time, without knowing it. Chile and Mexico are two cases in point. Did Chile plan to adopt a gradual inflation targeting regime in 1990, or is that just a convenient way to tell the story ex post? What regime did Mexico adopt in early 1995? What regime have Argentina and Venezuela adopted in 2002? All central banks usually announce an inflation target. They may also announce other targets, however. For example, throughout much of the 1990s Chile and Colombia had the practice of announcing targets on anything that would move. They both had exchange rate target zones, while Chile also targeted the current account deficit and Colombia targeted money. It was never clear to market participants which target would dominate. Schmidt-Hebbel and Werner call this a gradual adoption of inflation targets. One could just as easily call

it a target zone regime, which is how the authorities defined it at the time and also how Williamson describes it.[1]

If a country floats or has relatively wide bands, it has the capacity to control the money supply or the interest rate. It makes sense, in this context, to adjust policies so as to achieve certain targets. Since central banks are principally responsible for inflation, one would expect them to use their monetary flexibility to good purpose. It is therefore relatively easy to reinterpret all floating rate countries or countries with relatively wide exchange rate bands as being inflation targeters of sorts. As the paper even points out, the literature refers to the United States as an implicit inflation targeter, even though the Federal Reserve Board does not announce an inflation target and is well known to care about output and unemployment. To a large extent, inflation targeting is in the eye of the beholder.

A stricter definition would involve the absence of exchange rate commitments, that is, a floating regime relatively unencumbered by preannounced price targets, an inflation target that is obviously preeminent, and a monetary instrument that is periodically adjusted as a means to achieve that target. From this point of view, Chile can only be said to have been targeting inflation since the latter half of 1998, not 1990 as the paper states, given the country's exchange rate policy. In fact, Chile and Colombia should be classified as having had very similar policies during the 1990s, including the adoption of inflation targeting at the end of the decade, although the paper treats Colombia as a recent convert. Brazil clearly adopted inflation targeting in mid-1999, while Mexico is much harder to date, since it established monetary targets that it actually met and inflation targets that were missed by wide margins. The 1999 date used in the paper clearly was not obvious to market participants.

This issue of dating is not just an academic one. It calls into question the validity of the paper's analysis of measures of the speed of disinflation achieved by inflation targeting, the sacrifice ratios, and the deviation of inflation from its target. Inflation declined all over Latin America in the 1990s; attributing it to inflation targeting in Chile and Mexico is far from obvious. It is much more compelling to credit inflation targeting with having helped Brazil—not to bring inflation down, which was done through exchange rate targets—but to avoid a major acceleration in the context of a currency crisis in 1999. In fact, if one considers that Chile adopted infla-

1. Williamson (1998).

tion targeting in 1998, the experience looks remarkably like that of Brazil: the adoption of inflation targeting in the context of a large depreciation following the abandonment of a system of exchange rate bands. Was inflation targeting helpful in avoiding a higher pass-through into prices?

A second issue is that if inflation targeting is defined with great laxity, it is impossible to derive policy lessons that might shed light on some important questions. How can a central bank that abandons an exchange rate target manage monetary policy in a way that keeps inflation expectations under control? Is the announcement of inflation targeting à la Brazil more effective than the announcement of a money target as in Mexico in 1995? After all, how could the government of Brazil commit to an inflation target in June 1999 without knowing how the initial exchange rate depreciation that occurred in January of that year would affect the economy and how and when movements of the overnight rate would affect prices? What should Argentina and Venezuela do in 2002, now that they have decided to float their currencies and undergo a large nominal depreciation? Would the sudden introduction of inflation targeting—as in Brazil—help keep the inflationary impact under control, or would it backfire through a loss of credibility? What were the consequences for Mexico of continuously missing its inflation target for years?

This question is related to another issue that the authors do address: the credibility of the inflation target. The paper presents an analysis of the impact of inflation targets and exchange rate movements on inflation expectations. It finds evidence that inflation targets do affect actual inflation in Brazil, whereas in Chile and Mexico the effects are smaller and develop more gradually. One should take these results with more than a grain of salt, given that the actual number of yearly targets is so low. A more profitable approach would be to focus on the relationship between movements in the monetary policy variable—of which there are many in the course of a year—and inflation expectations. How are inflation expectations affected by movements in the Brazilian SELIC rate, in the Mexican *corto*, or in the Chilean *tasa de instancia?*

Another related issue is the choice of the monetary instrument itself. Is the effectiveness of inflation targeting unrelated to the choice of the instrument? Is Mexico right in avoiding the control of a politically sensitive interest rate and allowing interest rates to react to many more shocks? Or does this in any way limit its effectiveness? Is the case for controlling an interest rate more compelling at lower rates of inflation?

Yet another question involves the transmission mechanism through which monetary policy is seen to operate. In the typical Mundell-Fleming-Dornbusch model, an increase in interest rates has two effects on aggregate demand: it has a direct impact on demand through the IS curve and an indirect effect in the form of a currency appreciation, which is seen in the standard model as contractionary. In emerging market countries, however, appreciations tend to be expansionary, in part because of balance-sheet effects. This limits the effectiveness of interest rate movements, forcing central banks to move interest rates much more. If the latter effect is large enough, the central bank may even be forced to reverse actions, increasing interest rates when demand is low and reducing it when it is high.

These situations are more than theoretical possibilities. When criticizing my paper written with Ernesto Stein and Ugo Panizza, Schmidt-Hebbel and Werner note that exchange rate volatility has been high and rising, indicating that countries exhibit less fear of floating.[2] The important question, however, is where these volatile countries prefer to have their volatility—in the exchange rate or in the interest rate? Looking at the last year (2001) in table 5 presented by Schmidt-Hebbel and Werner, one finds that the relative volatilities of exchange rates and interest rates in Brazil and Mexico are the lowest in the sample presented in the paper, by very large multiples.[3] Chile appears at the other extreme, in part because its interest rates are set in real terms. Moreover, the ranking of the countries based on their interest rate volatility is the same as with the ratio of the two volatilities. This is consistent with the idea that the Latin American countries prefer to have their much larger underlying volatility disproportionately transmitted to the interest rate relative to the exchange rate. This was still the case as recently as 2001.

These results can be explained by the logic outlined above: interest rates are not as effective at controlling aggregate demand and hence inflationary expectations. They thus need to move much more in order to achieve the same effect. There may be other explanations, including fear of floating caused by liability dollarization or a relatively higher pass-through. That would explain the choice of where to have the monetary volatility.

2. Hausmann, Stein, and Panizza (2001).

3. New Zealand had an unusual year in 2001, with an unusually large interest rate volatility by its own standards; the ratio in 2000 was 22.9. The United States also had an unusual year, owing to the dramatic monetary easing that characterized policy in that year; in 2000 the ratio was 9.56.

Finally, there is the question of output stabilization. Chile, Colombia, and Mexico dramatically lowered their interest rates in 2000 in an attempt to stimulate aggregate demand. They also all missed their growth targets by wide margins in 2001. Is this an indication that monetary policy is relatively less effective at stabilizing output in these countries? Have economies responded to the monetary stimulus?

Latin America's recent embrace of inflation targeting opens up many policy issues. Schmidt-Hebbel and Werner assess a number of performance issues. They conclude that the initial results are promising. It is critical now to turn our attention to what aspects are responsible for the good performance, how many current problems will naturally go away with time, and which ones are more likely to endure.

**Roberto Chang:** Klaus Schmidt-Hebbel and Alejandro Werner provide a useful, informative description of recent attempts at implementing inflation targeting in Brazil, Chile, and Mexico. They argue, on the basis of statistical evidence, that inflation targeting has been relatively successful in those countries. The meaning of success in this context, however, is not evident, so it is worth discussing further here.

As stressed by the authors, the implementation of inflation targeting coincided with substantial macroeconomic gains in the countries studied: inflation was brought down from unsustainably high levels, inflation forecasts became more accurate, and inflation expectations were tamed. Despite such improvements, the proponents of inflation targeting cannot yet declare victory, even if one accepts the validity of Schmidt-Hebbel and Werner's evidence. Proponents of the regime must first confront a fundamental question before they can claim success: to what extent are these gains actually due to inflation targeting? The answer is not self-evident. Latin America has witnessed successful disinflation without inflation targeting: Peru after 1990 is the obvious example. The crucial task remains of identifying the genuine role of inflation targeting in disinflation. To do that, several conceptual issues have to be resolved.

Consider, in particular, the key claim that "inflation targeting may have contributed to strengthening credibility" in Latin America. This assertion presupposes that there is a widely accepted notion of what constitutes inflation targeting, which is, in fact, far from the case. Well-known inflation targeting regimes share a number of features that were not present in the episodes studied by Schmidt-Hebbel and Werner. In particular, infla-

tion targeting in New Zealand and other countries encompasses an explicit inflation target that is defined, at least in part, not by the central bank but by outsiders, and this then becomes the only target for the purposes of rewards and punishments. In contrast, Schmidt-Hebbel and Werner document that Brazil, Chile, and Mexico deviated from such a paradigm in significant ways during much of the period under study. The definition of inflation targeting based on industrial-country experience must be stretched considerably if one is to include monetary policy in Mexico, say, right after the 1994 crisis, when the explicit intermediate policy goal was the quantity of central bank credit.

Likewise, to assess whether inflation targeting has enhanced credibility, the term credibility needs to be clearly defined, which is usually not the case. These issues are not just semantic: policy conclusions and the interpretation of actual events depend crucially on them. To see how, it is useful to compare different theories of how inflation targeting may affect credibility.

One view, arguably dominant in the literature, starts with a central bank trying to deal with a classic time inconsistency problem. Walsh; Persson and Tabellini; Svensson; and others show that inflation targeting may be a feature of an optimal contract to provide correct incentives to the central banker.[1] This view of the role of inflation targeting implies, first, that the monetary authority adjusts its policy instruments to hit the inflation target and, second, that there is an important benefit associated with inflation targeting, namely, to eliminate the inflationary bias stemming from time inconsistency.

An alternative view is that inflation targets can be used as signaling devices. This may be the case, for example, if central bankers differ in their level of competence, as in Rogoff's models of political business cycles.[2] I do not know of a formal model of this situation, but a plausible conjecture is that competent central bankers will be willing to announce their inflation forecasts in order to separate themselves from incompetent bankers. Suppose, for instance, that after setting the levers of monetary policy, the central banker has the option of appearing on television to announce an inflation assumption for the next year. A more competent (or more informed) banker would presumably be more willing to take the risk

1. Walsh (1995); Persson and Tabellini (1993); Svensson (1997).
2. Rogoff (1990).

of making a public announcement than a less competent one. The implications are very different from those of the time inconsistency example. Policy instruments would be set in advance of the announcement of the target, rather than being adjusted to hit the target; target announcements would be chosen to hit inflation outcomes. It is not clear whether inflation targeting would, on the whole, be beneficial: the welfare outcomes would depend on whether the resulting equilibria are pooling, separating, or hybrid.

These examples illustrate two main points. First, the interpretation of the data depends on which view of inflation targeting one adopts. In both examples, policy instrument settings, inflation targets, and actual inflation will be closely associated, yet the role of inflation targeting is very different in each case. Second, the policy implications, in particular whether inflation targeting is actually welfare enhancing, depend on which theory one accepts.

The signaling view of inflation targeting seems more compelling for Latin America than the optimal contract view, and it is more consistent with the informal accounts of inflation targeting episodes. In addition, the view that the central bank adjusts policy instruments to hit the inflation targets is inconsistent with the fact that monetary policy affects inflation with substantial lags and the observed practice of announcing inflation targets for the next few months: when announcements are made, inflation for the next few months is largely a done deal.

Schmidt-Hebbel and Werner have written a valuable paper, which should be read by any student of monetary policy in Latin America. However, the actual contribution of inflation targeting to disinflation in Latin America remains an open and crucial issue.

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