Commentary: How Should Central Banks Reduce Inflation?—Conceptual Issues

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Inflation is a dramatic problem; all available evidence supports the view that it undermines growth and social stability at the very roots. Containing inflation, therefore, is an utmost priority. But the recognition that inflation is destructive leaves still a host of important questions as to how best to deal with the inflation problem. Importantly, it leaves the question where to draw the line, where to start thinking about tradeoffs.

Work reported in a large number of studies demonstrates that high inflation lowers a country's average growth performance. There is divergence of views on exactly where "high" starts. Work at the World Bank, for example, draws the line at 40 percent—anything more is demonstrably counterproductive, anything less may be a growth problem but that is harder to show. Other studies move much further down in setting the threshold for counterproductive inflation. Thus a recent International Monetary Fund (IMF) study finds support for the view that adverse growth effects emerge at inflation rates of only 8 percent. Even more ambitious work looks for counterproductive effects in the range of 0 to 3 percent and comes out in favor of a zero-inflation target as the only growth-friendly strategy.

There is one common thread to all this discussion: nobody has claimed inflation is good for growth, at any level. That contention, if it ever existed, is just gone. The overwhelming presumption today is that inflation is no help at all, that it is totally undesirable. The

remaining issue is to know whether there is a temporary cost in bringing down inflation, how high this cost—if any—might be, and accordingly, what is the range of inflation rates where inflation is the number-one policy issue. Interestingly, the World Bank study referred to above has one answer: above 40 percent inflation, reducing inflation increases growth. At lower rates of inflation, the issue becomes less clear-cut as we will see in a moment. Before getting to that topic, it is helpful to dispose of one easy issue: extreme inflation.

How to get out of extreme inflation

It is no longer controversial to assert that extreme inflation is impossible without sustained, extreme money creation. True, the rise in velocity driven by the extravagant cost of holding money—the flight from money—is part of the inflation process. But extreme inflation does not happen just by chance. The source is always and everywhere, as Firedamp has long claimed, extreme money creation, which, in turn, is linked to the financing of budget deficits. If anything above 40 percent growth (per year) hurts growth, extreme inflation—20, 30, 40 percent per month—certainly takes its toll in full measure. There is no question that stabilization is a sine qua non for growth.

That leaves two important questions. One is *when* to stabilize and the other is *how.* There is a school of thought that claims waiting is a good idea: the longer and more extremely inflation runs its course, the more disorienting the process for the public. In the end, the public will come to endorse whatever is necessary to stop inflation. Starting too early just means failed sterilizations and a loss of credibility.

That view is wrong for two reasons. First, stabilizations almost everywhere are not made of a single, decisive package which overnight abolishes the problem. On the contrary, it is rather a process of a protracted search for the countless things that have to be done in the public sector to reduce the deficit and increase competition and accountability. At the outset none of them is enough. But looking back from a successful stabilization invariably reveals a long history

of efforts that ultimately add up to enough. Waiting merely advances destruction of the economy's immune system and its social structure. These are very hard to put back together. That was the case in Germany, Austria, and Hungary in the 1920s; it may yet be the case in Russia or Ukraine today. Sometimes it may be desirable to destroy the existing social structure, but that surely goes far beyond the agenda of inflation control and it is definitely not a technical issue in optimal stabilization.

The next question then is how to stop an extreme inflation process. There is no doubt that *a regime change* must occur. The term is much abused in the literature, but in this context it is appropriate and decisive. The fiscal regime must be changed so that the budget no longer needs to be financed by the central bank. Almost invariably that means balancing the budget; possibly the goal may be less ambitious if there is plausible financing from the capital market. One way or the other, the central bank has to be out of the business of printing money to finance the government. Moreover, this needs to be institutionalized in a way that goes beyond mere promises. They will have been broken already far too often in the past; something better is needed to show what is new. Here is the point where institutional arrangements matter—currency boards, constitutional amendments, and the like.

In a situation of extreme inflation an economy becomes spontaneously dollarized. If dollar deposits are allowed, dollar deposits become the rule. If they are not allowed, dollar holdings in the form of currency and offshore deposits via capital flight will take the role of local currency deposits. That process can be documented for all and any high-inflation country. The implication of this almost complete domestic demonetization and the corresponding dollarization is quite central. If the economy is already near fully dollarized, going there all the way is only a small step. It merely amounts to recognizing that everyone is already on board and it is just the government that is not. Nothing is more definitive in terms of regime change than taking the extra step. That was true in the 1920s with a restoration of the gold standard in the demonetized economies of Germany or Austria and it is true today from Argentina to Russia.

There are three ways to take advantage of the fact that foreign exchange will have become central in a hyperinflation. The smallest and least definitive move is to just peg the local, stabilized currency to the dollar or the next best stable money in the region. That is good for a start, but it won't last as a credible anchor; it throws most of the regime change weight to the money supply process and the budget. Since nothing very institutional has happened, relapse into the old pattern of inflation can happen easily.

A far stronger move is the drift to a currency board system such as Argentina practices. The rules of central banking are changed in a dramatic fashion, and irreversibly. Money creation is tied to foreign exchange inflows and outflows; a hard line is drawn between the central bank and the treasury. True, all that could be reversed, but only by an act of Congress and that means a financial collapse before the debate even gets under way. But there might be a debate about softening the system and latent fears about the implications of overvaluation. This leads to advocacy of an even stronger system—moving outright and fully on the dollar.

Even this system comes in two ways: 100 percent dollarization with absolutely no domestic money creation—monetary teetotaling—or leaving room for a home money (and local heroes on the coins and bills) in small denominations. It is tempting to leave some room for local heroes, but second thought is appropriate: who would want to be the dignitary or hero depicted on a debased currency? Surely history books are better places than schmutz-money.

Two points reinforce the view that *full* dollarization is preferred to a currency board. First, as long as there is some local money, residual uncertainty about reversal or the hard policy and devaluation is always present. This is apparent in Argentina, for example, where after four years of the currency board, there remain interest differentials between peso and dollar deposits of the same maturity at the same financial institutions. The discussion never stops, particularly outside the country where the belief in a "permanent and irreversible" regime change is always taken with a grain of salt. Second, an anecdote from Poland in the 1920s makes the point that

poor public finance always finds a way to the printing press. A new central bank had been created (by Edwin Kemmerer, the money doctor of the 1920s) with full gold standard and complete independence. But coinage was left to the treasury. For a brief period, inflationary coinage by the treasury resulted in one more bout of inflation. Of course, it could not go very far since coins are harder to produce and physically cumbersome. This must be one of the weirdest inflation episodes in history.

The basic inference is that countries who have plain and simply failed to control their money, have reached the most complete debauchery of their monetary system, should spend a few decades on the dollar or the deutsche mark. Their history shows that having a national money is a threat to growth and international standing; the lesson for us is to get rid of it. Arguments about seigniorage are misplaced when the attempt to collect 1 percent of GDP costs 2, 3, or more percent in growth.

There is another way to make the story palatable. Why should a country like Hungary or Poland hang around cultivating their own money, running precarious disinflation attempts with overvaluation in the wings? All of Europe, which they are desperately trying to join, is moving ahead to the recognition that a Europewide money gives them more stability and better economic performance. The soft currency countries of Eastern Europe should be in the forefront since they need the extra stability more than anyone else. The IMF should routinely advise, as part of the move from hyperinflation to stability, moving on the dollar, the deutsche mark, or the *Eurodollar.*

The political argument against this strategy, voiced all too often in countries where money has been debased as completely as can be done, speaks for itself: our national currency is like the flag. These people surely would think twice before doing to their flag what they have done to their money!

The currency arrangements are only one part of successful action. At least as important is a shift on the fiscal side. The stabilizing government needs to balance the budget, no less. And that must be

accomplished in a lasting and productive fashion. Emergency taxation is a poor way of going about the task; restructuring government spending, privatization, and closing loopholes has to be nine-tenths of the action.

The more waste there is in government, the better the scope for strong fiscal sanitation and hence, support in monetary stability. The government is not bankrupt; it is just mismanaged. The more extreme the willingness to adopt monetary institutions or the dollar, the more firm the ground on which reconstruction takes place.

Destroying a money is not easy. It takes years and years of dedicated work. Not surprisingly, reconstructing monetary stability is not an issue of a year or three. It takes a decade or more. Countries that have gone all the way into destruction and have then rebuilt are rightly hypersensitive about the institutions that guard the new stability and about any compromises that might renew their bad experiences in however minor a way. They are right to be uncompromising.

Moderate inflation

Countries with 15 percent inflation per *month* must stabilize with urgent priority. Nothing is likely to be more important. Countries with 15 percent inflation per *year* certainly should not belittle inflation. They definitely should attempt, on average, to bring inflation down. But they must see this as one of a number of priorities and they should view it as a process of five or even more years. Accepting the right perspective on moderate inflation is important because otherwise, severe recession, super high real interest rates with resulting banking problems, and currency overvaluation with the risk of a collapse might be the result rather than the dramatic success hoped for on the inflation front.

To appreciate the point, it is useful to look at an inflation representation in a formal way: inflation this year is what it was last year (this is the indexation effect) except for the influence of real appreciation, which tends to lower inflation, slow down public sector inflation (at the cost of bigger deficits), or recession.

$$\pi_t = \pi_{t-1} + \alpha(e - \pi_t) + \beta(p - \pi_t) + \varphi y$$

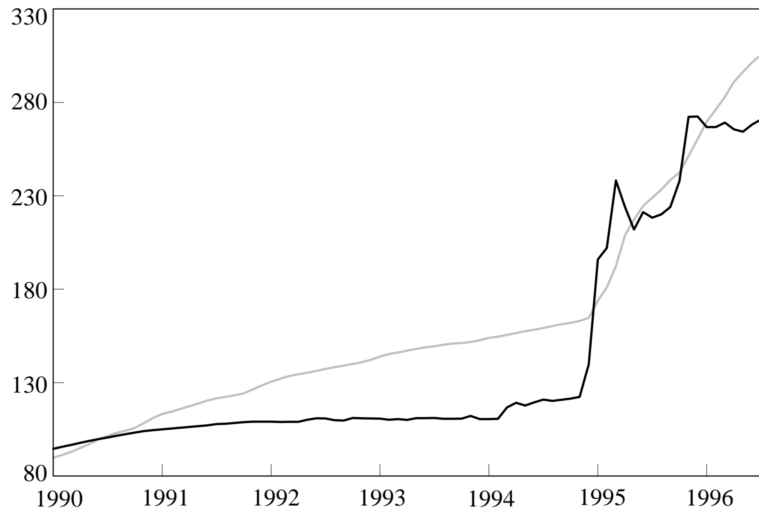
where π is the current rate of inflation, *e* the rate of depreciation, *p* the rate of increase of public sector prices, and *y* the output gap. The equation summarizes the proposition that inflation today is what it was yesterday—via formal or implicit indexation or "inertia" as it is often called—except for the accelerating influence of real depreciation, increasing real public sector prices, or overheating. Disinflation then requires real appreciation of the exchange rate (with resulting trade deficit risks), reduced inflation in the public sector prices (with resulting budget deficit risks), old-fashioned recession, or the always-suspect *incomes policy* which can never be a substitute for financial discipline, but may help coordinate the disinflation. Something has to give. Inflation reduction does not come from ceremonious incantations of the central bank or a spontaneous outbreak of credibility.

Chile, for example, has had an average inflation over the past ten years of 17 percent. At the outset, it was 30 percent; in the early 1990s, it was still double digit, and today, ten years later, it is down to 7 percent. The average growth rate for the 10-year period was 7 percent.

At the outset, a deep recession with near 30 percent unemployment set the tone for sharply lower rates of price increase. From there, productivity growth not outrun by wage increases and careful footwork by the central bank have gradually done their work. Chile's approach has been exemplary, particularly in the past few years where the central bank has refused to overreach and squeeze inflation down to the fashionable 2 percent of the industrialized countries. Chile's policymakers recognize that strong growth, modernization, and integration in the world economy are not held back by 6, 10, or even 15 percent inflation, but could be seriously hampered if overambitious disinflation created a macroeconomic problem.

Mexico's experience in the 1990s is the opposite—exaggerated emphasis put on inflation, exaggerated urgency to get to 2 percent,

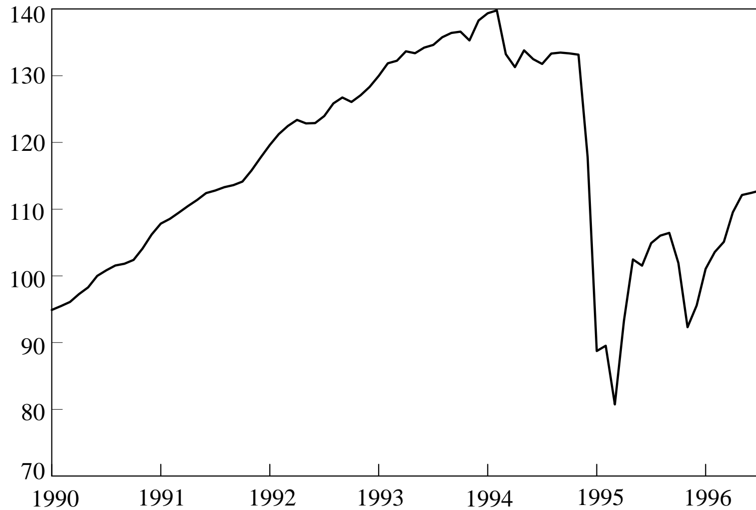
Chart 1
Mexico: Exchange Rate and Prices



dangerous imperviousness to overvaluation. The intransigent wish to bring down inflation in the context of an incomes policy that allowed significant wage increases led, year after year, to mounting real appreciation. However, in a country where trade had been liberalized and deregulation led to the shedding of labor in many sectors, real *de*preciation was called for. The cumulative real appreciation in the end amounted to more than 40 percent! The Mexican currency crisis was not surprising; in fact, it is what was predicted and had been predicted. The surprise was the extent of meltdown.

One would have thought that the severity of the recent experience might have taught Mexican policymakers a lesson—stay far, far away from an exchange-rate-based stabilization. Yet, precisely that same strategy is being pursued yet again. Of the huge real depreciation of 1995, much less than half is left. Even in the face of more than 20 percent inflation, monetary policy supports a peso that is flat

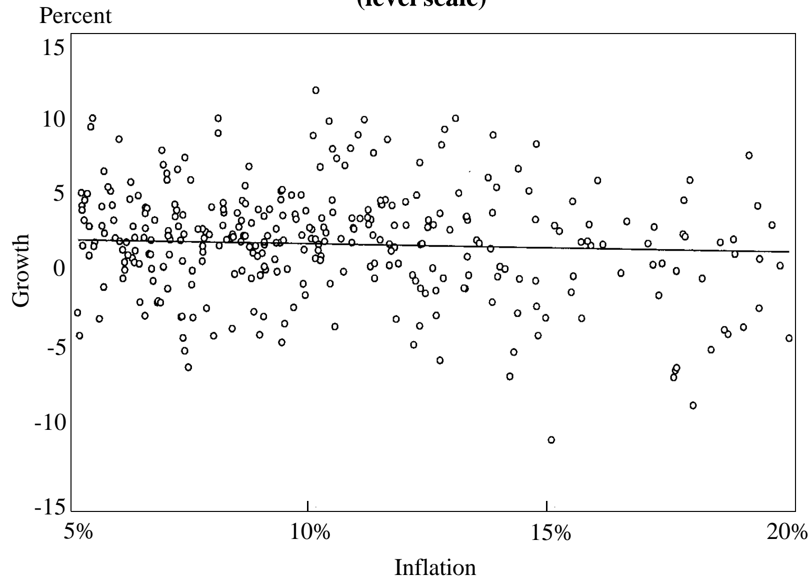
Chart 2
Mexico: Price Level in US Dollars
(Index 1990=100)



rather than depreciating at the pace of inflation. It is said to be a "flexible" rate, but in between interest rate and aggregates policy, it manages to keep the peso, keep the capital coming, and risk preparing yet another instance of overvaluation. (See Charts 1 and 2.) It is early to express that concern, but this is the appropriate time since correction of the course remains easy. Once a large overvaluation has built up—as in Mexico in 1994 or presently in Brazil—it is difficult to expect that inflation can fall below world trends sufficiently to bring a remedy. A vast empirical review of the experience with real appreciation reported by Goldfajn and Valdes shows clearly that large overvaluations have little chance of a mild end.

The central lesson in stabilizing moderate inflation is that it is very perilous, indeed, to use the exchange rate for anything but a very transitory, initial consolidation effort. The exchange rate cannot carry most or even much of the burden of stabilization. Nor can

Chart 3
Inflation and Growth
(level scale)



monetary policy do the job all by itself. Fiscal policy and competition must do a very substantial portion of the work.

The concern for inflation is altogether appropriate, but single-mindedness is not. In the face of moderate inflation, growth also must be part of the discussion. It is not correct to argue that there can be no growth in the presence of inflation, nor is it right to state that even moderate inflation is a detriment to growth. Chart 3 shows a cross-section of growth rates for a large group of countries with inflation in the range of 5 to 20 percent. It is hard to see any evidence of a relationship between inflation and growth. In the absence of a cost in terms of growth foregone, that suggests a more gradual disinflation strategy is acceptable.

Of course, it might be argued that the only stable inflation is zero inflation. That is the kind of dogmatic posture which has no empiri-

cal foundation. For the past decade or more, countries have been at work reducing inflation or at least containing it. Countries with moderate inflation rates, such as Chile, have perfectly well managed to achieve *gradual* reductions without either compromising the credibility of that strategy or sacrificing growth. On the contrary, the fact that inflation was steadily—over twelve years—falling but growth was strong throughout, made the program a textbook case of successful inflation fighting. Mexico's case, by contrast, is a series of failures and blunders as result from half-baked ideas about credibility, inflation kills, and the like. Chile today is a low inflation country; Mexico is once again back to intolerably high inflation. The right message is that inflation must come down and that there is never room for complacency; that is not the same as inflation reduction first, growth later.

References

Bruno, M. "Does Inflation Really Lower Growth?" *Finance & Development*, (September 1995), pp.35-8.

Dornbusch, R. "Overvaluation and Disinflation." Unpublished manuscript, Massachusetts Institute of Technology, 1996.

___________, and S. Edwards. "Exchange Rate Policy and Trade Strategy," in B. Bosworth and others, eds., *The Chilean Economy,* 1995. Washington, D.C.: The Brookings Institution.

___________, and S. Fischer. "Moderate Inflation," *The World Bank Economic Review* Vol. 7, No. 1, 1993, pp.1-44.

Goldfajn, I., and R. Valdes. "How Does Real Appreciation End?" NBER Working Paper, 1996.

Vegh, C. "Stopping High Inflation," *IMF Staff Papers* Vol. 39, No. 4, 1992, pp. 626-95.