

Monetary Reform in Latin America: Prospects for Success

I. Introduction

Inflation and subsequent monetary reform have, in the last fifteen years, become common features of the Latin American economic landscape. Within this period many of these countries have sought to end domestic inflation and restore economic stability by undertaking a variety of reform measures. Though these reforms differed in their details, they shared several important features: each was announced with a considerable amount of fanfare, most of the reforms included changes in a number of policies other than monetary policy (notably, a deficit-reduction plan) and many reform plans contained, as their centerpiece, a preannounced "table" of exchange rate devaluation. Yet none of these reforms was a complete success: in 1985 inflation in Latin America ranged between 35% (in Chile) to over 1000% (in Argentina). In many countries, large government deficits continue, having never been successfully reduced during the reforms of the 1970's. In addition, these countries generally face uncertain prospects for economic growth and employment together with the problems of servicing their foreign debt.

The aim of this paper is to evaluate the prospects for the success of future monetary reforms in Latin America. In order to address this issue, we must first understand the forces peculiar to Latin America which have led to the current inflation/reform cycle. Next, we must have a solid understanding of the costs of inflation on the one hand, and the costs and benefits of reform on the other. Finally, we must understand what economic preconditions must be satisfied for a reform to be successful; toward this end we shall discuss both economic theory and some evidence from previous reforms.

The paper is organized as follows. Section II begins with a discussion of the causes of the

recurrent, near-hyperinflations experienced in Latin America. Next, we discuss the costs and benefits of inflation and reform, and discuss the conditions economic theory suggests are necessary for a successful reform. Section III provides an overview and discussion of several recent and ongoing reform episodes. The facts of the reforms are laid out, and the reasons for past successes and failures are evaluated in the light of the discussion of Section II. In Section IV we discuss the prospects for the success of these, and future, reforms. We conclude by providing a "checklist" of conditions necessary to a successful reform. The list is surprisingly short, but contains conditions that are perhaps difficult to attain. We also provide a list of tools or policies that are often claimed by policymakers to be central to a reform, but which we believe are of little or no consequence to the success of a reform. An Appendix contains data on inflation, money growth, output, and deficits for some Latin American countries.

Our general conclusion is that the prospects for successful future reforms are good – largely because both the general populace and creditors of Latin America have become increasingly intolerant of inflation and of the economic policies that are its cause, but also because the lessons of the 1970's seem not to have been entirely lost on the policymakers themselves.

II. Inflation and monetary reform

The proximate cause of inflation is excessive money creation – yet it does not follow that reducing inflation simply involves reducing the monetary growth rate. The recent history of Latin America is testimony to this fact: many "reforms" involving temporary adherence to a

preannounced exchange rate path (and, correspondingly, a temporarily reduced rate of growth of the money supply) failed to have any significant impact on inflation. In order to understand the causes of inflation we must examine the causes of the high level of money growth. Probably the most important factor in understanding the recurrent inflations is the fact that the monetary authorities in Latin America have little or no autonomy in the conduct of monetary policy. Monetary policy is essentially dictated by the fiscal authority, i.e., the evolution of the money supply is dictated by the evolution of governmental budget deficits. Thus, we arrive immediately at the reason for the failure of so many Latin American reforms: money growth was reduced, but government budget deficits were not. For a short period of time these deficits can be, and were, financed by debt issue. But the extent to which these countries can use this alternative financing source is limited. The reason is that governments face an intertemporal budget constraint: they cannot issue debt in excess of the present value of future tax collections. In the recent experience of Latin American countries, lenders apparently became unwilling to hold additional debt even before this theoretical upper bound on debt was reached. Once lenders are unwilling to purchase additional amounts of a country's debt, there are only two options open to the policymaker: reduce the deficit or increase money growth.

Without reductions in deficits, these countries could not maintain reduced monetary growth rates and thus could not maintain the announced path for the exchange rate. This was well understood by investors and citizens of these countries, who expected, even at the time of the "reform", that the government would return to a policy of high money growth in the near future. These expectations were reflected in nominal interest rates, and in the fact that inflation did not respond (at the time of the "reform") to the reduced rate of monetary growth. People understood that the "reform" simply could not last.

Thus, understanding inflation in Latin America requires understanding the forces shaping fiscal policies. While political and social considerations are no doubt important, we focus on two economic considerations that bear directly on this problem. First, in these countries,

many central industries are owned and operated by the government, often at a loss: such industries include communications, transportation, and the production and refinement of fuels. Financing these industries in many cases accounts for a large share of government budgets in these countries. Second, given the level of governmental expenditure, there is the question of how to finance this expenditure. In many Latin American countries, the system of accounts and communications is insufficiently well developed to allow the application of many types of taxes commonly used in developed Western economies: for example, income taxes. Evasion of such taxes is too easy in these countries for them to be viable methods for financing government expenditure, making the inflation tax an attractive alternative.

Revenue from money creation: surprise inflation

There is tremendous incentive in *any* economy for the government to engineer a surprise inflation. The reason is that an unexpected inflation transfers resources from the hands of individuals holding fixed-interest, nominal government debt (currency or bonds) to the hands of the government without distorting any decisions made by individuals. Given the unexpected nature of the inflation, there is nothing an individual can do to escape this tax. Such a tax is efficient in a sense that an income tax, for example, is not – an income tax distorts individuals' labor supply decisions. But the problem, of course, is in trying to engineer surprises. In Latin America in particular, because of their history of high inflation rates, individuals are well aware of the government's temptation to attempt to implement surprise inflations. And given the history of inflation and failed reforms, announcements of a new reform are always received with a considerable amount of skepticism. That is to say: individuals know that the government would like to convince people that the reform was genuine, in order to induce them to increase their holdings of currency, and to induce them to accept lower nominal interest rates on the government debt.

Then, once real cash balances have risen and interest rates have declined, the government would like to increase inflation. Since the base for the inflation tax is the level of real cash balances (the nominal currency stock divided by

the price level), the revenue from the inflation tax is the inflation rate multiplied by the level of real cash balances. Thus, a government wishing to maximize its revenue from the inflation tax will try to induce individuals to increase their holdings of currency, and then inflate. Without the elimination of the government's budget deficit, the temptation to inflate in the future is always there. Thus, without the elimination of the deficit, the only way that a government can credibly announce a reform is to simultaneously apply binding regulations that provide independence to the monetary authority, i.e., the government must legally bar itself from using money creation as a source of deficit finance.

An example of the potential importance of the legal restriction against inflationary finance of deficits is found in the way in which the post-WWI German hyperinflation ended. In October 1923, the German government undertook a monetary reform which stopped the hyperinflation in less than a month. The German reform included policies which brought the government budget into balance. The reform also included a currency reform: the old currency was replaced by a new currency called the Rentenmark. But the most important feature of the reform was the fact that a new bank – the Rentenbank – was established to manage note-issue. There were legal limits both on the total amount of new notes that could be issued, and on the amount that could be issued to the government. The Rentenbank did not yield to subsequent government pressure to issue more notes than originally stipulated, so that inflation did not recur.

The costs of expected inflation

Having examined the reasons for recurrent inflation and the problems with instituting monetary reform, we turn to a discussion of the costs of inflation and the economic costs and benefits to a monetary reform. For moderate inflation rates (say, 3–5%) the real costs of inflation are probably small and are well-approximated by the costs of economizing on holdings of currency. Economists sometimes call this the “shoe-leather cost” of inflation, because if inflation is perfectly anticipated, nominal interest rates will reflect the inflation rate and the primary cost to individuals of the inflation is the

cost of going to the bank or brokerage house more frequently to convert interest-earning assets into zero-interest currency.

The fact that inflation taxes currency holdings does not mean that inflation should not exist – if the government does not have recourse to non-distortionary taxes, it is optimal to use the inflation tax *to some extent*. As mentioned above, taxes on labor income, corporate income, and value added taxes are all distortionary in the sense that changes in the level of the tax changes individuals' behavior. Thus, inflation should be viewed as costly to society only to the extent that the government resorts to this tax in excess of the amount that is optimal; i.e., beyond the level at which it imposes distortions equal to those imposed by other taxes.

The costs of high and variable inflation rates

For inflation rates of the order often experienced in Latin America, there are other, more significant costs. First, and most important, is the fact that high and variable inflation rates greatly reduce the information content of prices. In an economy where prices change rapidly and in an unpredictable fashion, it is extremely difficult for businessmen and consumers to make useful plans for current and future production, investment, and consumption. In contrast to an economy with stable prices, where a change in the nominal price of a good signals a change in its *relative* price, an individual living with high inflation rates will not be able to easily distinguish between relative price changes and general price level increases. When prices have lost their key economic function as a guide to the value of goods, it is not surprising that disruption of the economy follows. Economies with high variability in money and prices do, in fact, have highly variable levels of output.

Extremely high inflation rates give individuals very strong incentive to hold as little of the government currency as possible. This encourages individuals to develop alternative media of exchange so that trades between individuals are accomplished either by barter or by transacting in the currency of another country, which is typically illegal. Both of these methods are inefficient relative to transacting in a stable-valued domestic currency. On the one hand,

there are higher real resource costs of finding a trading partner with whom to barter and, on the other, there are costs of covering up illegal activities. Having, in a sense, driven the economy underground, the government will then find it more difficult to apply conventional taxes such as income or value-added taxes.

Further, increased inflation affects the real value of tax collections. Because of lags between accrual and payment of taxes, an increase in inflation rate reduces the real value of other taxes collected. These effects may combine to lead the government to increase inflation further in an attempt to make up some of this lost revenue. Consequently, high inflation leads to disturbances at the foundation of an economy, both by distorting the information and resource-allocative function of prices, and by disrupting the basic framework of trade between individuals.

The costs and benefits of a monetary reform

Thus, a government potentially has several reasons for desiring a reduced rate of inflation. First, the inflation rate may have risen to a point where a decrease in the inflation rate may actually lead to an increase in revenue from the inflation tax. This is easy to see if we imagine the extreme case where the prevailing inflation rate is so high that individuals hold virtually none of the domestic currency, implying zero revenue from the inflation tax. At a lower inflation rate, individuals would be willing to hold some currency, leading to a positive level of receipts from this tax. Second, inflation may have so disrupted the economy that stabilization of the price level would lead to an increase in economic activity.

But monetary reforms are often accompanied by further declines in economic activity. These declines in economic activity stem from two major sources. The first source is found in institutional rigidities – for example, labor contracts which specify that nominal wages are adjusted to previously-realized inflation rates. A second, “expectational” source derives from the fact that individuals, if disbelieving that a reform will take place, will demand nominal wages and interest rates that correspond to high levels of inflation. For example, suppose that unionized workers do not believe that the government is actually undertaking an inflation-re-

ducing reform, and so insist in their contracts of annual increases in nominal wages equal to the recent inflation rate, in an effort to keep their real wages constant. Then, when inflation falls due to the monetary reform, employers will find themselves paying higher real wages to unionized labor. To the extent that they can, employers will hire less of this kind of labor, and less of unskilled labor as well. Output will fall, and unemployment will rise. This need not have happened, had workers believed that inflation would fall, and thus had reduced the level of their wage demands accordingly.

Similarly, if individuals expect lower future inflation rates, the result will be lower nominal interest rates and an increase in the demand for real cash balances (i.e., an increase in the base for the inflation tax). If individuals do not expect inflation to fall nominal interest rates will incorporate an expected inflation component. If inflation does, in fact, fall the result will be high ex-post real interest rates. (This effect seemed to have been important in recent Latin American reforms.)

This lesson has not been lost on governments; hence, the announcements that always precede a reform. The reason for these announcements is to induce individuals to believe that the future inflation rate will be lower, and thus induce them to reduce nominal interest rates and wage demands, and to increase their holdings of currency. It has been demonstrated both in theory and in practice that inflation will be reduced more quickly and more painlessly the more confidence individuals have in the government's commitment to the reform. But talk is cheap: government announcements of reform will be believed only to the extent that individuals have reasons *other than the announcement itself* to believe that a reform will be undertaken. These reasons are clear and decisive actions undertaken by the government which fundamentally change the course of both monetary and fiscal policies. The more dismal is the country's previous history of attempted reforms, the more stringent are the requirements on the new policies necessary to ensure a reform's credibility. In the next section we look at the evidence from Latin American reforms undertaken in the 1970's. Examination of these attempts at stabilization sheds considerable light on the question of how – and how not – to design a successful reform.

III. The history of reform in Latin America

During the 1970's, the countries of the Southern Cone of Latin America – *Argentina, Chile,* and *Uruguay* – underwent stabilization processes that shared many key features. The two central, common aspects of these experiences were the use of the exchange rate as a tool of stabilization, and the simultaneous undertaking of a “package” of reforms, including reforms of trade policy and liberalization of financial markets.

The novel feature of these reforms was the announcement of a specified future path for the exchange rate (a “tablita”) entailing a decreasing rate of devaluation. Such a preannounced “crawling peg” is a special case of an adjustable-peg exchange rate regime, one in which the government commits itself to support the exchange rate specified by the “tablita” by undertaking appropriate interventions in the foreign exchange markets. The point of the preannounced, decreasing rate of devaluation was to reduce the rate of domestic inflation, both directly, by influencing the domestic currency price of imports and exports, and indirectly, through effects on individuals' expectations of inflation.

In addition to announcing the exchange rate table, the three countries instituted fiscal reforms of varying degree of stringency. By the mid-1970's, all three had fiscal deficits that exceeded 10% of GDP: the Chilean deficit reached 23% of GDP during 1973 (the year of the military coup that overthrew the Allende regime), and the peak figure for Argentina was 12%, attained in 1975, just prior to its military coup. Subsequently, the deficits were reduced to about 10% of GDP, but inflation was still substantial. (See the tables in the Appendix for details of inflation, money growth, output growth, and deficits.)

Chile

In 1975, the Chilean authorities instituted a drastic, 25% across-the-board reduction in government spending together with a major reduction in the number of publicly-owned enterprises. By December 1977, when Chile's “tablita” was unveiled, the government had a small fiscal surplus. During the period from 1976 to 1981, the inflation rate fell from 200% to less

than 20% and, perhaps surprisingly, the unemployment rate fell from 19% to 8%. To this point, the reform can be judged a success. But in June 1982, after having been fixed against the U.S. dollar for almost three years, the peso was devalued. Exchange controls were instituted two months after the initial devaluation, and the exchange rate subsequently followed a “passive” crawling peg, adjusting with a lag to inflation rates. Although the exchange rate has depreciated substantially since 1982, domestic inflation has remained in the range of 20–35% per year, with budget deficits remaining correspondingly low.

Argentina

Although Argentina's budget deficit was substantially reduced after 1977, the deficit was still about 3–5% of GDP by the time the “tablita” was introduced in January 1979. The proposed elimination of the deficit included in the “Recovery Plan” of December 1978 was never realized, although other reforms took place – for example, the relaxation of controls on international capital movement. During the period 1979–1980 the cumulative rate of inflation was around 500% and the peso was devalued by only 210%, following the “tablita”. Clearly, the inflation rate did not correspond to the preannounced rate of devaluation implied by the “tablita”. By the end of 1980, there was great pressure for devaluation in excess of the amount prescribed by the “tablita”. The two causes for this pressure were first, the basic inconsistency between the size of the deficit (with accompanying increases in the money supply) and the rate of devaluation implied by the “tablita”, and second, the change of government slated for March 1981 (i.e., the government supposedly committed to the “tablita” was leaving office). An unannounced 10% devaluation occurred in February 1981; the new administration devalued the peso an additional 30% after taking office. These deviations from the “tablita” during a time of low credibility set off a large-scale episode of capital flight from Argentina – the reinstatement of the “tablita” did not stop this outflow. After another large devaluation in June 1981 credibility in the reform was completely demolished, and a dual exchange rate system was set up. In the period from 1981 to the end of 1983, the cumulative rate of ex-

change depreciation was 2400%. During this period the deficit grew rapidly, due in part to the Malvinas War and in part to a reduction in the level of economic activity. This deficit was partly financed by selling debt abroad. A brief stabilization and growth program was attempted between June and August 1982. Through a policy of setting maximum levels of nominal interest rates and wages in a still-inflationary environment, the government managed to eradicate the real value of debts via sharply negative real interest rates. The inflation rate rose from 165% in 1981 to 350% in 1983, raising the spectre of hyperinflation.

Uruguay

In Uruguay, a series of tax and expenditure measures applied during 1975–1976 reduced the fiscal deficit to a level that allowed a credible attack on inflation. When the exchange rate “tablita” was introduced in October 1978 the deficit was below 1% of GDP; recall that the Argentine deficit was about four times as large. Inflation began to converge to the pre-announced rate of devaluation, but in 1979 a series of events largely outside the control of the Uruguayan authorities derailed the stabilization process. The source of the trouble was the concurrent Argentine attempt at reform; one that was doomed to failure due to Argentina’s large fiscal deficit and accompanying financing requirements. Because of the different sizes of the Argentine and Uruguayan economies and their intimate linkages in goods, services, and asset markets, distortions introduced in the Argentine economy because of the attempted reform had spillover effects on the Uruguayan economy. In Argentina, the combination of pegging the exchange rate while not reducing the deficit or money growth led to a situation where the Argentine peso was “overvalued” in the sense that the exchange rate would have depreciated substantially had the Argentine authorities allowed it to float. The temporary strength of the Argentine peso led Argentine consumers to increase dramatically their purchases of Uruguayan goods (especially real estate) and services (especially tourism). The result was an increase in the Uruguayan price level in excess of the amount implied by the rate of devaluation called for in the “tablita”. When the expected Argentine devaluation

occurred, the flow of goods and services reversed: Uruguayans increased their consumption of Argentine products and the Uruguayan economy went into recession. The budget deficit soared during 1982, primarily due to the large decline in tax receipts which accompanied the decline in economic activity. Expectations of a devaluation rose, and government rhetoric was insufficient to stem the capital outflow that had arisen. In November 1982 the “tablita” was abandoned; the Uruguayan peso has subsequently followed a managed float. Prior to the abandonment of the “tablita”, the inflation rate had been reduced to below 20% per year, a figure comparable to the Chilean rate during that country’s stabilization period. Subsequently, however, the increase in Uruguay’s fiscal deficits and high rates of exchange depreciation meant that inflation rebounded to a level that currently exceeds 80% per year.

Why did these reforms fail?

The success and failures of the three reforms discussed above all hinged on whether the country in question pursued a fiscal policy compatible with reform. In the Argentine case, it is clear that the inability or unwillingness of the government to reduce the fiscal deficit undermined the credibility of the reform. This is also true for the last period of the Uruguayan stabilization policy.

The Chilean experience highlights the importance to a successful reform of the internal consistency of the various components of policy; the ultimate failure of the stabilization program was due to reasons other than overly expansionary monetary policy or large fiscal deficits. First, the deterioration in Chile’s terms of trade was an important source of pressure on the exchange rate: the price of copper, Chile’s main exportable, fell more than 25% between 1980 and 1982. Second, the fact that Chile had pegged her exchange rate to an appreciating U.S. dollar was a further source of difficulty to her exporters, since many of their customers are European. (This illustrates the extent to which commitment to a fixed exchange rate system ties the hands of even a policymaker committed to reform.) Third, Chilean law required that nominal wages were indexed with a considerable lag to inflation, implying that wages and prices could not fall. Thus, the only way to de-

crease the world price of Chilean goods was through a devaluation of the peso. Pressure on the exchange rate was intensified by large swings in speculative capital flows as investors began to expect that the exchange rate was likely to depreciate.

The subsequent decline in economic activity in Chile was exacerbated by barriers to certain kinds of capital flows that would have allowed interest rate arbitrage to reduce the level of real rates. Another force acting to maintain high real rates was the practice of some banks of rolling over bad loans rather than calling them or writing them off.

The Uruguayan case shared with Chile the basic inconsistency of a fixed exchange rate together with a legal floor for nominal wages. Another institutional rigidity in Uruguay stems from the fact that the Social Security payments are indexed to the previous year's inflation rate, generating a tendency towards temporarily large budget deficits if inflation is rapidly reduced. Uruguay was, in addition, subject to the spillover effects of swings in the Argentine economy.

Ongoing reforms

In December 1984, *Argentina* undertook an IMF gradualist program, but the monetary and fiscal austerity measures were not successful in reducing inflation. In June 1985 a new reform known as the "Austral Plan" was undertaken. This plan entailed a shock treatment intended to end inflation; many of its features are traceable to the measures that Germany used in 1923 to end its post-WWI hyperinflation. The central features of the current Argentine plan are outlined below.

- The government has promised not to finance deficits by money creation. While this promise is not legally binding, President Alfonsín has staked a great deal of his political capital on this promise.
- The budget deficit is to be cut by tax and expenditure measures: notably, export taxes and import tariffs have been imposed, and prices for publicly produced goods have been increased substantially.
- Wages and prices are frozen until further notice.
- A sharp devaluation preceded the implementation of a new currency – the Austral –

which was fixed vis-à-vis the U.S. dollar. This devaluation has the combined effect of allowing the reform to begin without pressure on the exchange rate, and also provides inflation tax revenue from the ensuing (one-time) increase in the price level.

- A timetable was announced to adjust outstanding loan contracts.

Even though inflation has been reduced a great deal from the high levels of the first half of 1985, the Argentine program still faces some difficulties. The fiscal deficit did not reach the forecast level of 2.5% of GNP by the end of last year. The government's current intention to privatize six of the largest state-owned enterprises might help in this area. The release of currently fixed wages and prices may, when it occurs, be followed by upward adjustment of these prices to their equilibrium levels. Finally, the high levels of ex post real interest rates is evidence of persistent expectations that high inflation is likely to return.

Brazil had recently undertaken a plan similar in many respects to the Argentine plan. Wages and prices have been frozen, and a new currency – the cruzado – has been created and fixed to the U.S. dollar. In addition, the country's all-encompassing indexation scheme is in the process of being dismantled. But even though the fiscal deficit is not a serious problem in Brazil, and even though measures to reduce it have been announced, there has not been a clear statement limiting the power of the government to monetize future deficits. The Brazilian effort at reform is bolstered by the fact that the economy seems quite healthy – in 1985, output grew at a rate of 7.5%.

IV. Designing a successful reform

In this section we review the conditions necessary to a successful reform. In addition, we discuss some commonly-implemented features of reforms which do not increase the reform's likelihood of success.

Conditions necessary for a successful reform

1. Reduce the fiscal deficit. The most important feature of a successful monetary reform is that it is not solely a reform of monetary policy. Government policies are a package – it is gen-

erally infeasible to undertake a dramatic reduction in the monetary growth rate while leaving a large fiscal deficit untouched. The reason is that a government has a budget constraint – it can engage in debt financing of its deficits only for a limited time. When the country's debt limit is reached, so that no new debt can be sold either domestically or internationally, the government must either dramatically reduce its deficit, or return to inflationary finance. Thus, one of the most important signals a government can send regarding its commitment to monetary reform is *first* to undertake a dramatic reduction in the fiscal deficit. The evidence from the Chilean and Argentine reforms of the late 1970's confirms this view.

2. *Ensure that future deficits cannot be financed by money creation.* Even if current deficits are reduced, removing the current temptation to inflate, there remains the question of how future deficits will be financed. Since current inflation and interest rates depend on people's expectations of the entire future path of the money supply, a reform cannot be a success if people believe that money growth will increase again in the future. Typically, Latin American governments attempt to convince their citizens through announcements that they will not inflate in the future. But unless the independence of the monetary authority is guaranteed by a change in their legal status, such announcements have little credibility. The potential power in supporting a reform of a change in the legal status of the monetary authority is well illustrated by the previously discussed end of the post-WWI German hyperinflation. The success of the German case – contrasted with the repeated failures of reform in Latin America – suggests that it is important to legislate the separation between the fiscal and monetary authorities, and to ensure that the monetary authority is insulated from pressure applied by the fiscal authority. Finally, it is desirable to take steps to ensure the convertibility of the currency into an asset with stable value (possibly gold or privately-issued debt).

Policies irrelevant to the success of a reform

1. *Announcements.* Both theory and evidence suggest that "announcements" per se, whether in the form of pure rhetoric or a preannounced path for the exchange rate, are largely irrele-

vant to the success of a reform. Whether announcements of reform are believed is due, in part, to the history of past reforms. In a country where monetary reforms repeatedly fail, an announcement of a new reform is likely to be received with considerable skepticism. But, as discussed above, there is also considerable latitude for a truly committed government to take actions that will convince rational individuals of its intention to reform monetary policy. The more skeptical are individuals that a reform will be carried out, the more important it is that the government move decisively to implement appropriate fiscal and monetary policies. And, especially in the event of popular skepticism, it is very important that the government not deviate from the reform policies in the early stages of the reform process. The only sense in which announcements are useful is that, by publishing information on its policies, the government can facilitate individuals' information-gathering activities. That is, if the government is actually carrying out a reform, it should publish the data which confirm this fact.

2. *Fixing or announcing a path for the exchange rate.* Recall that a central feature of many recent reforms was the announcement of a specified future path for the exchange rate (a "tablita") entailing a decreasing rate of devaluation over time; i.e., the government has (verbally) committed itself to support at each future point in time the exchange rate specified by the "tablita". In announcing the "tablita" the government hoped to convince individuals of their commitment to the reform, so that individuals would base their expectations of future inflation on those implied by the "tablita". But the announcement of a "tablita" or the fixing of an exchange rate does not provide a commitment mechanism for the policymaker, since the announcement of an exchange rate path does not change the opportunities or incentives faced by the policymaker. He can still use money to finance deficits; if he does, the result will be reserve drain. For individuals in the economy, the fixed exchange rate cannot mask the actions of the policymaker. Individuals have great incentive to look *behind* the fixed exchange rate to observe the monetary and fiscal policies pursued by their government. If these policies are inconsistent with the maintenance of the fixed exchange rate (and a reduction in the long run inflation rate), then their expectations of future

inflation will be unaffected by the announcement of and short-term adherence to a "tablita" or fixed rate.

3. *Wage and price controls.* Implementation of wage and price controls is a common feature of the two most recent Latin American reforms. But this policy is at best useless, and at worst creates large distortions in the economy. By installing price controls, the government tries to remove from the hands of individuals the problem of setting current wages and prices. But since current prices and wages depend, in the absence of controls, on individuals' expectations about future government policy, implementation of controls amounts to an attempt on the part of the government to administer beliefs about future government policy. If individuals' beliefs differ from those implied by the fixed prices, then the controls will cause distortions in the markets for goods and labor services. The important point is that the freezing of wages and prices by *itself* does nothing to change the beliefs of individuals concerning the likelihood that the government is pursuing a set of policies that will successfully stabilize prices.

Prospects for future reforms

The reforms of the 1970's provided abundant information to policymakers and the public about the types of policies necessary to a successful reform. The recent reforms undertaken in Argentina and Brazil suggest that policymakers in those countries are attempting to move in the direction of implementing policies that have a better chance of success than those adopted in the past. In particular, more attention is currently paid to the reduction of fiscal deficits. Also, both Argentina and Brazil have undertaken currency reforms, wherein the old currency was replaced with a new one, and announcements were made that the government would not resort in the future to inflationary finance of government deficits. The analysis of this paper suggests that such currency reforms are pure announcements, and are thus useless as a stabilization tool, unless they are backed by a change in the institutional structure by which deficits can be financed by money creation. Neither Argentina nor Brazil has undertaken this necessary change in the extent of independence of the monetary authority, although President Alfonsín of Argentina has

staked a considerable number of his political chips on his promise not to inflate in the future. Such promises are, however, a poor substitute for legislated independence of the monetary authority.

Finally, the experiences of the 1970's have changed the way citizens of Latin America think about inflation. Its causes and effects are well understood by individuals, and governments cannot undertake inflationary policies without quickly becoming very unpopular. In addition, the large amount of foreign debt owed by these countries means that agents outside the country have incentive to monitor the policies undertaken by the debtor governments. But pressure from the citizenry or from foreign creditors is a poor substitute for responsible management of a country's fiscal and monetary affairs. It is encouraging, therefore, that the recent reforms in Latin America provide evidence that policymakers have learned from their past failures.

Appendix

Argentina

Year	Money growth (% p. a.)	Inflation (CPI) (% p. a.)	Output growth (% p. a.)	Deficit (% of GDP)
1970	19.8	13.5	2.6	1.2
1971	35.9	34.8	3.4	2.3
1972	67.0	58.4	2.2	2.7
1973	117.0	61.3	3.2	5.5
1974	68.6	23.5	5.2	6.2
1975	184.0	182.3	0.0	11.9
1976	301.6	443.2	-1.0	10.3
1977	134.3	176.1	7.0	7.2
1978	132.7	175.5	-3.7	2.8
1979	137.2	159.4	6.8	3.2
1980	96.8	100.8	0.9	2.7
1981	70.1	104.5	-6.3	3.6
1982	247.5	164.7	-4.8	8.1
1983	361.7	343.8	2.0	11.8
1984				
(Quarter)				
I	503.8	446.6	3.1	
II	546.2	559.1	3.1	
III	550.8	655.1	0.0	
IV	501.6	688.0	0.8	
1985				
I	486.4	814.6	0.8	
II	729.2	1036.2		

Data is from "International Financial Statistics".

Chile					Uruguay				
Year	Money growth (% p. a.)	Inflation (CPI) (% p. a.)	Output growth (% p. a.)	Deficit (% of GDP)	Year	Money growth (% p. a.)	Inflation (CPI) (% p. a.)	Output growth (% p. a.)	Deficit (% of GDP)
1970	66.7	33.3	1.4	2.7	1970	14.3	16.3	4.8	1.4
1971	120.0	19.4	9.0	10.7	1971	53.4	23.9	-1.0	5.8
1972	145.5	79.1	-1.2	13.0	1972	46.7	76.5	-3.6	2.5
1973	316.7	352.9	-5.6	23.0	1973	80.3	97.0	-2.1	1.2
1974	272.4	506.0	1.0	10.5	1974	64.1	77.2	9.3	3.8
1975	257.4	374.2	-12.9	2.6	1975	42.3	81.4	4.5	4.4
1976	193.7	211.8	3.5	2.3	1976	65.5	50.7	4.3	2.1
1977	108.2	91.9	9.9	1.8	1977	40.4	58.2	1.8	1.3
1978	67.0	40.1	8.2	0.8	1978	85.1	44.5	6.3	0.9
1979	64.5	33.3	8.3	-1.7	1979	71.7	66.8	8.5	
1980	56.8	35.1	7.8	-3.1	1980	47.4	63.4	4.7	-0.3
1981	-6.0	19.7	5.7	-1.6	1981	8.3	34.0	1.9	1.6
1982	9.4	9.9	-14.3	2.4	1982	19.8	19.0	-9.4	10.5
1983	26.6	27.2	-0.7	2.6	1983	11.1	49.2	-5.0	3.9
1984					1984			-1.8	5.2
(Quarter)					(Quarter)				
I	27.1	21.1			I	13.3	42.4		
II	23.8	19.5			II	9.4	50.4		
III	31.1	16.3			III	17.6	61.9		
IV	13.1	22.5			IV	48.4	63.6		
1985					1985				
I	5.5	28.8			I	53.2	63.9		
II	11.1	32.7			II	63.5	74.3		
III		35.5			III		71.6		

Data is from "International Financial Statistics" and from the Central Bank Bulletin.

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