

**IMF PAPER ON POLICY ANALYSIS  
AND ASSESSMENT**

© 1993 International Monetary Fund

This is a *Paper on Policy Analysis and Assessment* and the author(s) would welcome any comments on the present text. Citations should refer to a *Paper on Policy Analysis and Assessment* of the International Monetary Fund, mentioning the author(s) and the date of issuance. The views expressed are those of the author(s) and do not necessarily represent those of the Fund.

PPAA/93/9

INTERNATIONAL MONETARY FUND

Research Department

Credible Disinflation Programs

by

Pierre-Richard Agénor\*

July 1993

Abstract

This paper examines the implications of the recent macroeconomic literature on credibility for the design of disinflation programs. It reviews alternative mechanisms that have been suggested to enhance the credibility of such programs, including the adoption of a shock therapy approach for signaling purposes, the use of multiple nominal anchors, and increased central bank independence. The analysis highlights the importance of a proper sequencing of macroeconomic and structural reforms for maintaining domestic political support and ensure sustainability of the reform process.

JEL Classification Numbers:

E31, E61, O11

---

\*The author would like to thank, without implication, Daniel Citrin, José De Gregorio, Pierre Dhonte, Gian Maria Milesi-Ferretti, Thomas Morrison, Gonzalo Pastor, Julio Santaella, and Carlos Végh for helpful comments on a more detailed version of this paper, which is available upon request.

Table of Contents

	<u>Page</u>
I. Introduction	1
II. Sources of Credibility Problems	2
III. Enhancing the Credibility of Disinflation Programs	7
1. Signaling and sustainability	7
2. Price and wage controls	10
3. Central bank independence	13
4. Sequencing and political support	16
IV. Concluding Remarks	19
References	21
Figure 1. Inflation and Price Controls in Brazil, 1984-90	14a

## I. Introduction

The repeated failure of disinflation programs in developing countries has often been attributed to private agents' lack of confidence in the ability of governments to persevere in reform efforts and maintain a consistent set of policies over time. <sup>1/</sup> Moreover, a tradition of failed stabilization attempts suggests that the credibility problem each new anti-inflation program must confront becomes more severe over time, adding to the downward rigidities that often characterize the inflationary process.

The recent literature in macroeconomics has considered a variety of mechanisms aimed at establishing or enhancing policy credibility and the reputation of policymakers. A key feature of the literature (see Cukierman, 1992) is that private agents interact strategically with policymakers and determine their behavior on the basis of their expectations about the likely course of current and future policies. The purpose of this paper is to examine the implications of this literature for the formulation and design of disinflation programs. Section II presents an overview of alternative sources of credibility problems. Section III examines alternative mechanisms aimed at alleviating credibility problems in stabilization programs, including *the adoption of a shock therapy approach for signaling purposes*, the use of price controls as an additional nominal anchor, and increased central bank independence. The concluding section provides some final remarks.

---

<sup>1/</sup> The lack of policy credibility as a source of inflation persistence has been emphasized by various authors, including Blejer and Liviatan (1987), Calvo and Végh (1992), and Dornbusch (1991).

## II. Sources of Credibility Problems

In the context of disinflation programs, the first important aspect of the credibility problem relates to the program itself, specifically to the policy measures around which it is formulated and the degree to which they are consistent and sustainable. Other relevant aspects, which relate to policymakers' interactions with private agents, emerge as a result of various assumptions concerning the behavior and "characteristics" of those implementing an otherwise consistent program (such as the structure of policy preferences and the reputation of the policymakers themselves), the information structure, and the policy environment.

First, a credibility problem may emerge when the public perceives that a stabilization program is inconsistent with other policies being pursued simultaneously. A disinflation program that does not include measures to limit the public sector budget deficit will typically lack credibility because private agents will understand its inconsistent nature. The Brazilian Cruzado Plan implemented in 1986, for instance, lost credibility rapidly because private agents quickly realized the inflationary implications of the expansionary fiscal stance the authorities adopted at the outset. In addition, inconsistencies in the overall formulation of an economic reform program or an inappropriate sequencing of policy measures may hurt the credibility of the stabilization effort, even if the components of the reform program are internally consistent. Rapid trade liberalization, for instance, makes little sense if a large number of prices are maintained under government regulation.

Secondly, the lack of credibility can result from a time-inconsistency dilemma faced by policymakers: their optimal ex post strategy may differ from their ex ante strategy. For instance, once nominal wages are set by the private sector, the authorities may find it tempting to disinflate less than they had promised to, in order to generate output gains (Barro and Gordon, 1983). This result obtains because the policymaker is concerned about both inflation and unemployment, and faces an expectations-augmented Phillips curve. The policymaker wants all agents to expect low inflation in order to exploit a favorable trade-off between inflation and unemployment. But announcing a policy of low inflation is not credible, since once expectations are formed the policymaker has an incentive to renege on his announcement in order to reduce unemployment. <sup>1/</sup> Private economic agents understand this incentive and tend not to believe such policy announcements in the first place.

A similar time-inconsistency problem emerges in a small open economy that has opted for a fixed exchange rate arrangement (Agénor, 1991). By fixing the exchange rate--and therefore the domestic price of tradable goods--the policymaker's aim is to reduce inflationary expectations embodied in prices set in the nontradable sector of the economy. However, price setters understand the policymaker's incentive to deviate from the fixed exchange rate announcement and devalue the currency in order to depreciate the real exchange rate and stimulate

---

<sup>1/</sup> Policymakers' incentive to inflate need not be motivated by employment considerations. As shown by Cukierman (1992), it can also be spurred by the presence of short-term rigidities in the tax system, the existence of seignorage considerations or because the policymakers' objective is to reduce the real value of the nominal public debt.

output, and therefore will not believe the initial announcement. The general implication of models that highlight the time-inconsistency dilemma in both closed and open economies is that when policymakers have an ex post incentive to renege on their promises, rational agents will discount announcements of future policy actions or assurances regarding the continuation of present policies. Accordingly, inflation will be difficult to reduce and will instead tend to display persistence over time.

A third source of credibility problems is incomplete or asymmetric information about policymakers themselves: private agents may not be able to assess how serious the incumbents really are about fighting inflation. At the outset of a stabilization program, private agents do not entirely believe the authorities' commitment to disinflate, and need time to verify the new policy stance and assess the "true" intentions of policymakers. Imperfect information of this sort may be particularly prevalent in some developing countries, where policymakers tend to change rapidly, generating confusion about policy objectives and the preferences of the incumbents. Imperfect monitoring abilities prevents private agents from detecting those preferences--unless the policymakers go public. If policymakers have the incentive to do so, they can exploit this informational advantage. The implication is, however, that imperfect monitoring capability reduces the scope for building reputation by policymakers, particularly if agents learn only gradually (see Cukierman, 1992).

A fourth source of credibility problems in disinflation program results from the uncertainty surrounding the policy environment and the predictability of policy measures. In a stochastic world, even if

a program is coherently formulated and time-consistent--in the sense that policymakers have no incentive to depart ex post from the preannounced policy measures--exogenous shocks large enough to throw the program "off track" may occur (Dornbusch, 1991). Under such circumstances, reputable policymakers may not be able to dampen price expectations and convey credibility to a stabilization program, because of a high probability that an unexpectedly large occurrence will force them to deviate from their targets. Such shocks may be external in nature (such as sharp changes in a country's terms of trade or world interest rates) but may also result from the policy environment itself, especially when the authorities have imperfect control over policy instruments. For instance, the announcement of a fiscal target will not be fully credible if the government does not adequately control the level of government expenditure, if tax revenues are subject to considerable variability, or if the rate of inflation depends on the rate of expansion of domestic credit, which in turn depends on both deterministic and stochastic factors. Private agents will understand the implications of this lack of control over policy instruments and will accordingly form a probability that the policy target will not be met. 1/ The lower the degree of precision in the manipulation of policy instruments, the more likely it is that private agents will anticipate the possibility of a future collapse of the stabilization effort, and the more rigid downward the inflation

---

1/ In a sense, the lack of credibility results from the inability of policymakers to precommit their actions in response to different states of the environment. Although, in principle, fully contingent mechanisms might eliminate this source of credibility problem, in practice they are hard to formulate.

rate will be. Thus, the lack of policy predictability may create doubts about the sustainability of the reform process and affect the degree of credibility of an otherwise consistent and viable program.

Finally, a credibility problem may emerge when the public perceives that policymakers will be unable to implement their program because its political base may crumble, as may occur with a government coalition made up of parties with different ideological orientation or with a government whose legitimacy is in doubt. Although private agents may believe in the government's objectives and policy intentions, they will also evaluate the political feasibility of potentially painful macroeconomic reforms. The less cohesive political forces are, or the greater the strength of vested interests, the more severe the credibility problem. Moreover, lack of political consensus will often lead agents to expect policy reversals. This uncertainty about future policies, in turn, has drastic implications for the long-term effects of stabilization plans. Strategies believed to be sustainable are likely to elicit both economic and political responses that will reinforce the reform process, while strategies believed to be reversible will have the opposite effect.

In practice, it has proved difficult to provide evidence--even retroactively--regarding the particular type of credibility problem that a given program or policymaker faces. Although there has been some substantial methodological progress recently (see Agénor and Taylor, 1993) the paucity of robust quantitative techniques creates serious problems in gauging the practical importance of alternative sources of credibility problems and makes it difficult to devise appropriate policy responses or undertake corrective measures. These

practical difficulties, however, make it all the more important to strengthen the design of disinflation programs.

### III. Enhancing the Credibility of Disinflation Programs

A variety of proposals have been made to enhance credibility in the context of disinflation programs. One line of inquiry has pursued the search for ways to increase the credibility (or, in this case, the consistency) of the reform program itself by devising appropriate contingency clauses. The second and broader line has focused on ways to increase the reputation of the policymakers implementing the program. This section deals primarily with the second category, discussing the conceptual basis of some of these proposals and evaluating their practical policy implications. First, the appropriateness of a shock therapy approach to stabilization as a way to signal the policymakers' "type" to the public and build their reputation is examined. The role of price controls as an additional nominal anchor is then discussed. Third, institutional reforms, such as an increase in the degree of autonomy of the central bank or adhesion to a monetary union, are evaluated.

#### 1. Signaling and sustainability

It is often argued that policymakers must make a sharp break with the past to demonstrate their commitment to price stabilization (Rodrik, 1989). This means not only that the authorities must refrain from accommodating inflation at the outset in order to sustain the stabilization effort (and eventually to succeed in controlling inflation), but that they may have to take more drastic measures than they would otherwise prefer to. Such a course of action may be all

the more necessary when a series of unsuccessful attempts has rendered the public highly skeptical about the policymakers' ability and commitment to disinflate, or--as suggested by Bruno (1992) in the case of some reforming socialist economies--when a new regime has emerged in which the private sector has no yardstick for evaluating policymakers' actions. In such cases, "biting the bullet" by accepting a recession can be perceived by the private sector as a test of the authorities' determination to maintain low inflation (Vickers, 1986). In an economy where inflation is fueled by monetary financing of government spending, an overadjustment in the fiscal sector can also provide an important signal about the authorities' commitment to maintain the budget deficit under control. Mexico's drastic fiscal adjustment--from an operational deficit equivalent to 3.6 percent of Gross Domestic Product in 1988 to a surplus of 1.8 percent in 1990 and 3.3 percent in 1991--is widely regarded as an essential element in conveying credibility to the stabilization program initiated at the end of 1987.

However, using overly restrictive monetary and fiscal policies in an attempt to convey signals about the preferences of policymakers may exacerbate the credibility problem instead of helping to alleviate it. First, excessively harsh policy measures may create expectations that such decisions are not sustainable and will eventually be reversed. As discussed in more detail below, overadjustment (excessive cuts in public spending, for instance) may increase unemployment and undermine political support for painful reforms. Second, if uncertainty about incumbent policymakers relates to their ability to commit themselves to preannounced policies (and not to the authorities' relative concern

for output expansion), the optimal behavior may be to partially accommodate inflationary expectations rather than to adopt an overly restrictive monetary policy stance (Cukierman and Liviatan, 1991). More generally, the signaling argument for a "big bang" approach to stabilization rests upon the assumption that the behavior of policymakers depends primarily on their policy preferences--that is, the weight they attach to price stability relative to output. In practice, however, policy decisions are also affected by the state of the economy, which depends, in turn, on the macroeconomic policy stance. In such conditions, the output loss associated with a shock therapy approach may weaken credibility by raising expectations that actual policies will be relaxed and can lead to an outcome worse than what would have developed with a gradual approach (Coricelli and Milesi-Ferretti, 1993).

It is the persistence over time that matters to establish reputation of policymakers, rather than the degree of restrictiveness of the policy measures implemented at the outset of a stabilization program. Macroeconomic adjustment measures that are not regarded as politically and economically sustainable (within the limits imposed by a democratic regime) cannot be credible. A critical element in ensuring sustainability is the proper sequencing of stabilization measures in the context of the overall reform effort, in order to minimize the distortions that are often by-products of such programs. For instance, in some cases microeconomic adjustment and institutional changes may need to precede macroeconomic policy reforms to ensure that the overall reform strategy is consistent and to convey credibility to the stabilization package. To some extent, ensuring

the irreversibility of macroeconomic reforms ensures their sustainability. Sequencing adjustment measures in such a way that it becomes costly for future policymakers to reverse decisions already taken by a reform-minded government enhances the credibility of a disinflation program.

## 2. Price and wage controls

Price and wage controls have been used repeatedly since the early 1960s in disinflation programs in developing countries, despite the fact that these controls have well-known microeconomic costs. A typical argument policymakers--or their advisors--offer in support of price ceilings is that inflation persists because of lagged wage indexation and backward-looking expectations. The presence of inertial factors means that attempts to use restrictive monetary and fiscal policies exclusively to combat inflation will lead to strong recessive effects, making it impossible for such policies to be continued beyond the short term. More recent theoretical arguments, however, justify the temporary use of price controls to enhance credibility and generate political support.

The use of price controls as a nominal anchor (in addition to the money supply or the exchange rate) for enhancing credibility has been emphasized by Blejer and Liviatan (1987) and Persson and van Wijnbergen (1993). In Blejer and Liviatan's (1987) analysis, the lack of credibility stems from the severe asymmetry of the information available to the public and that held by policymakers. At the outset of a stabilization program, private agents do not entirely believe the authorities' commitment to disinflate, and need time to verify the new policy stance. A price freeze gives policymakers a period during

which they can convince the public--by adopting, and sticking to, restrictive monetary and fiscal policies--of the seriousness of their policy targets. Persson and van Wijnbergen (1993) provide a game-theoretic analysis of the mechanisms that enable controls to assist in establishing credibility. In their framework, policymakers must signal their willingness to accept a recession in order to gain credibility without resorting to inflationary measures or giving in to pressure to reverse their policy stance. The temporary use of price and wage controls (in addition to a restrictive monetary policy) allows policymakers to reduce the cost of signaling its commitment to disinflate.

The most frequently cited example of a successful application of price controls is the Israeli stabilization of 1985, during which all nominal variables (including the exchange rate) were frozen. In addition to a sharp fiscal contraction (including a cut in subsidies) and an up-front devaluation, the government announced not only a credit freeze but also its intention to maintain the exchange rate fixed, with the understanding that the unions would temporarily suspend COLA clauses and freeze wages for a few months. Agreement on the latter was, in turn, made conditional on the introduction of price ceilings. The tripartite agreement between the government, employers, and trade unions formed the basis for a sharp reduction in inflation from several hundred percent per annum to 25 percent, and subsequently to 15-20 percent. The short-run gains--in terms of a quick reduction in inflation and enhanced government credibility--resulting from the successful application of price controls outweighed the distortions created by the price ceilings (Bruno, 1991).

In addition to the many practical problems associated with the imposition and removal of price controls (such as the enforcement mechanism and the length of the flexibilization stage), the debate on whether price controls improve credibility is far from settled. In the Blejer-Liviatan (1987) framework, for instance, the use of price and wage controls can also be counter-productive, since a freeze does not enable the public to learn whether sufficient fiscal restraint has been achieved--that is, whether inflation has really been stopped or has only been temporarily repressed. In fact, controls may lengthen the time required for expectations to adjust to a new equilibrium. In addition, the credibility price controls provide may vanish if policymakers are unwilling or unable to control all prices in the economy, and if forward-looking price setters in the "free" sector understand the incentives to depart from a preannounced price control policy in an attempt to reduce the macroeconomic costs associated with a price freeze (Agénor, 1992). Paradoxically, the imposition of price controls in such a framework may lead to inflation inertia.

In practice, price controls have often been used as a substitute for, rather than a complement to, monetary and fiscal adjustment. While price controls have often been effective in bringing down inflation quickly in the short run, in many cases their initial success has proved difficult to sustain, due to a lack of persistence in macroeconomic policy reforms. Private agents have quickly realized that legislating prices down would not be an effective alternative, often leading to a rapid resurgence of inflation. In Argentina, Brazil, and Peru, experiments with stabilization packages involving wage and price controls during the 1980s failed because the

policymakers were unable to maintain the fiscal and monetary discipline required to make the short-run drop in inflation sustainable. Under Alan García in Peru, wage and price controls were components of a populist program and were used as substitutes for more orthodox measures. Real wages were allowed to rise substantially, and the authorities had little success in bringing public spending under control. When pressure on prices ultimately forced relaxation of all controls, a new inflationary spiral began.

Brazil provides a similar example. In the late 1980s the authorities implemented three anti-inflation programs that relied heavily on price controls: the Cruzado Plan in 1986, the Bresser Plan in 1987, and the Verano Plan in 1989. However, because the price freeze was not accompanied by adequate macroeconomic policy reforms, the inflation rate jumped upwards after dropping for only a brief period (see Figure 1). After the collapse of the Bresser and Verano Plans, inflation came back with a vengeance, leading many observers to conclude that the repeated use of price controls had diminished their effectiveness, as economic agents were able to anticipate the price increases that would follow the flexibilization stage.

### 3. Central bank independence

A possible way for policymakers facing credibility problems to demonstrate their capacity and unequivocal commitment to reform is to appoint a "conservative" central banker with a well-known dislike for inflation, whose day-to-day control over monetary policy is relatively free from political pressure or interference from key ministers in the incumbent government (see Cukierman, 1992). An independent central bank (preferably a legally established one) with a clear and

well-publicized mandate to maintain price stability provides an institutional mechanism that may reduce incentives to deviate from rules. Appointing an independent central banker may also remove the temptation to rely on monetary expansion to secure a short-term gain in output, reduce the incentive to rely on the inflation tax, and force the government to implement fiscal reform. In addition, the political difficulties associated with stabilization programs may be less severe when the policymaking decision process is relatively centralized and insulated from various interest groups. This argument helps emphasize the importance of institutional reforms for enhancing the credibility of macroeconomic adjustment programs.

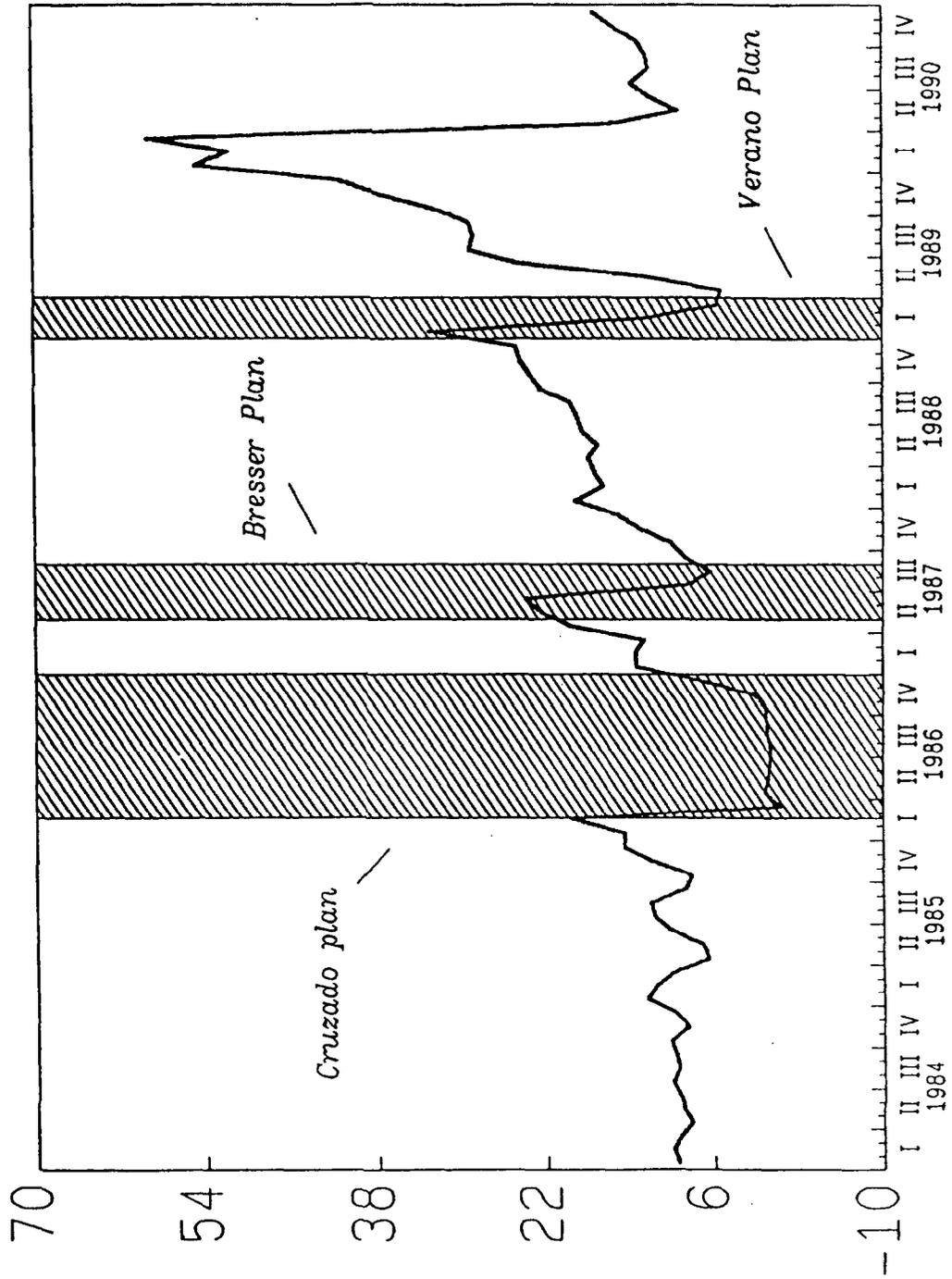
A similar idea consists for a high-inflation country in joining a monetary union with a fixed exchange rate mechanism and surrender the power to conduct an independent macroeconomic policy. By transferring its monetary and exchange rate policy autonomy to a reputable central bank, a high-inflation country can borrow credibility and thus signal its own commitment to price stability, thereby reducing--relative to a purely domestic strategy--the cost of disinflation. <sup>1/</sup> In the context of developing countries, where central bank financing of fiscal deficits is often the root cause of inflation, this argument carries considerable weight.

Several recent empirical studies have shown that central bank independence contributes significantly to explaining cross-country variations in inflation rates. Countries whose central banks enjoy

---

<sup>1/</sup> This argument has been much discussed in the context of the European Monetary System. Italy and France are thought to have benefited from the Bundesbank's credibility.

FIGURE 1. INFLATION AND PRICE CONTROLS IN BRAZIL, 1984-90  
(Month-to-month percentage changes in consumer prices)





the highest degree of autonomy seem to have the lowest levels and variability of inflation (see Alesina and Summers, 1993), and Cukierman (1992). Institutional reforms aimed at enhancing central bank autonomy have been implemented in a number of countries in the past few years. The 1989 reform in Chile, for instance, grants a large degree of legal independence to the central bank, and Mexico's congress is currently considering legislation that should achieve the same goal.

However, the extent to which policymakers should "tie their hands" by appointing a reputable anti-inflation central banker (or policymaker) in order to convince the public of their commitment to a domestic disinflation program remains the subject of controversy. Central bank independence is only one of several institutional devices that can be implemented to ensure price stability and enhance the credibility of macroeconomic policy. Although replacing discretionary actions with a rule-based policy framework implemented by an independent (domestic or foreign) central bank may help reduce the perception of arbitrariness and thereby strengthen confidence in the policy-making process, the signaling effect of such a change in the policy regime may be weak if secrecy prevails in the institution's day-to-day operations. More importantly, adhering to the rigid rules implemented by a domestic or foreign central bank may lead to suboptimal outcomes (compared to contingent rules) in an economy subject to random shocks. Escape clauses for discretionary actions may be necessary, although extreme care must be taken in defining the conditions under which such clauses should be triggered in order to avoid negative side effects (Lohmann, 1992). Finally, as emphasized

by Swinburne and Castello-Branco (1991), central bank independence cannot, by itself, guarantee the credibility of monetary policy. This depends on the overall stance of macroeconomic policy. For instance, if the fiscal policy adopted by a ministry of finance is viewed as inconsistent with a disinflation target, credibility is impossible to achieve even with an independent central bank.

#### 4. Sequencing and political support

The design and subsequent implementation of a disinflation program require that policymakers make some decisions regarding the distribution of income. In the absence of a broad political consensus in support of the program, such decisions are difficult to make, and the stabilization plan will accordingly be more difficult to implement. For a program to be viable, the size and composition of distributional effects of the macroeconomic reforms must be politically acceptable. The credibility of stabilization programs depends heavily on the degree of political cohesion in the country and the legitimacy and popular support enjoyed by the government.

Political factors play a crucial role in both the shock therapy and gradual approaches to stabilization discussed earlier, in the context of signaling arguments aimed at enhancing credibility. The political trade-off can be summarized in the following terms. On the one hand, drastic measures may help generate credibility in the reform process quickly, particularly when they are implemented during a new administration's "honeymoon," when the population is perhaps more willing to accept the costs associated with painful measures. In addition, the initial benefits of sharp adjustment may outweigh the costs that would be associated with the persistence of inflation at a

higher level as well as other social and economic costs that would result from the policy shock. On the other hand, overly costly policy decisions--from a social and economic point of view--run the risk of causing the political consensus to collapse and may lead to a policy reversal at a later stage.

A gradualist strategy may also lack credibility for precisely the same reason that a shock therapy strategy may not be credible: future governments may be tempted to adopt discretionary policy reversals. However, the costs in terms of output and employment may be lower with a credible gradual approach than with a shock therapy approach, allowing policymakers to maintain the social and political consensus necessary to sustain the reforms. 1/ From the perspective of credibility, circumstances under which a shock therapy approach to stabilization should be preferred to a more gradual strategy are therefore likely to vary across countries and over time.

Although broad political support is essential to the sustained success of macroeconomic reforms, 2/ it is often difficult to create a political consensus at the outset of a disinflation program. As argued earlier, in situations where newly elected political leaders enjoy a period of widespread popularity, economic shock treatments have a higher probability of being accepted than prolonged adjustment

---

1/ In principle, the cost associated with maintaining austerity over a prolonged period under a gradual approach may be as high as the short-term cost associated with a shock therapy if output recovers rapidly in the aftermath of stabilization. In practice, however, future benefits are often heavily discounted by private agents, in a sense forcing policymakers to focus on short-run costs.

2/ Patinkin (1993) emphasizes the crucial role played by the "national-unity government" formed in September 1984 in the success of the Israeli stabilization program of 1985.

programs. In general, however, political support tends to dissipate rather quickly if expenditures on basic programs such as education, health, and social services are cut in order to meet fiscal targets or if unemployment rises in the short term to very high levels. For any given country, the optimal speed of macroeconomic adjustment will depend on a variety of economic and political factors (such as the structure of the economy, the policymaker's preferences, and the degree of political consensus). Although in practice it is extremely difficult to determine the correct pace of reform, two mechanisms may help those designing stabilization programs. First, as argued before, it is crucial to sequence macroeconomic and structural reforms in a way that minimizes the short-term drop in output. <sup>1/</sup> Second, it may also be important to devise a compensatory scheme for those affected the most, that is, to put in place social safety nets that include targeted subsidies on essential food products, cash transfers to vulnerable groups, among other options, to protect those that are least able to absorb the costs of macroeconomic adjustment (low-income families, pensioners, and unemployed workers). The latter appears to be one of the main lessons of the recent literature on the political economy of stabilization programs (Haggard and Kaufman, 1989).

Nevertheless, while equity provides a strong rationale for targeting specific groups, programs that attempt to avoid imposing severe economic costs on some vulnerable groups may not necessarily be more credible (even if the social safety net is cost-effective),

---

<sup>1/</sup> Obviously, if policymakers are not prepared to accept any short-term contraction in output and employment--for political or electoral reasons--credibility will be impossible to achieve.

because the targeted groups may not be the most politically influential in the country. Targeting specific groups for protection may impose substantial short-term costs on other groups that enjoy greater political power and could undermine the credibility and sustainability of the program in the same way as--and perhaps more than--ignoring the needs of the vulnerable groups altogether. To the extent that groups attempt to shift to each other the burden of stabilization, the consequence may be serious delays in the stabilization effort (Alesina and Drazen, 1991).

#### IV. Concluding Remarks

This paper has examined the implications of the recent macro-economic literature on credibility for the formulation and design of disinflation programs. Although some of the available analytical results are sensitive to particular assumptions concerning such factors as the structure of the economy, the preferences of policymakers and private agents, and informational asymmetries, and despite the severe limitations of the empirical literature on existing credibility models, some tentative conclusions and broad policy lessons can be drawn at this stage.

The alternative options that have been put forward recently have not created a consensus among economists regarding the optimal way to convey credibility to a disinflation program or to enhance the reputation of policymakers. What is essential is to make clear at the inception of a stabilization program that a new economic regime is being introduced. This understanding will make it more likely that the behavior of the private sector will reinforce the reform process,

in turn increasing the programs' credibility. Policy measures must accordingly be structured to indicate early on that major changes are being introduced. Emphasis should be put on structural actions that clearly demonstrate the direction of the reforms and that are difficult to reverse, rather than on excessively stringent macroeconomic policies. Such structural policies should aim at eliminating the principal causes of fiscal imbalances, since the persistence of fiscal deficits makes it less likely that subsequent reforms will be successful, hence reducing the program's credibility. However, because signalling a significant change with past inflationary policies cannot be achieved only with structural measures, a significant change in monetary and fiscal policies is also necessary. Finally, the fact that stabilization often creates only long-run benefits (which are often discounted by short-sighted agents) means that the prevailing economic conditions should have some bearing on the performance of the strategy. A program that performs well in a number of alternative possible situations seems preferable to one designed for only a specific scenario. Consequently, contingencies may need to be considered more systematically in the formulation of disinflation programs. Most important, perhaps, is the need to integrate political factors into the design of stabilization programs. Understanding the endogenous interactions between credibility, macroeconomic policy decisions, and the political environment may be the key challenge that program designers face at the present time.

References

- Agénor, Pierre-Richard, "Credibility and Exchange Rate Management in Developing Countries," Working Paper No 91/87, International Monetary Fund (September 1991). Forthcoming, Journal of Development Economics.
- , "Credibility Effects of Price Controls in Disinflation Programs," Working Paper No 92/83, International Monetary Fund (October 1992).
- Agénor, Pierre-Richard, and Mark P. Taylor, "Analyzing Credibility in High-Inflation Countries," Economic Journal, Vol. 103 (March 1993), pp. 329-36.
- Alesina, Alberto, and Allan Drazen, "Why are Stabilizations Delayed?," American Economic Review, Vol. 81 (December 1991), pp. 1170-88.
- Alesina, Alberto, and Lawrence H. Summers, "Central Bank Independence and Macroeconomic Performance," Journal of Money, Credit, and Banking, Vol. 25 (May 1993), pp. 151-62.
- Barro, Robert J., and David B. Gordon, "A Positive Theory of Monetary Policy in a Natural Rate Model," Journal of Political Economy, Vol. 91 (August 1983), pp. 589-610.
- Blejer, Mario J., and Nissan Liviatan, "Fighting Hyperinflation: Stabilization Strategies in Argentina and Israel," Staff Papers (International Monetary Fund), Vol. 34 (September 1987), pp. 409-38.
- Bruno, Michael, "High Inflation and the Nominal Anchors of an Open Economy," Princeton Essays in International Finance No 183, Princeton University (Princeton, New Jersey: June 1991).
- , "Stabilization and Reform in Eastern Europe," Staff Papers (International Monetary Fund), Vol. 39 (December 1992), pp. 741-77.
- Calvo, Guillermo A., and Carlos A. Végh, "Inflation Stabilization and Nominal Anchors," Paper on Policy Analysis and Assessment No 92/4, International Monetary Fund (December 1992).
- Coricelli, Fabrizio, and Gian Maria Milesi-Ferretti, "On the Credibility of 'Big Bang' Programs," European Economic Review, Vol. 37 (April 1993), pp. 387-95.
- Cukierman, Alex, "The End of the High Israeli Inflation: An Experiment in Heterodox Stabilization," in Michael Bruno et al., eds., Inflation Stabilization, MIT Press (Cambridge, Mass.: 1988).
- , Central Bank Strategy, Credibility, and Independence, MIT Press (Cambridge, Mass.: 1992).

- Cukierman, Alex, and Nissan Liviatan, "Optimal Accomodation by Strong Policymakers under Incomplete Information," Journal of Monetary Economics, Vol. 27 (February 1991), pp. 99-127.
- , "The Dynamics of Optimal Gradual Stabilizations," World Bank Economic Review, Vol. 6 (September 1992), pp. 439-58.
- Dornbusch, Rudiger, "Credibility and Stabilization," Quarterly Journal of Economics, Vol. 103 (August 1991), pp. 837-50.
- Haggard, Stephan, and Robert Kaufman, "The Politics of Stabilization and Structural Adjustment," in Developing Country Debt and the World Economy, ed. by Jeffrey D. Sachs, University of Chicago Press (Chicago, Ill.: 1989).
- Kiguel, Miguel, and Nissan Liviatan, "When Do Heterodox Stabilization Programs Work? Lessons from Experience," World Bank Research Observer, Vol. 7 (January 1992), pp. 35-58.
- Lohmann, Susan, "Optimal Commitment in Monetary Policy: Credibility versus Flexibility," American Economic Review, Vol. 82 (March 1992), pp. 273-86.
- Patinkin, Don, "Israel's Stabilization Program of 1985, Or Some Simple Truths of Monetary Theory," Journal of Economic Perspectives, Vol. 7 (March 1993), pp. 103-28.
- Persson, Torsten, and Sweder van Wijnbergen, "Signalling, Wage Controls, and Monetary Disinflation Policy," Economic Journal, Vol. 103 (January 1993), pp. 79-97.
- Rodrik, Dani, "Credibility of Trade Reform--A Policymaker's Guide," World Economy, Vol. 12 (March 1989), pp. 1-16.
- Swinburne, Mark, and Marta Castello-Blanco, "Central Bank Independence and Central Bank Functions," in The Evolving Role of Central Banks, ed. by Patrick Downes and Reza Vaez-Zadeh, International Monetary Fund (Washington, DC: 1991).
- Végh, Carlos A., "Stopping High Inflation: An Analytical Overview," Staff Papers (International Monetary Fund), Vol. 39 (September 1992), pp. 626-95.
- Vickers, John, "Signalling in a Model of Monetary Policy with Incomplete Information," Oxford Economic Papers, Vol. 38 (November 1986), pp. 443-55.