Chapter Title: The Austral Plan

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inevitable because the inflation tax, with sufficient financial adaptation, can be almost entirely evaded and hence the budget deficit cannot be financed. The Olivera-Tanzi effect, the shortening of contracts, and financial adaptation all react in a perverse way (from the point of view of stabilization) in that they widen the deficit and accelerate explosively the inflation process.

4.4   Concluding Remarks: Why Stabilization Is Difficult

The preceding discussion has an immediate bearing on the fact that stabilization is difficult and, more often than not, takes more than one attempt to succeed. In the process of high inflation all institutions melt. When stabilization is undertaken, there is neither immediate, spontaneous resumption of longer adjustment periods for wages and prices, nor an instant increase of real money demand to noninflationary levels. As a result, more sizable adjustments in the budget are required and more dramatic measures are necessary to create the confidence that stabilization will last. Because the fiscal measures have to be extremely large, they are also extremely difficult and hence often cannot be sustained. When they fail, inflation returns instantly at an exceptionally high level because institutional inertia has not recovered.

We will see in the next chapter how incomes policy—freezing exchange rates, wages, and prices—can be an effective supplement to the inevitable budget cut. It makes up for institutional inertia and, to that extent, gives a government a better chance to start stabilization. But, as is clear from the experiences of Argentina, Brazil, and Peru, failure to correct the budget means that high inflation will soon return. The decline in the ratio of M1 to GDP that occurred in 1980–85, shown in figure 4.3, was not fully reversed in the initial stabilization. As a result, financing even a moderate deficit is much more inflationary than it was prior to the experience of extremely high inflation. This hysteresis effect of high inflation (similarly apparent in contracts, pricing, and tax collection) sharply reduces the chances of stopping inflation with anything short of a dramatic budget cut.

5   The Austral Plan

In early 1985 Argentina moved to the very brink of economic disintegration. The rate of price increase accelerated by the month, reaching an annual rate of 6,000, and was still rising. At this stage the government made a decisive move: recognizing both the need for austerity measures and the political and economic obstacles to a stabilization that relied only on the demand side, the

heterodox Austral Plan was conceived, combining traditional monetary reform with incomes policy.

It is certainly not an exaggeration to claim, with two years' hindsight, that this plan was dramatically successful in arresting the disintegration process and providing breathing space in which to address the deep-seated fiscal and growth problems. In this chapter we discuss the first year of the Austral Plan,[1] and then turn in the following chapter to the central challenge of fiscal reconstruction and growth.

5.1   General Remarks

Among the key features of the stabilization program were the use of wage-price controls, a fixed exchange rate, fiscal correction, and a significant expansion in the nominal quantity of money. A conversion table was introduced to adjust existing contracts to the disappearance of inflation. The combination of fiscal correction and incomes policy has come to be known as "heterodox" stabilization policy, thus opposing it to the conventional IMF programs, which emphasize tight monetary and fiscal policies as the exclusive instrument of stabilization.

A main point of this chapter is to isolate the precise role played by the heterodox features of the program. Our point is that these features provide an immensely valuable *breathing spell* during which price stability can be established without creating recession. The resulting strong political support for the program and for the policymaker yields a platform from which can be made the inevitable adjustments in the budget that are the pillars of stabilization. We note that mistaking the breathing spell for success and the failure to use the political support at its height for the difficult task of fiscal correction will mean that the program must soon slip. And when it does slip, it often does so irrecoverably.

The focus then is on how these programs, unlike traditional programs, provide an immediate, temporary opportunity for basic policy reform. Even if they do not afford "magical" relief from the necessity of fiscal correction, they surely represent a significant opportunity to try to achieve policy reform in cases where before it had always proved impossible or was overly delayed because of the perception that there would be enormous political costs associated with high unemployment and slow disinflation.

Stabilization has two dimensions: the program may or may not include fiscal correction or austerity, and it may or may not have an incomes policy (wage, price, public utility, and exchange rate freezing, together with remonetization as explained below). The standard program is the IMF approach in which there is fiscal austerity but incomes policy is not a key instrument. It is true that orthodox programs favor wage restraint, but price controls are never an item on the conditionality list. On the contrary, price liberalization tends to be an element of these programs. Heterodox programs, by contrast, combine an incomes policy with fiscal austerity.

Stabilization without austerity—that is, relying merely on incomes policy—is not a viable approach. The most common form of this approach is to attempt stabilization by controls only, without paying attention to the sine qua non of fiscal correction. History is crowded with some thousands of years' worth of examples of failed experiments, from Emperor Diocletian to the modern day experiments of the Peronists in 1973–74, of U.S. President Richard Nixon, of Israel in early 1985, and of the Brazilian cruzado programs. Inevitably these programs end after a more or less brief period of effectiveness, failing when shortages have become a significant political headache. Eventually the "patient," often too late, is rushed to the IMF.

There is another dimension along which programs might be distinguished. Programs can be orthodox or heterodox, and they can involve gradualism or shock treatment. In this classification the present programs are "heterodox shocks" or treatments. An example of a heterodox-gradualist program would be the Brazilian Campos-Bulhoes stabilization of 1964–67. An orthodox-gradualist program might be the case of Chile. It is more difficult to cite an orthodox-shock example, perhaps because of a lack of survivors to recount the episode.

The chapter is organized as follows: In sections 5.2 to 5.4 we review conceptual issues related to the use of incomes policy in stabilization when inertia is a central feature. The discussion includes the relation between deficits and inflation studied in the preceding chapter, inertial inflation, and the basics of monetary reform. In sections 5.5 and 5.6 we review the actual stabilization experience in Argentina. The chapter concludes with a discussion of the political dimension of stabilization, showing the extraordinary political popularity of the new programs.

5.2   Incomes Policy and Stabilization

In this section we review the analytic case for wage–price–exchange rate controls as an essential, but transitory, complement to the fiscal stabilization which, as already noted, is the sine qua non of successful anti-inflation policy.

Economists and well-advised policymakers have long known that aggregate demand discipline is a necessary condition for sustained price stability. Yet it may not be sufficient to stop inflation, or it may fail to work under conditions of tolerable unemployment. This is demonstrated by the failure of a number of IMF-supported programs which ignored the problem posed by inflationary inertia. The result of this disregard is that IMF programs often lead to dismal stagflation and eventually to a resumption of expansion and little or no success at permanently reducing inflation.

Not surprisingly, countries such as Argentina, Israel, and Brazil recently decided to focus on the supply side of inflation, attempting to stabilize prices by combining incomes policy with "monetary reforms." Whether or not these experiments will yield success stories depends on a number of factors

including, importantly, aggregate demand management. The overriding lesson from the ongoing experiments is the need for sound respect for fiscal discipline and the need to recognize that a good dose of initial overkill may be a necessary ingredient for success.

One interesting point is that such experiments were inspired by a sound game theory approach to inflation. It can be argued, as we do below, that an incomes policy is needed in order to coordinate individual behavior in a way not recognized by oversimplified versions of a rational expectations economy. The central issue is to understand what causes inertial inflation and how incomes policy can break the dependence of the inflation rate on its past behavior.

5.2.1   Inertial Inflation

A starting point for a discussion is to recognize that a large part of high inflation is essentially *inertial*. This observation applies equally well to the United States, Europe, or Latin America. Inertial inflation means that inflation today is approximately what it was yesterday. Let π be current inflation, π_{-1} be last year's inflation, and *Gap* denote the economy's cyclical position. The actual rate of inflation would then be:

$$(1) \qquad\qquad \pi = \pi_{-1} + \alpha Gap + v,$$

where v denotes current period supply shocks. The essential point of modern inflation theory is that inflation is linked to the past through a variety of channels. It is not only "too much money chasing too few goods," or supply shocks such as oil or agricultural price increases, or real depreciation, but also that inflation yesterday means inflation today.

The reason for this persistence of inertia is primarily formal or informal indexation interacting with staggered wage setting. This may take the form of a legally imposed wage rule, or it may also be that much more informal wage bargaining leads to the same result. The same mechanism also works by means of expectations. In setting their prices, firms will have to estimate their own cost increases and the price increases of competing firms. Their best guess is that, cyclical and supply shock factors aside, inflation today will be approximately what it was yesterday.

Because everybody shares this best guess, the public acts on these expectations and sets prices accordingly, without hesitating to give matching wage concessions. It is much easier to give wage increases in line with expected inflation than to run the risk of a strike. If everybody acts in this manner, then expected inflation turns out to be actual inflation; and if yesterday's inflation is the benchmark, then today's inflation will be much the same as it was in the past.

Cyclical factors and supply shocks, including a need to depreciate exchange rates to cope with a debt crisis, are the chief reasons that inflation has exploded in many countries. The inertial part of inflation, other things

equal, would tend to result in rather stable inflation, but the additional elements can cause inflation to move and often to move sharply. The cyclical factor is quite obvious; it is simply demand inflation or the cooling down of inflation due to slack in activity and employment. But it is worthwhile to recognize an asymmetry: there is no upper limit to firms' price increases in response to excess demand, but in reverse the argument does not apply. Stopping an inflation of, say, 400 percent by using slack is very difficult. Even as restrictive policy reduces nominal spending, firms are forced to make wage concessions based on past inflation. Their cost increases thus might be on the order of 400 percent, and it is quite inconceivable that they would be able to reduce inflation significantly simply by reducing profit margins. In the same way, reducing wage settlements below the prevailing rate of inflation will not make much of a difference to high inflation. Giving a wage increase of 360 instead of 400 percent would mean a very large cut in the real wage (8 percent!) but a very minor reduction in inflation.

The idea of fighting inflation by using slack thus applies only to an economy where wage reductions of 2 or 3 percent, or cuts on that order in profit margins, mean cutting inflation in half. When inflation is very high and very inertial, then demand policies have a hard time making a rapid and large impact. Because such an impact is the only politically acceptable method, governments of high-inflation countries have little hope except to try to stem further inflation deterioration; they cannot see any opportunity to actually end inflation.

In the new stabilization programs this problem is recognized in a way not done in the IMF programs. The need is seen for an incomes policy to break the inertial forces and thus instantly shift the economy from a state of high inflation to low. This incomes policy should be understood as follows: To stop inflation, someone must start offering reductions in profit margins or real wages in order to introduce disinflation. The initial disinflation can then be passed along by indexation onto a path of gradual, additional disinflation. Realistically, there will be no volunteers for such an approach. Everybody would like to leap together to a low inflation state, but nobody will make the leap unless others will join in. That means everybody wants to see zero inflation before each person will set his own price or wage increases at zero. But if everybody adopts a "wait and see" attitude then, of course, inflation will continue. An attempt to restrict demand would translate almost entirely into reduced employment and practically not at all into lower inflation. The dismal performance of the economy and the lack of success in fighting inflation would make any such campaign short-lived.

5.2.2   Game Theory and Incomes Policy

The scenario just described puts fighting inflation squarely in the domain of game theory. When economic agents interact strategically in the fashion related above, coordination becomes essential to achieve good results. A

system of temporary controls of wages, prices, and public utility and exchange rates is the coordinating device that establishes the fact of price stability, which the economy left to itself could not establish quickly except at extreme cost. It might be argued that if the government undertakes to produce the right kind of monetary and fiscal policy, then the public cannot escape the conclusion that inflation has been left "dead in its tracks." Everybody will respond accordingly, with the result that inflation *will* be dead.[2]

But there are two separate and crucial holes in this argument. One concerns the government's inability to precommit credibly to future policies. The other, which is more novel, concerns the problem of coordination in a world of price setters. We review these in turn.

The government cannot commit itself definitely, credibly, and beyond doubt. The institutional setting for such a precommitment does not exist (one thinks of constitutional amendments, the gold standard, and whatnot). Because the government cannot lock in its policies beyond doubt, the public recognizes that there is always some possibility that policy will not change to a noninflationary stance. Specifically, if the average agent does not quite believe that policy will change, then all agents will behave somewhat defensively, resulting in some wage and price increases, which force the government to suspend its policy. The expectation that this will indeed be the future course persuades the average agent to disbelieve the possibility of an instantaneous end to inflation.

These ideas can be interpreted in a game theory perspective, which assigns the government a double task: to ensure credibility of an aggregate demand policy consistent with disinflation, and to coordinate the expectations and actions of individual wage and price setters. Assume that after a prolonged inflation, the Central Bank announces that it will stop printing money and the Treasury announces that the budget deficit will be eliminated as a result of increased taxes or expenditure cuts. Even if the general perception is that nominal GNP will be stabilized immediately, prudent price setters would not take the lead in stopping sectoral price increases as long as they consider that further price increases in other sectors are possible.

In a noncooperative or noncoordinated game with many players, each individual player has little information concerning other players' payoffs. As a result, there is no reason to believe that all players will reach the zero inflation–full employment equilibrium in the first move of wage and price setting. Uncertainty about the behavior of other players persuades the individual price setter to adopt a very cautious pricing policy.[3] How many moves are required or how long it takes for the economy to reach the equilibrium is an open question, depending in part on the learning mechanism used by individual agents.

The speed of convergence may be painfully slow after a prolonged period of high inflation. The more prolonged the experience, the higher the

unemployment rate that results when excessive prices are confronted by a given nominal income target that is sustained by the stabilization policy. The higher and more persistent the unemployment, the more agents will be inclined to believe that the authorities' determination will falter. Accordingly, rather than speeding up their price responses, they may persist even longer in their overly prudent disbelief. After all, the history of previous stabilization attempts has taught them a lesson.

The foregoing discussion provides the rationale for an incomes policy: if governments transitorily play the role of the Walrasian auctioneer, they can speed up finding a zero-inflation full employment equilibrium. From this point of view, incomes policy may be required to make economic agents behave in line with rational expectations models. It should be stressed that the central function of controls is not to constrain individual decision-making, but to tell each agent how other actors will play, clearing potential externalities in an imperfect information game. This role of controls, incidentally, eliminates a traditional argument against incomes policy, namely that governments are not better equipped than the private sector to discover the equilibrium. In fact, the central problem is not to identify the equilibrium but to orchestrate the simultaneous playing of wage and price setters so as to reach the equilibrium.

A more fundamental contention is that the temporary success of an incomes policy may lead policymakers to forget that price stability can only be sustained with aggregate demand discipline. The temptation is to misread the price stability and produce a boom. The misleading signals are a true risk, as can be seen from countless examples in history. Yet the converse is also true. Trying to fight a high inflation from the demand side may only lead to stagflation so dismal that policymakers may conclude that life with inflation is less uncomfortable than life with an IMF-supported program. Worse yet, they often reach that conclusion only after a prolonged period of recession. The lesson then is that economists should advocate the superior recipe of heterodox programs and, with as much emphasis and urgency, note its limitations and temptations.

Of course, the chances of hitting a zero-inflation, zero-unemployment, zero-shortage equilibrium instantly using an incomes policy are remote. Wage-price controls will almost inevitably lead to some shortages unless there is a generalized recession that lowers demand. The central question is, what is worse in terms of social welfare, a few product shortages that may eventually be overcome by imports or a generalized shortage of jobs? From this point of view, objections to an incomes policy should be balanced against the extreme costs of recession and unemployment. This is especially true when the problem is to fight a high inflation that has strong inertial roots. One reason to prefer an incomes policy is that it can be managed with appropriate flexibility, across sectors and across time, moving gradually from price freezes to price administration.

The case for a coordinating role for an incomes policy owing to information externalities arises only when macroeconomic noise and uncertainty are large relative to the microeconomic uncertainties in each individual market. This explains why, in a second stage of the stabilization program, removing wage-price controls gradually, in successive sectoral steps, will result in less uncertainty and lower subsequent inflation than removing controls in one shot. The one-shot approach would simply bring back the uncertainty of individual players as to what every other player will do. Then, at the stage of liberalization there would be defensively large price increases which might well wreck the inflation stabilization. Achieving consistency during the removal of controls is thus an important and difficult task.

5.2.3   Incomes Policy Matching

We conclude this section by noting that the various instruments of an incomes policy—exchange rates, wages, public and private sector prices, and the nominal money stock—must be carefully matched. Failure to align these policy instruments can easily lead to dramatically poor performance.

The clearest example of a poorly aligned policy may well be the Chilean stabilization of the late 1970s. The budget has not only been balanced, but indeed there was a surplus. Money was under tight control and inflation was gradually declining, although very slowly. To speed up disinflation, the government opted to stop the exchange rate depreciation that was being used to avoid loss of competitiveness in the face of continuing inflation. But the government failed to recognize that wage indexation, which was geared to the past inflation, meant cost increases for firms without an offsetting relief on prices. The exchange rate soon became grossly overvalued, leading ultimately to the worst kind of speculation and financial instability.[4]

The need to match instruments also applies to the money stock. As we will discuss in the next section, successful disinflation requires determined (though careful and limited) monetization of the economy.

5.3   The Budget and Inflation

The common perception is that inflation is caused by budget deficits. We draw attention here to two important channels that were studied in the previous chapter to show how high budget deficits can result from inflation. This more unusual direction is important in assessing public finance in inflationary episodes and in developing a judgment about the fiscal policy changes required to implement stabilization.

The first reason inflation causes deficits is the Olivera-Tanzi effect (see sec. 4.1.2). Inflation, combined with lags in tax collection, means that the *real* value of the tax collection arriving in the hands of the government is lower the higher the rate of inflation. If there is 100 percent inflation and no indexation of liabilities, last year's income taxes which are paid this year

represent only half of the real value of taxes the government would receive without inflation or without lags or if full indexation existed.

Of course, in any high-inflation episode the lags in tax collection are sharply reduced and some form of indexation will appear, but it turns out to be impossible to make the entire tax collection *fully* inflation proof. Even during the Argentine hyperinflation, value-added tax (VAT) collection was monthly and income tax collection was only quarterly. Thus, if inflation rates reach 20 or 30 percent per month, even very short lags have a major effect on the real value of tax collection. This effect is reinforced from the public's active interest in postponing tax payments in order to effect a large reduction in real payments. Charges for late payments and indexation help mitigate these problems, but they do not eliminate them. This is particularly true if the charges are not indexed nor geared to real market interest rates. The actual relevance of the Olivera-Tanzi effect depends on the tax structure.

The second interaction between inflation and the deficit stems from the inflation component of debt service. Part of government outlays will be for service of internal and external debt. Interest rates will reflect expected inflation and depreciation. Because of this link between inflation and nominal debt service, two different measures of the deficit should be distinguished: the actual deficit and the inflation-adjusted or *operational* deficit. The former calculates the deficit taking full debt service as the measure of debt service, $iB = (r + \pi)B$, while the latter only includes real interest payments (rB) and excludes the inflationary component of interest (πB).

The rationale for this distinction is that corresponding to the inflation component of interest payments is inflationary erosion of the principal. To measure the increase in the real value of government indebtedness, the inflationary erosion of the debt should be subtracted from the addition to the stock of outstanding government liabilities, which is done by calculating the inflation-adjusted or operational deficit.

The importance of inflation adjustments in the budget is apparent when we think of a government with a debt/income ratio of, say, 20 percent of GNP, and an inflation rate of 200 percent. The inflationary component of debt service is equal to 40 percent of GNP. The actual deficit therefore vastly overstates the increase in the government's *real* indebtedness. If inflation were brought to zero, through whatever means, the budget deficit would be reduced correspondingly.

5.3.1   Money Illusion

If the public has no money illusion, then its extra saving in the presence of inflation will be just enough to absorb the inflationary component of debt service. Otherwise, how would it be possible to finance budget deficits of 25 percent of GDP? There is, indeed, a serious theoretical flaw in using unadjusted budget figures to measure supply-demand gaps. As long as an

increase in the budget deficit is matched by an equal increase in voluntary private savings, aggregate demand will not be affected at all. The assumption that deficits create voluntary savings in order to finance them looks rather strange, as far as the adjusted budget is concerned. Yet, it becomes highly plausible when the problem is to finance the inflation adjustment of the public sector debt. In the case of the foreign debt, this is obvious.

If the public has no money illusion, the same principle applies to domestic public sector debt. Bond holders will understand that the inflation adjustment of their credits should not lead to additional consumption. Here again, inflation automatically creates the nominal savings needed to finance the inflation adjustment of the government debt.

Of course, the no-money-illusion assumption can be questioned, especially in the absence of formally indexed public sector bonds. Even in an economy with widespread indexation, widows and retired workers might use part of the inflation adjustment of their savings accounts to finance consumption. Yet, two essential points should be stressed. First, money illusion is not likely to be a major problem, otherwise it would be impossible to finance deficits of 25 percent of GDP. Second, even if money illusion is important enough to prevent the inflation adjustment of domestic public debt from being financed entirely by voluntary savings, it brings us back to the Olivera-Tanzi effect. Once again, there is a circular cause-and-effect relation between aggregate demand and inflation. Stopping inflation will lead to an automatic reduction in aggregate demand.

These distinctions between adjusted and unadjusted deficits play an important part in understanding the rationale for the new stabilization programs. If a government perceives that most of the deficit comes from the inflationary component of debt service, and the noninterest budget is in sufficient surplus to pay the real interest on the debt, stabilization becomes more plausible. All that is needed is a jump from high inflation to no inflation. Failure to understand the role of inflation adjustment could make it seem that an extraordinary reduction of the deficit through spending cuts or tax increases is required before stabilization can be considered. In this sense the famous IMF dictum, ''a deficit is a deficit, is a deficit'' is a poor starting point for analyzing the fiscal fundamentals required for a successful stabilization.

5.4   Monetary Reform and Monetization

Stabilization of high inflation often has monetary reform as an important and highly visible component. We briefly review the essential features of such a reform. The first, which is crucial, is to shift contracts from those appropriate to an inflationary economy to those appropriate in a zero-inflation environment. The second and less significant component is the

introduction of a new monetary unit, the main purpose of which, other than "eliminating zeros," is to increase confidence and consolidate expectations.

5.4.1 Contracts

In an inflationary environment with high uncertainty, contracts will have a very short maturity unless, like rent contracts, they are indexed. Long-term capital markets will dry up, but even so, contracts for a month or even six months will still exist. These contracts specify nominal interest rates or implicit prices that are a reflection of the inflationary expectations prevailing at the time the contracts are written.

For example, with an inflation rate of 10 percent per month, a one-month loan contract will carry an interest rate of at least 10 percent per month. Rent contracts entered into at any time will involve nominal payments over, say, six months that reflect the assumption of increasing prices. Wage contracts will be indexed in a formal or informal manner, so that they are adjusted for past or for future inflation when they come up for readjustment. A major problem for inflation stabilization is to take into account the presence of these contracts and institutions that are in force at the time of stabilization. If the economy were to move instantly from high inflation to zero inflation, outstanding contracts and institutions would cause major problems.

It is immediately obvious that debtors can service loan contracts involving very high nominal interest rates only if the inflation expected at the time the contract was signed actually materializes. A six-month loan concluded with an inflation expectation of 10 percent per month would carry a 77 percent interest rate for the six months. If inflation were to disappear, the nominal interest rate of 77 percent would become the real interest rate and, hence, the debt service burden would be extraordinarily large. An adjustment in all loan contracts is required to avoid a massive, unintended, and unfair redistribution from debtors to creditors and the attendant risk of pervasive bankruptcy and financial instability.

For wage contracts the problem is perhaps even more complicated. Suppose, as would be realistically the case, that wages are readjusted every three or six months. Every time a contract comes up for renewal, the money wage for the next three months is adjusted upward for the inflation which actually occurred over the past three months. With such a pattern of wage contracting, an instant end to inflation is nearly impossible. Just when the government seeks to impose zero inflation, some wage contract is coming up for renewal and workers will ask to be compensated for *past* inflation. This wage increase in turn creates cost increases and, inevitably, inflationary pressure. Accordingly, the transition to zero inflation needs to be accompanied by some restructuring of wage contracting to avoid this inertia effect. At the time of stabilization, some wage earners will have just received their adjustment and hence will find themselves in the high real wage position of their three-month cycle, while others will be almost at the bottom. Freezing

wages in this situation would be perceived as extraordinarily inequitable and hence would serve as an impediment to stabilization.

Monetary reform is the broad term that characterizes the rewriting of contracts and the reform of institutions to make them compatible with the zero-inflation target. In the case of wages, monetary reform requires that those who had recent increases, and hence have high real wages, must have their wages rolled back, while those who are in the low real wage phase need upward adjustments. This reform could, in principle, be achieved by money wage adjustments using the old currency.[5] The confusion of a new money may, however, help to achieve the transition in a simplified manner. Note, too, that a new money provides an important instrument to avoid legal complications, uncertainty, and challenges to the restructuring of contracts. Similarly, for contracts involving future nominal payments, a new money is a means of aligning the real value of payments with the expectations implicit at the time contracts were concluded. A conversion scale which sets the terms for translating the old money into the new according to a set timetable of depreciation is the practical means of achieving this end.

Monetary reform can also involve a capital levy on the public in the form of a write-down of monetary assets. Interestingly, in none of the recent stabilizations has this been attempted. This fact is all the more noteworthy in that, unlike in the 1920s, government debts remained very large and hence made using a capital levy to balance the budget particularly attractive. In Brazil, where domestic public debt accounts for nearly 20 percent of GNP, the idea of a capital levy is often suggested. In fact, the Brazilian government used negative real interest rates to reduce the public debt.

5.4.2 Monetization

Monetary reform also often includes a change in monetary institutions. Along with a change in the monetary unit, new institutional arrangements are meant to dramatize the end of inflationary finance.

The traditional way to signal the new rules of the game is to announce the independence of the Central Bank and the end of automatic financing of the budget by the printing press. But it is important to read the fine print. In the 1920s, the stabilizations did involve institutional changes and limitations on the access of the government to the printing press, but that did not result in an end to money creation for two reasons. One was that in some cases the transition was characterized by a large, once-and-for-all issue of money. In Germany, for example, in 1923 the ceiling was set at 500 percent of the existing money stock.[6] But beyond this once-and-for-all fiduciary issue, there was the second reason: the possibility of the money stock increasing in the course of domestic private credit expansion or the monetization of reserve inflows. The experience from the classical stabilizations was one of extremely large increases in nominal money—several hundred percent—consistent with price stabilization.

The explanation for this large, noninflationary money creation is obvious. During the high-inflation period, the cost of holding noninterest-bearing money is extremely high. As a result, real balances decline or the velocity of circulation increases. This is the famous "flight from money." The financial system accommodates the flight from money by creating highly liquid interest-bearing or indexed liabilities—the "overnights," which practically serve as money. Surely, a person could not pay for a taxi ride with an indexed bond, but they could transfer funds on any day from an indexed cash reserve account to a checking account by a simple telephone call to the bank before 10 A.M. In fact, living without M1 was a fashionable and profitable exercise in survival. The fact that M1 survived at all, even at an extremely reduced level, can only be explained by transactions costs.

In the course of stabilization, the reverse occurs. The disappearance of inflation raises the demand for M1, or transactions-based real balances. Unless deflation increases the real money supply, it is necessary to increase the nominal money supply by one means or another to avoid extravagantly high nominal and real interest rates. A noninflationary expansion in the money stock is needed to meet the additional demand for money, the well-known reliquification or velocity problem. M1 can expand to replace other financial assets without risk of renewed inflation.

The problem is to fine-tune this expansion and to identify which aggregates must expand. Failure to expand M1 or too gradual an increase means that the economy will slide into a recession because of a liquidity crunch. But too rapid or too large an expansion leads to a loss of credibility and the reigniting of inflation. The safest solution might well be to set growth targets for total financial assets held by the public, allowing M1 to expand as long as other financial assets decline. Thus, if the government can accommodate the shift in the composition of the financial portfolio without expanding the size of the total liquid asset portion, then both recession and renewed inflation can be avoided. What are the implications of such a policy for broad monetary aggregates, such as, for example, M4? Here one would expect no major change (relative to GNP) unless there is a significant shift from dollar assets to domestic currency securities.

5.4.3   Financial Institutions

A major issue in the sudden end to high inflation is the fate of financial institutions and, specifically, that of commercial banks and financial intermediaries. During inflation the public seeks to avoid holding money because of the depreciation of the purchasing power of money. The higher the rate of inflation, the larger the implicit tax on money, and hence the greater the resources people are willing to devote to avoiding this tax. One natural consequence is the emergence of an industry that makes it possible to live with a minimum of real balances or, equivalently, to speed up the circulation of money.

Commercial banks and other financial intermediaries are the natural agents to promote the moneyless economy, and credit cards are among the vehicles. Financial institutions will establish branches in order to surround potential customers and will attempt to attract deposits by paying some interest, thus helping their customers avoid a complete loss of the purchasing power of their monetary assets. The proceeds of deposits are in turn re-lent at the high nominal interest rates commensurate with the prevailing rate of inflation. Deposit and lending rate differentials leave ample room for the costs associated with an expansion of the banking system. The common observation, then, is that during inflation, bank branches and bank employment mushroom.

In Argentina this process was clearly evident. The number of branches of financial institutions increased by 42 percent between 1977 and 1985. Commercial bank branches increased by 48 percent, and branches of finance companies nearly tripled!

When stabilization occurs, inflation disappears and so does the absolute size of the deposit-loan rate spread. There is then an extraordinary profit squeeze, which forces banks to close branches and sharply curtail employment. The effect is totally predictable, and it is very serious, not only from the point of view of labor relations but even more importantly from the perspective of financial stability. A successful monetary reform must take into account the fact that the financial industry is hurt by the end of inflation. Mergers, employment cuts, and a shift to fee-for-service banking will generally occur in the immediate aftermath of the stabilization.[7]

We turn next to an analysis of the Argentine experience under the Austral Plan.

5.5   The Austral Plan

Argentina's extraordinary macroeconomic history reflects an interplay of adverse shocks—domestic and external, economic and political. But the basic difficulties are two: the unions are inside the country, and the money is outside; the unions are British, and public finance is Italian.

In June 1985 Argentina implemented the Austral Plan, the first stabilization program to combine incomes policy with an initial dose of fiscal austerity. Figure 5.1 shows the recent inflation history of Argentina. Prior to stabilization, inflation had increased from less than 100 percent per annum toward the end of the destructive stabilization attempt under Martinez de Hoz, to nearly 1,000 percent; since early 1985 there had been a sharp acceleration. In June 1985 inflation, at an annual rate, exceeded 6,000 percent!

5.5.1   History

Table 5.1 gives details on the inflation rate, real wages, the real exchange rate, industrial production, and the budget deficit.
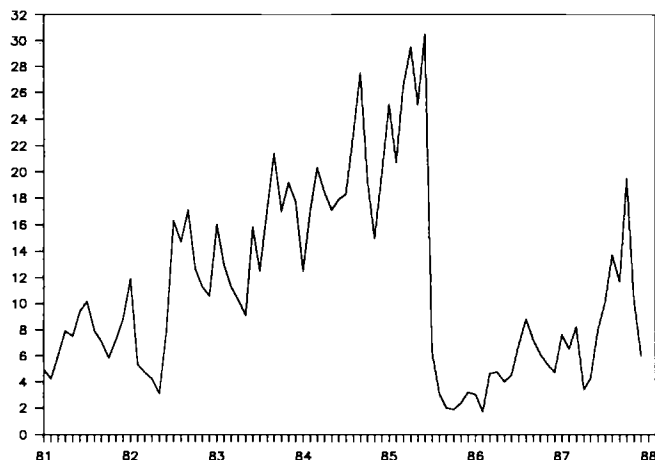
Fig. 5.1   Monthly inflation (CPI, percent per month)

Table 5.1   Key Macroeconomic Indicators

	1981	1982	1983	1984	1985:1
Inflation (% per year)	105	165	343	627	918
Budget deficit[a]	13.3	15.1	16.8	12.8	12.0
Real wage[b]	96	82	100	123	107
Real exchange rate[b]	151	108	100	112	107
Industrial production[b]	94	91	100	103	97

Sources: Carta Económico, Coyuntura Economica, Morgan Guaranty, and BCRA.

[a]Consolidated cash deficit of the public sector, including operations of the Central Bank, % of GDP.

[b]Index 1983 = 100.

There is no natural beginning to the recent inflation bout. The last large inflation had occurred toward the end of the Peronist administration, in mid-1975 and early 1976. At its peak, that inflation reached 35 to 50 percent per month.[8] During 1976–81, the military government achieved a reduction of inflation to an annual rate of less than 100 percent, but that reduction was bought at the price of a huge overvaluation of the exchange rate, which ultimately precipitated massive capital flight and accumulation of external debt.[9] Successors to Finance Minister Martinez de Hoz failed to contain inflation at this level, being handicapped by the preceding debt accumulation, the Malvinas War and the accompanying credit rationing in world markets, and a terms-of-trade deterioration.

A notable event in the inflation history was the deliberate attempt to reduce substantially the real value of internal debts, public and private, by the Dagnino Pastore–Cavallo team in June 1982. For the remainder of the military government, until late 1983, a holding action contained inflation

below 400 percent while achieving some recovery of economic activity. Budget performance throughout was very poor, a large part of the deficit representing losses on exchange rate guarantees granted by the Central Bank in the aftermath of the Martinez de Hoz overvaluation.

5.5.2   Stabilization

The Alfonsín government came into power in December 1983. Initially, the government attempted to cope with the problem of inflation by gradualist policies. From September 1984 on, an IMF program was in force. Not much was achieved, however, in great part because large real wage increases caused competitiveness and budget performance to deteriorate, forcing repeated major devaluations. The steady worsening of inflation, even in the face of halfhearted attempts at gradualist stabilization, ultimately forced the government to explore a different direction.

The shift in policies in June 1985 was triggered by two facts. The first was that the economy was well on the way to hyperinflation. Inflation had risen from only 18 percent per month at the time of elections to the 25–30 percent range. The second was that the government faced elections in November 1985 and hence could afford neither a German-style hyperinflation nor an IMF-style depression at that time.

Perhaps because the possibility of a hyperinflation was so actively on the minds of the economic team, the idea of monetary reform as a comprehensive framework for stabilization moved to the center of attention. Because of the team's structuralist persuasion, an incomes policy was thought to be an indispensable part of the stabilization. At the same time, the economic team had become distinctly more orthodox since the replacement of Economics Minister Grinspun by Juan Sourrouille, and it recognized that any attempt at stabilization without budget consolidation and correction of relative prices would inevitably fail.

The loss of confidence in gradualist policy and an unwillingness to accept IMF austerity per se led to the conception of the Austral Plan of June 1985. The plan struck a balance between the fundamentals—monetary and fiscal austerity—and pragmatism (or ''good theory'') residing in the adoption of wage–price–exchange rate controls as the central feature of the disinflation program. The key features of the plan were the following:[10]

(a) The government increased public sector prices, depreciated the exchange rate, imposed import duties and export tariffs as well as a forced saving scheme. Some tax rates were raised and tax collection was sped up. These measures were designed to improve the budget situation and to align key relative prices prior to the freeze.[11]

(b) A wage-price freeze and a fixed exchange rate based on the U.S. dollar went into effect until further notice. The wage freeze involved a cut in the real wage because there was to be no catch-up provision for the increases in public sector prices and in the exchange rate. At the same

time, the purchasing power of wages increased as a result of the reduced inflationary erosion of wages during the payment period.

(c) A scale of conversion to adjust outstanding contracts for the immediate and unanticipated end of inflation was put into place.

(d) A new monetary unit was introduced, the Austral. The old money was allowed to continue to be used and circulate at par.

(e) The program was accepted by the IMF and served as a basis for debt rescheduling, with new money financing a significant part of arrears and current debt service.[12]

5.5.3 Two Years Later

Where has the Austral Plan taken the Argentine economy during the first two years? Table 5.2 shows the performance prior to the plan and over the subsequent four semesters. The first point to note is that inflation has been cut dramatically, but that it has not disappeared. On the contrary, by mid-1986 it is at a rate of more than 100 percent per year and rising. The second point is that economic activity, as measured by industrial production, has picked up sharply and is back to the previous peak levels of 1979–80, before the Martinez de Hoz experiment crashed.

The Austral Plan thus has two faces. It has clearly failed to eradicate inflation once and for all. But it has brought inflation down from the brink of hyperinflation and has achieved its results under conditions of sharp recovery. There is no comparable experience under an IMF program. In our judgment, the Argentine experience makes the case for programs that

Table 5.2   **Economic Performance and Two Years of the Austral Plan**

	1985:I	1985:II	1986:I	1986:II	1987:I
Inflation[a]					
CPI	26.2	1.9	3.8	6.5	6.3
WPI	28.5	0.9	2.1	5.7	5.6
Nominal interest rate[a]	27.7	6.9	6.0	7.5	7.9
Money growth[b]					
M1	23.4	8.5	4.5	4.6	4.4
M4	24.3	7.9	6.4	6.2	5.5
Budget deficit[c]	12.0	2.5	3.1	5.0	6.7
Real wage[d]	98	105	106	109	101
Real exchange rate[d]	107	93	87	83	76
Industrial production[e]	97	99	111	121	124

Note: For 1985:II, the date refers to August-December.

[a]Percent per month.

[b]The interest rate is the active money market rate, percent per month.

[c]IMF measure, including losses of the Central Bank, % of GNP.

[d]Index 1983 = 100. The wage refers to the effective real wage, adjusting for purchasing power effects of inflation. The series is published by FIEL with base of December 1983 = 100.

[e]Industrial production is seasonally adjusted, and the series is published by Carta Economica.

Sources: Carta Económico, Morgan Guaranty, and BCRA.

combine fiscal consolidation with an incomes policy. We return below to the insufficient use of fiscal restraint.

For the pessimist, the Austral Plan has at least given Argentina a temporary respite from a 6,000+ percent inflation. For the optimist, it has provided a breathing spell during which to consolidate public finances and restore conditions of growth under moderate (albeit high by the standards of industrial countries) inflation. Whether moderate inflation can be restored and sustained is, of course, an open question.

What went right is obvious: there was a significant correction in the budget. Part of this correction took the form of a reduced domestic currency cost of debt service, while much of the correction came from a sharp increase in the real value of tax collection. This increase reflected an end to the inflationary erosion of revenues, and the introduction of new taxes and a scheme of forced saving.

Even with these corrections, the deficit has remained very large and is growing, as shown in table 5.3. Moreover, there is some question about various government contingent liabilities which do not find a place in the flow measure of the deficit, but which represent a potentially very serious threat to fiscal stability. At the same time, there remain several points of concern with respect to taxation. For those few sectors or households that actually pay taxes, rates are probably too high. In addition, some taxes—for example, export retentions on agricultural products—are directly distortionary and have ease of collection as their only justification. Thus although some fiscal consolidation is taking place, public finance remains a disaster area.

Until April 1986 the government maintained a fixed exchange rate based on the U.S. dollar. Since then, a policy of mini-devaluations to avoid a deterioration of external competitiveness has been followed. The ability to hold the *real* exchange rate relatively constant despite domestic inflation is explained by the large depreciation of the U.S. dollar in the world currency markets. A fixed peg of the Austral to the depreciating dollar meant that

Table 5.3	The IMF Measure of the Total Budget Deficit (cash basis, as a percentage of GDP)		
Period	Nonfinancial Public Sector	Central Bank[a]	Combined Deficit
1983	13.3	1.1	14.4
1984	8.3	2.7	11.0
1985	3.4	2.2	5.6
1st half	7.7	4.4	12.1
2d half	1.5	0.9	2.4
1986	3.6	1.0	4.6
1987	5.4	0.9	6.3

Source: BCRA.

[a]Losses of the Central Bank.

there was an automatic partial offset against the real appreciation caused by domestic wage and price inflation. The dollar depreciation thus helped carry the fixed exchange rate policy for a few months.

The government at no time committed itself to a zero-inflation target. This is an important difference with Brazil. In Argentina the government promised fiscal stabilization and no money creation to finance the budget deficit, while in Brazil the promise was for *inflacao zero*. The Argentine government was wise not to commit to zero inflation. The economy is basically closed, and the lack of competition makes it possible for oligopolistic firms and unusually aggressive unions to interact in sectoral games to raise their relative income shares. The political force of the unions means that the government cannot avoid sanctioning most of the wage increases and, for employment reasons, most of the price increases as well. The Argentine program, after instantly shifting to zero inflation for a brief moment, moved immediately into a second phase of administered inflation. An economy run with significantly more slack would perhaps have avoided the inflationary pressure, but that might have made for much worse politics.

There is an interesting question as to whence came the expansion. One might, perhaps most readily, point to the large and sustained rates of money growth, but several factors point in the opposite direction. A contraction rather than expansion should have occurred when one looks at the deficit, which declined, and at real interest rates, which were extraordinarily high—70 or 80 percent per year on an inflation-adjusted basis in the second half of 1985. Among the plausible explanations for the expansion is the restoration of credit, which resulted from an increased time horizon of economic actors. In the period of intense inflation, consumer credit was unavailable so that consumer durable sales slumped. With the end of extreme inflation, consumer credit reappeared, though at extraordinary real rates, which helped promote demand and production. The restoration of credit is a counterpart to a significant remonetization of the economy. Figure 5.2 shows the real value of M1 from 1983 to 1987. It is apparent that real M1 doubled in the aftermath of the Austral program.

The second explanation relates to the purchasing power of wages. The depreciation and public sector price increases on the eve of the reform reduced real wages. At the same time, however, the purchasing power of incomes may have been increased to some extent by the fact that inflation came to a halt. When inflation slows, the part of income not spent at the beginning of the month more nearly preserves its purchasing power. Thus, the halt in inflation is equivalent to a shift in real income toward labor which, in turn, has a high spending propensity.

The third explanation concerns the budget. During the high inflation the deficit was financed by an inflation tax. The fiscal correction shifted the burden from money holders to those who pay outright taxes (agriculture and large firms, for example). This redistribution may also have been a source of
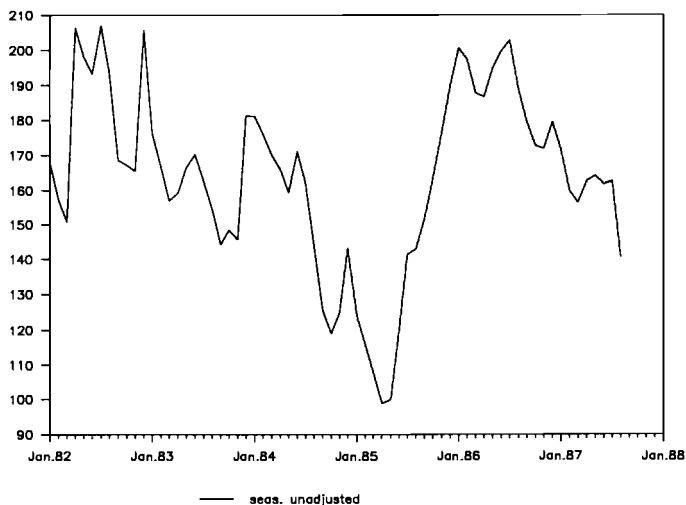
Fig. 5.2   Real M1 (index 1985 = 100)

increased purchasing power for groups which have high spending propensities. But even with these factors in mind, the expansion in demand and output may not be fully explained.

5.5.4   What Next?

At this stage two major concerns about the stabilization program are quite apparent. The first is whether the government can achieve further budget correction and thus provide assurance that inflation will remain moderate. Nobody expects zero inflation, but the issue is whether inflation can be reduced to, and held, around 50 or 100 percent. Of course, there is the question of whether triple-digit inflation can be stable. But that is more a question of future shocks than of the current problems of fiscal consolidation.

The second problem is the poor growth performance viewed from a trend perspective. Per capita output today is more than 10 percent lower than it was fifteen years ago, and what is worse, the decline in per capita output is bound to accelerate.[13] Net investment has been zero or negative for several years in a row, and there is no prospect of a change. These facts bring out the link between stabilization and growth. Stabilization and recovery involve primarily the demand side; but at some stage in the recovery, considerations of growth and the supply side must enter.

The budget correction is required not only to contain excess demand and inflationary pressure but also to promote investment. The link between the budget and investment occurs through two channels. The first is credibility effects. If the private sector anticipates deficits and hence a worsening of

inflation, they will expect the government to use tight money to make up for a lack of fiscal consolidation. Tight money presents the firm with the risk of being caught in investments with a high cost of debt service and with no customers. Hence firms are reluctant to invest, instead responding to demand using price increases and overtime rather than durable expansion in capacity and employment.

The other link between the budget and investment comes from the side of resource constraints. In a fully employed economy, resources for investment can only come from reduced consumption, reduced government spending, or increased net imports. To cut government spending is the popular option, but it has proved to be politically impossible, at least in the short term. Reduced consumption can, indeed, be achieved by a fiscal tightening. This is the correct option in a country where only 4 percent of total tax collection comes from income taxes. Finally, resources can come from abroad. That would pose the problem of increased external borrowing, perhaps in the form of forced lending by the creditor banks or reduced spreads. It also brings out the need to liberalize restrictions on imports so that potential investors actually have access to foreign goods. Increased foreign borrowing should certainly be part of an investment campaign in that it bridges the short-run political problems and provides a disinflationary effect.

It is doubtful that the investment and growth problem can be solved by the budget alone. The budget can, at best, help provide a favorable context in which other forces can promote investment. The most favorable sign at this time is the prospect of an Argentina-Brazil common market. Such a development would give weight to the productive forces of the economy and might well be the decisive event that restores investment and growth. With a return of growth, public finance problems and distributive quarrels might well retreat to the background. In the next chapter we turn to these questions by looking closely at the links between growth and the budget. In that context, of course, the issue of external debt service takes a prominent place. But before we move to these topics, we briefly look at the issue of the political popularity of the Austral Plan.

5.6 Politics

A very interesting and important aspect of the new stabilization programs is their political impact. They were initiated by governments already sharply weakened by their failure to stabilize. But, while stabilization is perceived ordinarily as politically difficult and harmful, these new programs have catapulted the politicians and technicians who initiated them to near immortality, at least initially. Alfonsín, who was the first president to attempt a full-fledged stabilization with incomes policy support, must be given credit for his courage and confidence.

Public opinion surveys provide a ready means of checking on the political success of the stabilization plans. We therefore review some of that evidence here to reinforce the dramatic contrast between the food riots that occasionally emerge in the course of IMF programs and the extraordinarily positive response in these cases.

5.6.1   Public Opinion

Data from a continuing opinion survey, SOCMERC, allows an assessment over time of the public's response to policy and management.[14] The data reported in table 5.4 show the fraction of the sample assessing the performance as positive. The notable point in this table is the immensely positive response to the Austral Plan and the sharp improvement in government popularity on all counts between May and August 1985. Moreover, the positive response has been quite persistent. Even after the initial enthusiasm wore off, there was still very substantial support, as is evident from the December 1985 rating. In addition, a public opinion poll at the end of 1985 showed that 35 percent of the sample felt that the Austral Plan had helped them and a further 42 percent estimated that it had not affected them significantly, while only 9 percent felt that they had been strongly hurt. Only 18 percent of the sample felt that the plan should be abandoned.[15]

5.6.2   Explanations

Why do these new programs bring forth such strong public support, whereas traditional programs are viewed as a political liability? We see two immediate explanations.

Perhaps the most important aspect of these new stabilization programs is that they occur in a context of sharply accelerating and extreme inflation. It is well known that the public views inflation as utterly threatening. If this view is accurate for the moderate inflation experienced in the industrial countries, then it is quite likely even more accurate for the extreme experiences reviewed here. The strong public reaction observed in this case far exceeds what economists can explain in terms of the economics of inflation.[16] By the same token, price controls are invariably a popular political move any time inflation is perceived as a problem. Using controls to stop accelerating inflation thus amounts to a well-known recipe in political

Table 5.4   Percentage of SOCMERC Sample Responding Positively to the Government

	December 1984	May 1985	August 1985	December 1985	April 1986
Austral Plan			74	68	52
Economic management	19	10	40	35	19
Government in general	46	35	57	52	36
President Alfonsín	72	64	74	71	64

Source: La Nación, various issues.

economy. More in-depth research in the psychology of inflation and controls is therefore certainly warranted.

It is striking to note that the public is actually willing to accept the need for sacrifices in order to secure stabilization. A survey in Argentina found that 46 percent of the respondents were willing to make personal sacrifices to help the success of the Austral Plan, while another 46 percent said they could not reduce their standard of living further. Only 8 percent were unwilling to do so.

Fiscal stabilization is also popular in that it does not involve a reduction in aggregate real absorption of goods and services in the private sector. The adjustment only involves a change in the incidence and distribution of taxation. An inflation tax finances the government during the high inflation period, whereas outright taxation finances basically the same level of real government spending after stabilization. Since no current account improvement is required for stabilization, the whole program amounts for the most part to a reshuffling, within the country, of the burden of financing a given real level of government spending.

There may also be redistributions between sectors. For example, industries that collect sales taxes (say, the tobacco industry in Argentina) lose out when the float disappears, and workers gain from the stability of real wages. These redistributive features differ from the case of a country in which stabilization requires an improvement in the current account and hence a net reduction in aggregate absorption.

Of course, with rising inflation and increasing focus on fiscal problems, and a resulting emphasis on tax collection, the Austral Plan was losing popularity during 1986–87. Table 5.5 shows the evaluation from a survey for both Alfonsín and the Austral Plan. The data reported in this survey offer a preview to the poor electoral performance of the radical party in the September 1987 election.

5.7   Concluding Remarks

The new stabilization programs in force in Argentina (and in Israel and Brazil) represent a critically important, viable alternative to traditional,

Table 5.5   Recent Evaluation of Alfonsín and the Austral Plan (percentage of respondents)

	Alfonsín's Management		Austral Plan	
	Positive	Negative	Positive	Negative
July 1986	51.0	19.0	32.0	29.5
December 1986	47.5	26.5	21.5	42.0
July 1987	37.0	36.5	14.5	59.0

Source: El Cronista Comercial (24 August 1987).

orthodox, IMF-style programs. They grasp a central economic fact—the need for coordination rather than sheer slack—as an essential part of stabilization. From a political point of view they are dramatically successful, at least in the initial stage, and as such they are feasible. Of course, without coming to grips with the fundamental problem of the budget, this program, like the Gelbard stabilization shown in table 5.6, had to fail.

Programs using incomes policy as an explicit part of stabilization represent an important advance in macroeconomic policy, but even so, they do not afford miracles. There is no substitute for a correction of fiscal disorder, the orthodox part of stabilization. Perhaps surprisingly, governments seem to be unwilling to use the very strong improvement in their political standing to follow up on the initial stabilization with a program of enduring, substantial improvement in public finance. This unwillingness is very shortsighted because any program will ultimately buckle under as a boom and shortages force the return of inflation. There may be no outright collapse, at least for a long time, but the program tends to melt away gradually for lack of sustainability, credibility, and confidence. As a result, political support inevitably falls off. And with the loss of support, the chances of achieving important changes in public finance fall. The chance of turning from stabilization to growth is thus missed.

A return to sustainable, long-term growth continues to be a pressing issue. In the three years prior to the Austral Plan, investment had declined significantly, and the supply potential has expanded little since then. The important changes in public finance which are required to promote long-term financial stability have not taken place. The lesson is that the incomes policy approach to stabilization does not dispense with the need for orthodoxy, but it does provide a rare political opportunity in the form of a brief breathing spell and the momentum of popular support for the hard task of fundamental policy reform.

Table 5.6   **Four Stabilization Programs (monthly Rate of Inflation)**

	Krieger-Vasena November 1967	Gelbard May 1973	Martinez de Hoz March 1977	Sourrouille June 1985
Previous three months	1.2	6.9	8.8	28.3
Month of stabilization	2.4	3.5	3.9	25.1
After stabilization				
1st year	0.7	1.0	8.7	3.4
2d year	0.7	4.8	8.5	6.5
3d year	1.5	19.6	6.8	11.9

Source: Carta Económico.