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INFLATION AND MONETARY REFORMS: the post-war brazilian experience

Claudio R. Contador **

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** Professor at the Institute of Graduate Studies and Research in Business Administration, Federal University of Rio de Janeiro, Brazil.
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** Professor at the Institute of Graduate Studies and Research in Business Administration, Federal University of Rio de Janeiro, Brazil.
The author owes a heavy debt to Dr. Angus Maddison, Dr. Annibal V. Villela

I - BACKGROUND

Since the 2nd World War, the Brazilian economy has undergone notable changes. In three decades, Brazil changed from a relatively simple economic structure based on rural activities and on primary exports to a highly complex one, with sophisticated and competitive industries and services. The GNP increased nine times in real terms, from US$ 27 billions in 1950 to US$ 245 billions in 1985, which means an average rate of annual growth of 7.4%. Nevertheless, needs grew faster than the physical achievements and the Brazilian economy - like most rapidly developing countries - has suffered from political instability and from three basic constraints: the external resource gap, the domestic savings gap, and the misallocation of resources. These aspects, together with the rising social and economic demands, brought the adoption of strategies in which the public sector had the predominant role, particularly in fixed capital accumulation, in financial development and in the allocation of resources.

The other important characteristic of the Brazilian economy was the chronic and unstable inflation, which affected the development and behavior of the financial system and the capital markets. Official indexation was implemented in 1964 and its impact on the economy was the principal determinant of the financial development of Brazil afterwards.

This paper deals with the role of inflation and government intervention in the Brazilian financial development during the last two decades - particularly the monetary reforms of 1964 and 1986. The next section presents a brief review of the events behind the 1964 reform and its achievements. Section III is concerned with the 1986 reform and the last section concludes the paper.

II - THE MONETARY REFORM OF 1964

Until the end of the 2nd World War, Brazil did not have a formally recognized central bank. In the post-war period, the most important changes were the creation in 1945 of a very limited monetary authority - the Superintendencia de Moeda e Credito (SUMOC) - with wide-ranging powers of policy formation and of supervision over the banking system, but tied operationally to the Banco do Brasil - the official commercial bank - and to the establishment of development banks in the early 1950s. In operational terms, the monetary and credit policies were exercised by the Banco do Brasil which had a privileged position of zero reserve requirements and utilized the reserve requirements of other private banks for its own lending.

Until 1964, the organizational innovations and the creation of new instruments were minor in the financial system. As a matter of fact, the financial system endured the distortions caused by inflation, interest rate ceilings and relative price bias against capital and holdings of liquid assets, which had been established ten years before. Two earlier laws and the unstable inflation were the principal determinants of the financial development until 1964. In 1933, following a period of relatively stable prices, two laws were promulgated; one - known as the "usury law" - prohibited nominal interest rates above 12 % per year and the other - the "gold clause law" - forbade contractual payments except in domestic currency and without any kind of monetary correction.

The inflationary crisis of 1963/64 gradually eliminated the opposition to formal indexation. The tight stabilization policy adopted in 1964 also aimed at reducing the allocative and redistributive effects of inflation and to this effect, it was necessary to distinguish nominal from real changes. Thus, behind all post-1964 legislation lay the recognition that, since monetary correction adjusts nominal values only, nominal changes should not be taxed.

The monetary reform of 1964 was based on three types of measures:

a) the creation of formal indexation designed to substitute the costly informal indexation and the socially inefficient market devices, to reconstruct the voluntary savings formation and long-term contracts, and to avoid the redistributive and allocative effects of inflation,

b) the use of compulsory savings mechanisms whose resources where to be administered by government institutions and

c) the creation of a new financial system, led by a Central Bank, with new institutions, instruments, markets, and a modern structure of regulation and control.

When introduced in June of 1964, formal indexation was initially applied to fiscal debts and the assessment of fixed and working capital. At the same time, legislation authorized the National Treasury to issue indexed bonds (ORTNs) to finance the public deficit. In August 1964, another financial institution was created - the National Housing Bank (BNH) - which was allowed to issue real estate bills. Law 4594 of December 1964, known as the Law of the Banking Reform, created the

National Monetary Council, the principal normative institution of the financial system, and the Central Bank. Law 4728 of July 1965 - the Capital Markets Law - introduced controls into the capital markets and extended indexation to a large number of financial assets: bills of exchange, time and savings deposits, debentures, and so forth. In 1968, the exchange rate was indexed according to the system popularly known as "minidevaluations". Finally, in 1970, the National Treasury started to issue short-term bills subject to "ex ante" correction (LTN), more suited for open market operations.

It is interesting to note that the Law of the Capital Markets of July 1965 explicitly mentioned the belief that the indexation would be short-lived and an exceptional measure. As it was formally written "...instead of the expectation of the devaluation of the cruzeiro, we now offer the creditor the possibility of correcting ex post, in the case that the devaluation of the currency takes place during the period of the loan. As the Government is convinced that price stability is near, it is possible to offer an ex-post monetary correction, either for long term deposits in credit institutions or for debentures issued by firms..." However, the "temporary" measure would last twenty-one years and by the 80s would be blamed for feeding inflation.

From mid 1964 on, a great number of changes were introduced into the financial system of Brazil. Indexation gradually extended to different forms of financial instruments, contracts, service charges, accounting values, etc. establishing in the economy a more complex financial structure. The only assets not subject to indexation were those that formed the narrow concept of money supply, i.e., currency and demand deposits, and their demand was assured by their role as transaction instruments and by the operational difficulties in applying monetary correction to them. Thus the legislation itself differentiated monetary and non-monetary assets.

Official indexation made it possible to distinguish between the real interest rate - whose 12 % usury law ceiling was still maintained - and the component due to inflation. It is also noteworthy, that from 1966 on, real interest rates tended to become high, ranging from 4 to 6 % a year in risk-free investments. The financial system reacted to demand pressures and created and expanded the supply of the so-called non-monetary assets. Although this development was beneficial from the point of view of the savers - who could rely on more and better investment alternatives, from the point of view of the government which found a convenient way to finance its deficits, and from that of financial intermediaries - the growth of financial instrument substitutes for money imposed a price on the control and efficiency of monetary policy. Hence, it is not surprising that controlling bank credit and the nominal stock of money had much weaker anti-inflationary effects after 1964 than before when the broad and complex financial system has not yet been established. (Contador, 1976)

Further, the post-1964 regulation intended to create a segmented financial system in which some institutions would become the sole suppliers of credit to certain sectors while others specialized in specific terms. The reason presented by the Brazilian government was that the segmentation would benefit financial specialization and lower operating costs, thus permitting the growth of capital formation. Later on, it became clear that the segmentation of the capital markets had a bias favoring the official financial institutions. In fact, the financial specialization and sophistication did occur but at a high cost. The increasing financial segmentation, stimulated by the legislation, the broadening of the scope of credit subsidies and the creation of new indexed forms of claims, greatly widened the range of the interest rates. Even the establishment of financial conglomerates under the leadership of commercial banks did not prevent the bad effects of the financial segmentation. Strangely, the competition among conglomerates stimulated inefficiency and the concentration of the financial system.

From the point of view of the capital market, it is not clear whether financial segmentation improved the savings formation and the allocative efficiency of investments. There is no doubt that the ratio of savings to GDP increased after 1964, from 15 % in 1955/64 to 30 % in 1973/76, but several factors contributed to the change. After 1964, the functioning of the capital market was affected by a high degree of government intervention. The scheme of providing fiscal and credit incentives through the segmented market and not adjusting lending terms to changing conditions led to interest rate differentials that created serious distortions in terms of misallocation of resources and a regressive income distribution. It proved also to be highly inflationary, because it was financed by the monetary authorities.

In 1973, the first oil shock brought to the Brazilian economy the realization of the high dependence on imported oil. The adjustment process in the balance of payments was very slow and inflation rate increased. Even when the government had a clear picture of the oil crisis, the glow of the "golden years" of 1968-1973 hindered recessive measures. The strategy of accomodating the oil shock had two elements. First, the trade deficits were covered by foreign borrowing and reduction of international reserves. Second, on the domestic front, the accomodation of the needed changes in relative prices was implemented through the broad abuse of fiscal incentives and subsidies. Later on, the second oil shock in 1979 and the rising international interest rates would cause new disturbances in the Brazilian economy.

As a result, in the beginning of the 1980s, the Brazilian economy endured a high external debt and its costs, a confusing system of subsidies and regulatory policies, a distorted structure of relative prices and a huge and unmeasurable public deficit. Inflation climbed above 200 % on an annual basis; the monetary correction on wages, exchange rate, internal public debt and controlled prices became instantaneous and widespread. The main policy instruments were lost and the economy ended up more vulnerable than ever to real shocks. The multiplication of public enterprises, financial institutions, and special funds - uncontrolled and eventually pursuing contradictory objetives - turned out to be the main cause of the 1981-84 turmoil. The excessive centralization of power in the hands of the central government conflicted with the lack of authority to discipline its own institutions.

To face the growing deficit, the federal government increased the public debt. The shift in the demand for credit drove up interest rates in the unregulated domestic financial market. At that point, the policy of higher interest rates was very convenient because it attracted foreign capital inflows but it also imposed the costs of increased foreign indebtedness and of decreased private investments.

Thus, the official financial market grew at the expense of the private institutions, demanding credit and increasing its cost to the private sector. The increasing role of the state enterprises and the complex system of subsidies and incentives imposed difficulties for the control of the public sector and created obstacles to the adoption of better policies to deal with the problem of inflation. As part of this confusing period, there was a growing use of selective credit programs through special funds at the Central Bank, financed also by inflationary resources.

The year of 1981 turned out to mark a watershed in the Brazilian economic performance. The unprecedented fall in the per capita real product was accompanied by growing inflation, large public deficits and serious problems in the balance of payments, aggravated by the international recession and by higher interest rates payments. In the attempt to avoid sharp changes in the income distribution, the indexation schemes became more rigid and widespread throughout the economy. Real interest rates on non-indexed claims - which were negative until 1980 - turned out to be very high as the scope and the size of credit subsidies were sharply reduced and the public debt grew. Virtually all real interest rates had become positive and in many case stood at levels above the international standards and rates sustainable in the long run.

By the end of 1985 and the beginning of 1986, inflation was clearly out of control and many economists foresaw a hyperinflationary process following the modern examples of Argentina, Bolivia and Israel. Finally, in February of 1986, the new administration implemented the second major post-war monetary reform - the so-called Zero Inflation Program.

III - THE MONETARY REFORM OF 1986

The economic performance of 1985 began a new phase in Brazil and by all major indicators, the years of recession were past. The GDP grew 8.5 %, the annual production of capital goods increased 12.2 % and the output of consumer durable goods went up 15 %. In the foreign sector, the results were also bright with a new surplus of US$ 12.4 billion in the trade balance. Unfortunately, the annual inflation stepped up from 224 % in 1984 to 235 % in December of 1985, a rather minor setback in comparison with the good results. By all standards, the prospects for 1986 were equally bright.

Nevertheless, in the begining of 1986, the Brazilian society perceived that several problems were still to be solved. The public deficit - near zero in the oficial view - did not decrease even after the higher tax collection imposed by the fiscal reform of December 1985. Moreover, the marginal inflation rates were rising and the rigid indexing schemes were proving to be definitively perverse. In spite of the good results of the trade balance, many economists began to fear that the conditions were untenable in the long run. The exchange rate was rigidly indexed to the domestic inflation, measured by the General Price Index, a poor indicator of the production costs of tradeable goods. The government clearly needed more degrees of freedom in economic policy but the indexation mechanisms turned passive the monetary base, the wage policy, the exchange rate, and in some sense the public deficit itself.

In the middle of February, inflationary expectations were revised to 400-500 % on an annual basis and there existed strong signs that the Brazilian economy was in risk of a hyperinflation process. Finally, at the end of February, the government launched a monetary reform, creating a new monetary unit - the cruzado - and disindexing most of the markets. In the first phase, prices, wages and the exchange rate were frozen according to moving averages of past real values. Future payments and claims in cruzeiros were converted to cruzados assuming a discount factor of 0.45 % per day or 14.4 % per month or 402 % per year. Indexation did not disappear completely; savings deposits and social funds remained protected against positive rates of changes in prices but were not to be adjusted downward in the case of deflation.

The 1986 Monetary Reform was based on three assumptions:

1 - the market prices were at equilibrium levels since any disajustment between supply and demand was already cleared by the high inflationary process;

2 - the financial component of the federal spending was close or equal to the public deficit, which meant that disindexation would eliminate the public deficit; and

3 - there would be no supply shock in the future.

After six months, all three assumptions had proved to be incorrect. Consider the first one. There is no logic for the belief that prices were at equilibrium. Nobody could say what equilibrium prices were since past inflation set itself a wide range of prices in the same market. Even if one accepts that, there is no guarantee that frozen prices would be right in the future, particularly in the rapid growth conditions of Brazil.

Thus, price controls became as artificial and perverse in terms of resource allocation as the former indexing schemes. Also, the "ex-ante" gains derived from freezing the exchange rate were never clear and made the economy as vulnerable as ever to foreign supply shocks.

The expectation of zero public deficit also proved to be wrong for two reasons. First, because the financial component of federal spending was lower than expected, and the public deficit did not disappear. And second, the ambitious social programs launched by government increased spending. On the other hand, the huge fall in the cost of holding money favored the monetary authorities who could issue money to cover the growing demand for money. Some estimates forecast that the monetary base could have grown 150 % with no inflationary effects which would mean something around 2 % of GDP (Contador, 1986). But this does not matter. The financing of the public deficit through money issue without inflationary effects is an once-and-for-all benefit. Once the monetization of the economy is complete, any excessive money issue will set new inflationary pressures.

Finally, the assumption of absence of supply shocks conflicted with the well-known disaster in the domestic production of food in 1986.

From the point of view of the financial sector, in the short run, the decline in nominal returns reshuffled the demand for financial assets as expected, because the cost of holding non-indexed assets diminished increasing the demand for real cash balances, particularly for currency and demand deposits, and raised the supply of credit by the banking system. The expectation of high corporate profits and the lower nominal returns on federal claims, certificates of deposits and so on, tended to shift the preferences of financial investors towards the stock market. And, at last, some types of financial institutions will certainly incur heavy losses. For different reasons, the finance companies (Financeiras), the commercial banks, the housing credit system and the insurance companies are the major losers. The profitable short-run operation with the resources of demand deposits simply ended.

By the middle of 1986 there were clear signs that the monetary reform should be subjected to corrective measures. The increasing public spending, the excessive growth (well above 400 %) in the money supply and the higher wages shifted simultaneously aggregate demand and supply strongly upward. Once again, the public sector became uncontrolled. Resource misallocations caused by price controls turned out to be higher than before and the savings rate kept declining. Aggregate supply could not respond to the demand pressures and repressed inflation became unbearable. The rising domestic costs, the insufficient food production, the fixed exchange rate, and the stimulus provided by the domestic market decreased exports and increased imports. International reserves were lost and speculation with foreign currencies took place.

In November of 1986, the government undertook several measures to control aggregate demand and started revising prices and wages. Inflation expectations became high and people feared the appearance of two digit monthly inflation. The nominal short-term interest rates skyrocketed and indexing mechanisms were again set to work. The financial private sector awoke up to old and well-known opportunities. In some senses, the picture is near that of one year before. GDP real growth is estimated to be higher than 7 % - even including the decline in the agriculture product - but the prospects for the balance of payments became grim.

IV - CONCLUSION

This short essay discussed the main aspects of the two monetary reforms in the post-war Brazilian period. The first one in 1964 may be considered technically successful in the sense that it helped to modernize the economy and developed the financial market. Its success lay in the serious stabilization policy that reduced annual inflation from 80 % in 1964 to near 15 % in 1970-73, increased the rate of capital formation and open the economy to the international market. The second monetary reform in 1986 tried to eliminate inflation without any coherent stabilization policy and relied heavily on price controls.

The lessons have not ended. The Brazilian economy responds quickly - for the good but also for the bad - to economic policies. At last, the government understands its mistakes and seems to be engaged in adopting a serious stabilization program for 1987.

REFERENCES

CONTADOR, C.R. (1975). Effects of indexation on the Brazilian Capital markets. In: CONFERENCE ON MACROECONOMIC PLANNING AND POLICY IN LATIN AMERICA. National Bureau of Economic Research, NBER/ILPES, 1975.

CONTADOR, C.R. (1976). Money supply and financial development. In: INTERNATIONAL SEMINAR ON CAPITAL MARKETS AND ECONOMIC DEVELOPMENT. Rio de Janeiro, IBMEC, 1976.

CONTADOR, C.R. (1986). O espaço para o déficit público em 1986. <u>Conjuntura Econômica</u>, <u>40</u>, (4), Apr. 1986.