DEPARTAMENTO DE ECONOMIA

PUC-RIO

TEXTO PARA DISCUSSÃO
N.º 307

STRENGTHENING THE FINANCIAL SECTOR IN THE BRAZILIAN ECONOMY[1]

DIONÍSIO DIAS CARNEIRO
ROGÉRIO L. FURQUIM WERNECK
MÁRCIO GOMES PINTO GARCIA

AGOSTO 1993

[1]Este trabalho é parte do relatório "Strengthening the Financial Sector in Latin America: The case of Brazil" apresentado ao Banco Interamericano de Desenvolvimento em julho de 1993. Além deste trabalho fazem parte daquele relatório os apêndices "The Flow of Funds in the Brazilian Economy" e "Central Bank Independence and the New Political Economy" de autoria de Marco Antônio Bonomo.

CONTENTS :

EXECUTIVE SUMMARY

The Brazilian economy's inflationary experience since the beginning of the 1980's is unique in many aspects. One important element of this singularity has been the role of the financial system in the provision of domestic assets accepted by wealth owners as money substitutes. One important question is to what extent this system need and can be re-formed to perform the necessary tasks of financial intermediation once the economy is stabilized. This study starts by examining the present characteristics of the Brazilian financial system which basically resulted from the general reforms of 1964/65 as well as from the post-1988 liberalizing legislation. Issues such as concentration, role of public and private institutions, costs and spreads, profitability and regulatory mechanisms, as well as the instruments and practices of monetary policy are first examined. Next the details of the present tasks performed by the financial system in a high inflation environment are reviewed, with special emphasis on the mechanisms and practices required for firms' survival in the mega-inflationary experience of the second half of 1980's, with its frequent policy shocks and ensuing policy uncertainty. The main conclusion of this part is that there is ample room for a period of credit-led growth after stabilization, since both firms and families' debt are very low. Once confidence is restored by a more stable environment, the favorable consequences of financial development experienced in the last twenty years is bound to exert a stimulating effect on savings and its channeling to investment thereby enhancing economic growth. Finally, policy implications are derived from the previous analysis. The important issues bearing on the Brazilian financial system currently being discussed in Congress namely, the independence of the Central Bank and the reform of public financial institutions, are examined in detail. Policy conclusions for the reconstruction of the private financial system after stabilization are then drawn.

1. STRUCTURE AND PERFORMANCE OF THE FINANCIAL SYSTEM[1]

1.1. Main Features

The debate over the possibilities of rational macroeconomic stabilization policy in Brazil face the challenges of a tradition of tolerance with inflation resulting from a general tendency of accomodation of inconsistent claims over the public budget as well as from a variety of institutional mechanisms designed to minimize the potential damage which inflation imposes to the functioning of the economy. In the long run, the effects of such mechanisms have been to allow a surprisingly diversified and structurally articulated industrial economy to work under an otherwise disorganizing mega-inflation. The economy is lubricated by a highly sophisticated financial system which is based essentially on the provision of firms' and individuals' cash managing needs, by issuing close substitutes for money as its main liabilities it also performs, with a large spread, its traditional task of screening and risk selection of potential debtors and channeling short term savings to their financing needs.

The main objective of the policy reforms which were conceived and implemented as part of the stabilization effort of the mid sixties was to provide non-inflationary financing of the government deficit as well as stimuli to private savings in an environment of chronic inflation. An important aspect of the policy reforms was a package of legislation, of which stand out laws 4595/64 which created the Central Bank and the Banking Law 4728/65 known as the Capital Markets Law.

[1] The coordinators wish to thank Pedro Bodin de Moraes for valuable discussions and comments on an earlier draft as well as Marcelo de Albuquerque e Mello, Monica Tavares Pinto Baumgarten, Ana Christina Adrião Rodrigues, Gustavo Monteiro de Athayde, Cristiano Ribeiro Moura, Ruy Monteiro Ribeiro, Delano Octávio Jorge Franco and Guilherme Ribenboim for competent research assistance.

1.1.1. The Structure of the Brazilian Financial System

The financial reforms of 1964/65 adopted a system based on specialized institutions. The Central Bank (BACEN) absorbed most monetary authorities functions of the Banco do Brasil and SUMOC (the former Superintendency on Money and Credit), the regulatory role of the SUMOC council was replaced by the National Monetary Council while Banco do Brasil would be gradually converted into a commercial bank, therefore progressively retreating from its role of financing government spending, besides losing its function of manager of international reserves and discounting banks' assets in case of iliquidity.

According to the legislation, commercial banks should be restricted to short term credit operations funded by demand deposits. Financial companies (the so-called "financeiras") would be mainly responsible for consumer credit and personal loans in a time when the expansion of the production of durable consumer goods was the main driving force of industrialization. At the time of the reform, the financeiras had been very active as suppliers of consumer credit as the main instrument for circumventing the "usury law" which defined a legal limit to the (nominal) interest rate for banks' loans to 12% per year. Investment banks would be the basic institution in charge of creating a long term capital market issuing time deposits and borrowing abroad, setting up as well as administering financial packages to fund long term projects and performing underwriting operations. Savings and loans associations and similar institutions operating under the supervision of the National Housing Bank (BNH) should provide mortgage credit and issue indexed passbook savings, the BNH acting as a second line provider of finance for the system, by making use of a compulsory savings fund formed by a tax of 8% on the monthly wage bill of every employer, designed to finance the worker's temporary unemployment or as retirement complement, known by the acronym FGTS.

The capital markets law defined a fairly segmented financial market. In practice, nevertheless, the system that finally resulted from that reform was much less segmented than the existence

of different financial institutions would lead one to believe. Several financial institutions belonging to the same conglomerate used to operate together, making use of the same physical as well as organizational facilities, but consisting of separate accounting plans in order to comply with regulatory requirements.

Another result from the financial reform of the mid-sixties was the rise of an important set of non-monetary credit institutions, that is, institutions whose liabilities are not means of payment. The total assets of such institutions grew by 170% in real terms between 1973 and 1978 alone, that is, 22% per year. This growth of non-monetary intermediaries may be seen as the other side of the coin of the substitution of non-monetary for monetary assets in the private sector portfolio the increasing share of non-monetary institutions in the total credit supply since the early seventies illustrate that the financial reforms managed to convert a system which was originally based essentially on commercial banks into a variety of specialized institutions.

Figure I shows the monetary aggregates evolution since the early seventies. Until March, 1986, one can clearly see the effect of rising inflation. M1 declines steadily in real terms (even more if in per capita, or per unit of GDP terms). The other monetary aggregates, which include non-monetary assets[2], on the other hand, rose with inflation (the substitution of non-monetary assets for monetary ones is further analysed when we discuss the conduct of monetary policy). In 1986 there is a temporary remonetization of the economy due to the low inflation after the first Cruzado Plan. Several other plans followed, without succeeding remonetizing the economy as the first Cruzado Plan (probably because the belief in the success of those plans in lowering inflation permanently was weak). On March 15, 1990, the just-inaugurated president Collor froze most monetary and non-monetary assets. One can see from Figure I that the demand has been fairly recompose ever since (all frozen assets were unfrozen until the last quarter of 1992).

[2]M2 is M1 plus federal bonds and bills; M3 is M2 plus savings deposits; and M4 is M3 plus time deposits.

It was only as late as June 1988, when the Central Bank introduced a unified accounting plan for all financial institutions, the so-called COSIF,[3] that the unification of all the different financial institutions of the same conglomerate was made possible. On September 1988, the CMN approved Resolution 1524, that created the Multiple Bank, the most important change in banking legislation since the mid-sixties, finally recognizing the failure to create a segmented system. According to this regulation, a multiple bank is a financial institution which operates a minimum of two and a maximum of four of the departments that characterized the following five former segmented financial institutions: commercial bank, investment bank, development bank, financial company, and savings and loans. The other major deregulating measure of Resolution 1524 was to do away with the restricted number of licenses to establish financial institutions (the charter was called "carta-patente"). Charters were traded at a premium by financial groups. Nowadays any group fulfilling the legal requirements (minimum capitalization, honest and capable management, etc.) may establish a financial institution. Currently, there are 171 multiple banks with commercial portfolios. There are also 41 remaining commercial banks, out of which six have already requested to become multiple banks.

The evolution of the Brazilian financial sector following the 1988 reform until June 1992 may be seen in Table 1.A below. The conversion of several financial institutions into multiple banks may be observed in the first section of the table. One has to be careful, though, with the double counting of the multiple banks that appear in the different categories of financial institutions. The last line provides the number of multiple banks without the double counting.

[3]Plano Contábil das Instituições do Sistema Financeiro Nacional.

TABLE 1.A

Evolution of the Brazilian Financial Sector
Number of Institutions (as of June/1992)

	1988	1989	1990	1991	Jun-92
Banks with Commercial Departments					
-Commercial Banks	106	66	50	45	42
-Multiple Banks	0	99	148	159	165
-TOTAL	106	165	198	204	207
Banks with Investment Departments					
-Investment Banks	56	36	23	21	21
-Multiple Banks	0	62	89	94	95
-TOTAL	56	98	112	115	116
Banks with Financial Departments					
-Financial Companies	107	70	51	45	45
-Multiple Banks	0	89	132	144	147
-TOTAL	107	159	183	189	192
Banks with Savings and Loans Departments					
-Savings and Loans	57	42	29	25	25
-Multiple Banks	0	54	71	74	77
-TOTAL	57	96	100	99	102
Banks with Development Departments					
-Development Banks	13	12	10	9	9
-Multiple Banks	0	2	5	5	9
-TOTAL	13	14	15	14	18
Others					
-Credit Unions	661	767	806	831	831
-Saving Banks	5	5	3	2	2
*-Distribuidoras**	447	419	395	386	376
-Brokerage Houses	273	282	258	273	274
-Multiple Banks-TOTAL (493 portfolios)	0	113	166	180	188

Source: Central Bank

* Note: A *distribuidora* is a broker firm which does not own a chartered seat in an organized exchange.

1.1.2. Size and Concentration

At the end of 1991, total assets of commercial banks plus independent investment banks amounted to around US$ 200 billion, or a little less than 50% of GDP, about half of which corresponded to loans outstanding. The last official Census results (1980) showed a total of 638 thousand workers in the banking industry. During the first part of the eighties output in the financial industry grew at an estimated 7% per year rising from 8 to 14% of GDP between 1980 and 1987 and employment in the system must have doubled in this period.[4]

Banco do Brasil is the largest bank, with total assets of US$ 57 billion. Table 1.B below shows the market shares of the 16 largest commercial and multiple banks, based on total loans values in 1991. It may be seen that the two largest banks Banco do Brasil and Caixa Econômica Federal (CEF) -- both owned by the federal government -- are responsible for 55.9% of the total loans and their joint loans are approximately 13 times greater than the loans of the largest private bank (Bradesco). But that is definitely a misleading indicator of their real market share. Their joint deposits are only 4.3 times greater than Bradesco's. But CEF has total assets of almost US$ 30 billion and concentrates its main activities in mortgage loans funded by passbook savings accounts. It also administers FGTS the workers retirement fund, and finances local government expenditures.

A large part of private banks deposits are nowadays channeled to public debt financing and not to loans. For example, BRADESCO, the major retailer, needs only half of its deposits to fund its loans, the remainder correponding roughly to public bonds or to government backed securities of some sort.

[4] Bodin de Moraes (1993).

TABLE 1.B

17 LARGEST COMMERCIAL AND MULTIPLE BANKS - MARKET SHARES - 1991

Banks	Market Share (%) based on Loans	Loans (US$ million)	Market Share (%) based on Deposits	Total Deposits (US$ million)	Ownership	Kind
CEF	34.5	20096.3	25.9	12861.1	State-owned	Commercial
BRASIL	21.4	12475.4	13.4	6655.9	State-owned	Commercial
BANESPA	10.4	6082.0	6.7	3339.5	State-owned	Multiple
BRADESCO	4.3	2506.9	9.1	4517.4	Brazilian	Multiple
ITAU	3.6	2070.7	5.7	2826.4	Brazilian	Multiple
UNIBANCO	2.4	1390.4	2.6	1274.5	Brazilian	Multiple
ECONOMICO	2.2	1269.5	2.4	1184.4	Brazilian	Multiple
NACIONAL	2.2	1269.3	2.7	1333.3	Brazilian	Multiple
BAMERINDUS	1.8	1055.3	4.1	2038.8	Brazilian	Multiple
BFB	1.3	747.3	1.2	578.2	French	Multiple
BANESTADO	1.0	593.8	0.6	304.2	State-owned	Multiple
SAFRA	0.7	424.0	1.8	874.0	Brazilian	Multiple
LLOYDS	0.7	396.5	1.1	536.3	British	Commercial
MERIDIONAL	0.7	394.0	0.6	306.1	State-owned	Multiple
SUDAMERIS	0.7	391.6	1.0	477.9	French	Multiple
CITIBANK	0.6	375.0	0.9	443.2	American	Commercial
REAL	0.6	366.7	1.4	703.1	Brazilian	Commercial
TOTAL	89.1		81.2			
AVERAGE		3053.2		2367.9		

Source: Fonseca [1992] and Central Bank Bulletin [September, 1992].

A fuller understanding of market shares requires at least two additional considerations. The first relates to the consequences of inflation to concentration in the banking industry. Recent research results (Silva [1990]) point to the positive effects inflation has had for concentration in the banking industry. This suggest the existence of economies of scale which may be important in the provision of retailing services, usually connected with the competition for the collection of inflation tax. By providing convenient banking services at "cheap" nominal rates, network banks manage to capture a substantial share of the inflation tax. In the first half of the eighties, with three-digit inflation and rules of the game reasonably steady, the number of

banks branches grew by more than 35% Part of this increase in scale, however, is hardly a sign of efficiency since branching carried with it a need for overstaffing and excessive costs [5].

Although the econometric evidence of Silva [1990] corroborates the importance of inflation and economies of scale in the banking industry in the concentration process of the Brazilian banking system,[6] another important cause is the federal policy in the early seventies of promoting bank mergers and acquisitions. After the traumatic closure of the third largest private bank in 1974, whenever a bank ran a serious risk of going under the Central Bank would induce some healthy institution to take over under the supervision and often the financial backing of the Central Bank.

How important is size to profitability in the banking sector of the Brazilian economy? As suggested in section 1.2.1 below, the relationship beween size and profitability depends on a number of other factors.

1.1.3. Ownership Structure

As of October 1992, out of 215 banks, 30 are public (3 federal owned, 24 state owned, and 3 saving banks, one federal and 2 state owned). The remaining 185 are privately owned. Table 1.C *in the Appendix C* lists multiple banks, and Table 1.D, *also in the Appendix C* lists the 41 remaining commercial banks.

The coexistence of a large public segment in an essentially private banking system is an important characteristic of the Brazilian financial sector as will be seen in the sections below.

---

[5] See Bodin de Moraes [1993], and Vasconcelos and Ogasawara [1992].
[6] The Herfindahl index for demand deposits on private commercial banks, for example, grew from 0.0219 in 1971.2 to 0.1414 in 1986.3.

1.1.4. Deposit and Loan Rates, Average Spread

Bank credit in Brazil has traditionally been a very regulated matter, with several different rates for the different purposes of the credit. Many of those rates are subsidized, either through governmental funds directly, e.g., credit provided by the National Economic and Social Development Bank (BNDES), or through regulations that require that banks provide a certain amount of credit for specific activities, e.g., credit for agriculture. Long-term credit for fixed investment is almost exclusively provided by the BNDES, whose funds come from a compulsory savings fund of all Brazilian workers (FAT, previously PIS/PASEP). Tables and figures in the statistical annex describe the evolution of credit outstading since the seventies by type of financial institution.

Figure II displays the series of deposit (non-indexed CD rates) and loan rates (commercial discount rates), as well as the spread between the two. Both interest rates have followed the inflation path, and the spread, although highly volatile, has tended to be high, with both the mean and the variance increasing with inflation. Table 1.E below displays the averages and standard deviations for the series analyzed during three periods: the "low-inflation" period (1973-1979), the high-inflation period without economic shocks (1980-1985), and the high-inflation period with economic shocks (post-1985; the Cruzado Plan took place in February 1986). The numbers in the Table corroborate the interpretation of Figure I, showing clearly that in the post-Cruzado era not only the average spread increased, but its variability became much greater. This result is consistent with the familiar mean-variance analysis: the economic shocks turned the Brazilian economy in a much riskier, although more profitable, environment.

These findings are robust to the different loan rates studied, and to whether or not the deposit rate was indexed to some price index. Unfortunately, there is no available data matching volumes and rates. Our attempts to recover such data set have been unsuccessful.

Table 1.E

Mean and Variance of Interest Rates (% per month)

	CD Rate	Discount Rate	Spread[7]
Pre-1980 Mean	2.62	3.65	1.00
1980-1985 Mean	7.53	11.06	3.27
Post-1985 Mean	18.51	24.60	4.76
Pre-1980 Standard Deviation	0.64	1.12	0.52
1980-1985 Standard Deviation	2.78	3.44	1.00
Post-1985 Standard Deviation	14.06	20.59	5.07

1.2. Performance of the Financial System

Banks are known to be a profitable business in a high-inflation environment, at least since Bresciani-Turroni [1937] study of the German hyperinflation. Growth of the financial industry in the eighties already mentioned in 1.1.2 above illustrates the point. The peculiarity of Brazilian experience is that even for banks inflation may have turned out to be too much of a good thing. Thus, as suggested by the increase in riskiness measured by the variance of spreads analysed above, although demand for banking services increased with inflation, not only demand for loans declined, but the quality of loans has deteriorated in many episodes of high volatility of the inflation rate in the eighties.

As loans declined from mid seventies to the eighties, income from financial intermediation derived more and more from the supply of indexed financial assets to the public backed by government bonds. By means of formal or informal repurchase agreements (which already existed since the early seventies as part of the Central Bank's effort to "create a market for government debt") financial institutions issued short term deposits with overnight liquidity and

[7] The spread was computed with the correct compound interest arithmetic. This is why the mean spread is not equal to the difference between the mean discount rate and the mean CD rate.

bought long term government bonds. Such maturity transformation, performed by several institutions (not necessarily banks) turned out to be a source of gains which are only partially reflected in the balance sheets of the banking system. The overrall profitability of banks depends on a variety of factors as discussed in the next subsection.

1.2.1. Profitability and Efficiency

The competition for the provision of banking services may be a source of inefficiencies as indicated above due for example to the tendency to excessive branching. Vasconcelos and Ogasawara [1992] estimate that personnel costs as a fraction of total assets in the commercial bank subsector were very high compared with international standards, ranging from 3 to 7% for the largest banks, although salaries must be lower and automatization is certainly high by the same standards. This fact illustrates the difficulties of an overall evaluation of the efficiency of the banking industry in Brazil, since the net result of the banking firm in such a complex financial environment depends on the specific mix of services provided by the bank besides strategic variables which determine its leverage, the profit margin and the turnover of assets. By decomposing the net profit of the core of the financial sector, one may have an interesting perspective of its determinants. Using data analysed in Fonseca [1992], a decomposition exercise was performed of the net profit of the largest 16 commercial and multiple banks (excluding CEF), based on the following identity:

$$NP/NW = (NP/IFI)\ (IFI/TA)\ (TA/NW)$$

where:

NP = net profits

NW = net worth

IFI = income from financial intermediation

TA = total assets

and

NP/NW = net profit rate

NP/IFI = net margin

IFI/TA = turnover ratio

TA/NW = leverage ratio

The net profit rate is seen therefore as jointly determined by the net margin, the turnover ratio and the leverage ratio. The results of such decomposition, based on 1991 data, are presented in table 1.F, which also shows in the last column, the NP/TA rate.

TABLE 1.F

DECOMPOSITION OF THE RATE OF PROFIT

(16 LARGEST COMMERCIAL AND MULTIPLE BANKS)

BANKS	NP / IFI	IFI / TA	TA / NW	NP / NW	NP / TA
BRASIL	0.1395	0.0324	11.9477	0.0540	0.0045
BANESPA	0.0588	0.1607	9.4017	0.0889	0.0095
BRADESCO	0.1407	0.1237	4.6047	0.0802	0.0174
ITAU	0.1762	0.1097	4.7889	0.0926	0.0193
UNIBANCO	0.1120	0.1123	7.0976	0.0892	0.0126
ECONOMICO	0.0568	0.1750	7.8215	0.0778	0.0099
NACIONAL	0.0539	0.1690	10.6250	0.0967	0.0091
BAMERINDUS	0.0338	0.1862	8.4283	0.0531	0.0063
BFB	0.0087	0.1624	10.4248	0.0147	0.0014
BANESTADO	0.0928	0.2470	7.3501	0.1684	0.0229
SAFRA	0.0610	0.4978	7.7651	0.2359	0.0304
LLOYDS	0.0005	0.6306	14.8871	0.0043	0.0003
MERIDIONAL	0.0249	0.5585	4.1668	0.0579	0.0139
SUDAMERIS	0.0176	0.1877	9.0167	0.0298	0.0033
CITIBANK	0.0002	0.4386	14.1773	0.0014	0.0001
REAL	0.0664	0.1486	8.1779	0.0807	0.0099
AVERAGE	0.0652	0.2463	8.7926	0.0766	0.0107

Source: Fonseca (1992)

The high level of leverage of Banco do Brasil and Banespa may be overstated by some underestimation of asset values which is especially true for Banco do Brasil due to its role in the financing of agriculture and the pattern of collateral which traditionally involves a higher level of immobilization than it is recognized in the balance sheets. Also Banco do Brasil,

exibits a rather low turnover ratio (3.2%) compared with other large commercial banks (10 to 20%) which is partly compensated by a higher leverage ratio. The largest commercial banks in the same table have also the lowest leverage ratios but high margins, illustrating their low deposit costs as big collectors of inflation tax from their depositors. They are typically retailers. For such banks, which operate with similar turnover ratios, profit rates depend directly on net operating margins and, therefore on the specific market strategy for capturing the gains derived from inflation. A noticeable exception in the sample of large banks is Safra which shows the highest return with a very high turnover, about twice the sample average.

1.2.2. Credit Supply and Inflation Shelter

In Brazil, the public financial institutions have been for a long time suppliers of long run credit. The most important institution for the provision of long run credit is the National Development Bank (BNDES) with total assets of around US$20.8 billion in December 1991 with around US$ 13 billion of loan outstanding, supplying an annual flow of some US$4.5 billion. Its funding is mainly by compulsory savings FAT (previously PIS-PASEP) contributions derived from a 0.65% Federal tax on sales of which 40% must be transferred to fund BNDES loans.

Mortgage credit has been under severe restraint since the closing of BNH (National Housing Bank) in 1986. The main source is FGTS (derived from a 8% payroll tax) financing total assets estimated to be around US$ 24.6 billion in 1991. Insurance companies are a minor source of long run funding since high inflation and instability are responsible for a very low share of premia in GDP (around 1.3%) with even less important life insurance segment.

Pension funds are a relatively new segment of the financial industry and their assets have been estimated in US$ 18.2 billion (a mere 4% of GDP compared to a similar figure of 50% for the US). New stocks issues have played a very small role in the financing of investment with the total capitalized value of stocks traded in the Rio and São Paulo Stock Exchanges amounting

to less than 10% of GDP. Appendix A describes the flow of funds data estimated for some important landmarks so that the main sources of funds and their behaviour in the eighties can be evaluated.

The banking sector, both private and official has thus been the traditional suppliers of short run loans in the economy. Figure II shows what happened to financial system loans to the (non-financial) private sector since the mid-seventies as a proportion of GDP. Following the steady increase until 1978, in the wake of the first wave of financial innovations generated by the mid-sixties reforms, a long downswing is observed implying a fall in the stock of loans from the peak of 35% of GDP to 11% in 1991. The phenomenon illustrates the shrinking of lending activity by the financial sector and is generalized for banks and non-banks, public and private as may be seen in similar tables and graphs in the statistical annex.

The two main reasons behind this phenomenon are of course related to the evolution of inflation which increases both lenders' and borrowers' risk. The conversion of the banking system from supplier of loans to issuer of money substitutes has been thus an essential part of the flourishing of financial activities while the economy trodded the high inflation path of the eighties. Control of such a system and its role in the self perpetuating inflationarry mechanism which seems to be ingrained in the Brazilian economic relations is both controversial and hard to grasp by non specialists but an attempt will be made in the next subsection to briefly describe the main difficulties The subject will be taken up in the next chapter which discusses the role of the financial system in the macro-financial relations.

1.3. Regulation and Supervision of the Financial System

The Central Bank is the main regulatory authority in the Brazilian financial sector. It acts following the rules dictated by the CMN (Conselho Monetário Nacional). It regulates all kinds of financial institutions, even ROSCAs (Rotating saving and credit associations) established to finance the purchase of durable goods.

Regulating the market for equities, there is the CVM (Comissão de Valores Mobiliários), conceived to be the Brazilian equivalent to the US SEC. The insurance institutions are supervised and regulated by the SUSEP (Superintendência de Seguros Privados) and the IRB (Institutos de Resseguros do Brasil), respectively.

1.3.1. Monetary Policy: Open Market Operations, Discount Loans and Reserve Requirements

Monetary policy is conducted in Brazil mainly through the open market operations. Discount loans are very expensive and are used only as the last resort. Reserve requirements are kept constant except under special circumstances.

Open market sales and purchase of government securities are conducted through the trading desk of the Central Bank. Formal public debt auctions are conducted every Tuesday also by the Central Bank. The most liquid security and main instrument for the market for reserves is the BBC (Bônus do Banco Central), a discount bond with a 4 to 6-week maturity. There are some US$ 25 billion of these bonds outstanding of which some US$ 4 billion are held by state companies and the remaining are held by funds administered by banks (around US$ 5 billion) and some US$ 16 billion are held by financial institutions either funded by their own capital or time deposits (an estimated US$ 3 billion) or financed by deposits of very short maturities, including inter-financial overnight deposits.

A very controversial feature of the Brazilian monetary regime is the role of the widespread use of repurchase agreements by the Central Bank in causing inflation. Many economists view the repurchase agreements as the main cause of why inflation persists, with little regard for the fiscal imbalance. This is an unresolved question in Brazil, and the different views on that theme may have profound consequences on the next stabilization attempt that will necessarily take place in the near future.

The daily fluctuations in money demand and supply in the Brazilian economy have an immense impact in the banks' reserves, as compared to a low inflation country. This is due to the small monetary base in Brazil caused by the very high inflation. To make those fluctuations acceptable to the banks, the Central Banks conducts many daily informal auctions (called *go-arounds)* in order to mop up the excess demand or excess supply of bank reserves. When the Central Bank withdraws excess reserves from the market, it does so by selling government securities with repurchase agreements. The repurchase agreements are necessary because free reserves are so expensive to the banks. If the banks had to keep the government securities until maturity, and the Central Bank did not provide (unexpensive) liquidity to the system, the banks would have to hold a much larger volume of free reserves, or resort more often to the discount window, and this could be unbearably costly to them. After all, as we argue here, cash management is the main activity of the Brazilian banks. The consequences of this feature will be discussed in Chapter 2.

It is a matter of discussion whether an alternative monetary policy regime without the widespread use of repurchase agreements is viable. Nevertheless, if such an alternative system is too costly for the banks, one possible outcome of the extinction of the so-called "indexed-money" (overnight holding of securities with repurchase agreements) is that the banking system ceases to provide money substitutes, opening the way to the flight from domestic financial assets. That is, the indexed-money may be a necessary condition for the economy to combine the existence of demand for domestic financial assets with a very high and volatile inflation.

Regarding the use of the discount window as a monetary policy tool, Brazil has experienced two different regimes. Until 1985, the banks used to resort quite frequently to the discount window. Until then discount rates were fixed, underestimating market interest rates in a period of escalating inflation. In 1985, the discount rate began to follow the market overnight rate plus a penalty spread. Since then, due to the substantial increase in the costs of its loans, the discount window has been used only in extreme situations. The banks' reluctance to use the discount window is also due to the fact that the Central Bank applies the so-called "Rieffler doctrine" automatically sending a supervisory team to all banks that resort to the window. Banks nowadays have an active interbank market which provides liquidity for most healthy institutions.

Reserve requirements are applied to all sight deposits, including the banks' float. Currently, no reserve requirements are required for time-deposits. The rates vary by region of the country and size of the banks' credit operations. Recently (February 1993), such discrepancies between those have been diminished, and the average rate has increased. The highest required reserve rate is 50%.

The Brazilian Central Bank practices a lagged reserve system, which has also been recently altered. The current lagged reserve system hampers the effectiveness of the monetary control. Quite often, the market situation when the banks have to hold their required reserves is different from the situation when the requirement was computed. This lag tend to exacerbate the interest rate volatility. A simultaneous reserve system, as practiced in the US, would improve the control of the money supply by the Central Bank.

1.3.2. Asset Composition of Commercial Banks

Most of the recent problems in the banking sector have occurred with the state banks or state savings banks (caixas econômicas estaduais). This happens because the Central Bank president, in his farewell speech in October 1992, and his successor identified the lack

effective authority to close the technically bankrupt state institutions. Both found the lack of authority over the state institutions as the single most important problem facing the new administration.

Table 1.G, in the appendix, illustrates the point. It is a list of all interventions by the Central Bank in the banking sector since 1986. Nineteen of the 23 interventions undertook since 1986 were on state banks.

The problems with the state banks emerged in 1982, when they were irresponsably used to provide financing to the state governments involved with general ellections. Since then, those institutions have been used regularly as source of funds to the respective states and municipalities. This is fundamentally achieved by a (intentional) loophole in the legislation.

The Resolution 1088 of the National Monetary Council limits the leverage of banks. Regular banks cannot hold more than 10 times their networth with state and municipal bonds together. State banks, however, can leverage themselves as much as they want with those securities! The Central Bank is currently attempting to close that loophole, so far, without success.

When the state and municipal securities go sour, the Central Bank is called upon to bail out the state banks. The usual way this has been done is by exchanging the state and municipal debt held by the state banks for federal debt of equal face value (and much greater real value). Therefore, the state banks, by avoiding the existing rules for all other banks, become virtually local central banks, with quasi-issuing power.

The state banks have exceeded many times the limit of risk diversification set by the Central Bank's norms. Those limit to 30% of the bank's net worth the total allocated to a single customer, either as loans or as provision of collateral. The same limit is valid for underwriting operations. To prevent accounting gimmicks, the norms forbid the rolling-over of bad credits. However, as we just explained, the state banks are exempted of abiding by those rules when

they buy the local state or municipal bonds. Therefore, it comes as no surprise that the main problem of the banking sector nowadays is located in the state banks.

Table 1.H below displays the level of commitment of the state banks with their state enterprises and governments. In those years, the state banks committed 2/3 of their assets to finance state enterprises and governments. Therefore, those banks are very exposed to risk by any reasonable measure. The most informed estimates of the overall state banks' adjusted net worth figures are around *minus* US$ 2 billion.

TABLE 1.H

STATE BANKS LOANS TO STATE GOVERNMENTS (Cr$ million)

	1	2	3	4	1/2	3/1	4/1	4/2
Jun-88	2565.5	3745	1443.4	1634	68.5%	56.3%	63.7%	43.6%
Dec-88	9031.5	13224	5771.2	6517	68.3%	63.9%	72.2%	49.3%
Jun-89	23148	37245	14764.2	16728	62.2%	63.8%	72.3%	44.9%
Dec-89	162279	267767	102161	115728	60.6%	63.0%	71.3%	43.2%
Jun-90	1205868	2268484	639853	721582	53.2%	53.1%	59.8%	31.8%
Dec-90	2573922	4459669	1497973	1663328	57.7%	58.2%	64.6%	37.3%

1 = total state banks' loans
2 = total state banks' assets
3 = state banks' loans to state governments
4 = state banks' loans to state enterprises and governments
Source: Andrade(1992)

Without the implementation of an effective regulation on the state banks, any stabilization attempt is doomed to failure. The recent experience showed that those banks can act as mini-central banks, with effective power to fund the state and municipal deficits. We will come back to this subject in the policy recommendations part.

There is no serious problem of bad assets in the private banking system as a whole. Most of the problematic credits in the hands of the private banks, mostly mortgage credits, are originated from subsidies granted by the government, and not from non-performance. The full

value of those credits are guaranteed by the Brazilian government.An educated guess of this government liability hovers around $20 billion.

1.3.3. Deposit Insurance and Monetary Controls

There is no official deposit insurance scheme in Brazil. The Central Bank is obligated, by law, to guarantee all passbooks savings. The practice has been that whenever the Central Bank intervenes and/or liquidates a bank, all sight deposits are also guaranteed. This does not apply to time-deposits, which are paid with the remaining assets after the sight deposits are reimbursed.

As mentioned before, the Central Bank acts daily to provide liquidity for the banks. Several monetary policy regimes have been tried, but a common feature of all of them is that the Central Bank always provides the necessary liquidity for the system. A natural consequence of this kind of behavior is the lack of control of the monetary aggregates.

There has always been much debate about the advantages of creating a deposit insurance scheme in Brazil. The 1988 Brazilian Constitution determines that such scheme shall be created. The CMN Resolution 1524 that created the multiple banks conditions the creation of a multiple bank to the requirement to join the deposit insurance scheme whenever it is created.

The discussion about the convenience of having a deposit insurance scheme is the same as in all other countries. It weights the benefits of providing stability to the financial sector against the moral hazard costs involved.

The idiosyncrasy of the Brazilian case is that the public banks do not want to pay any premium for the deposit insurance, because they believe that by the virtue of being public institutions they cannot go bankrupt. Sure enough, the private banks do not want to have the comparative

disadvantage of paying alone the costs of the deposit insurance fund. Therefore, the creation of a deposit insurance fund in Brazil is still very uncertain.

FIGURE 1

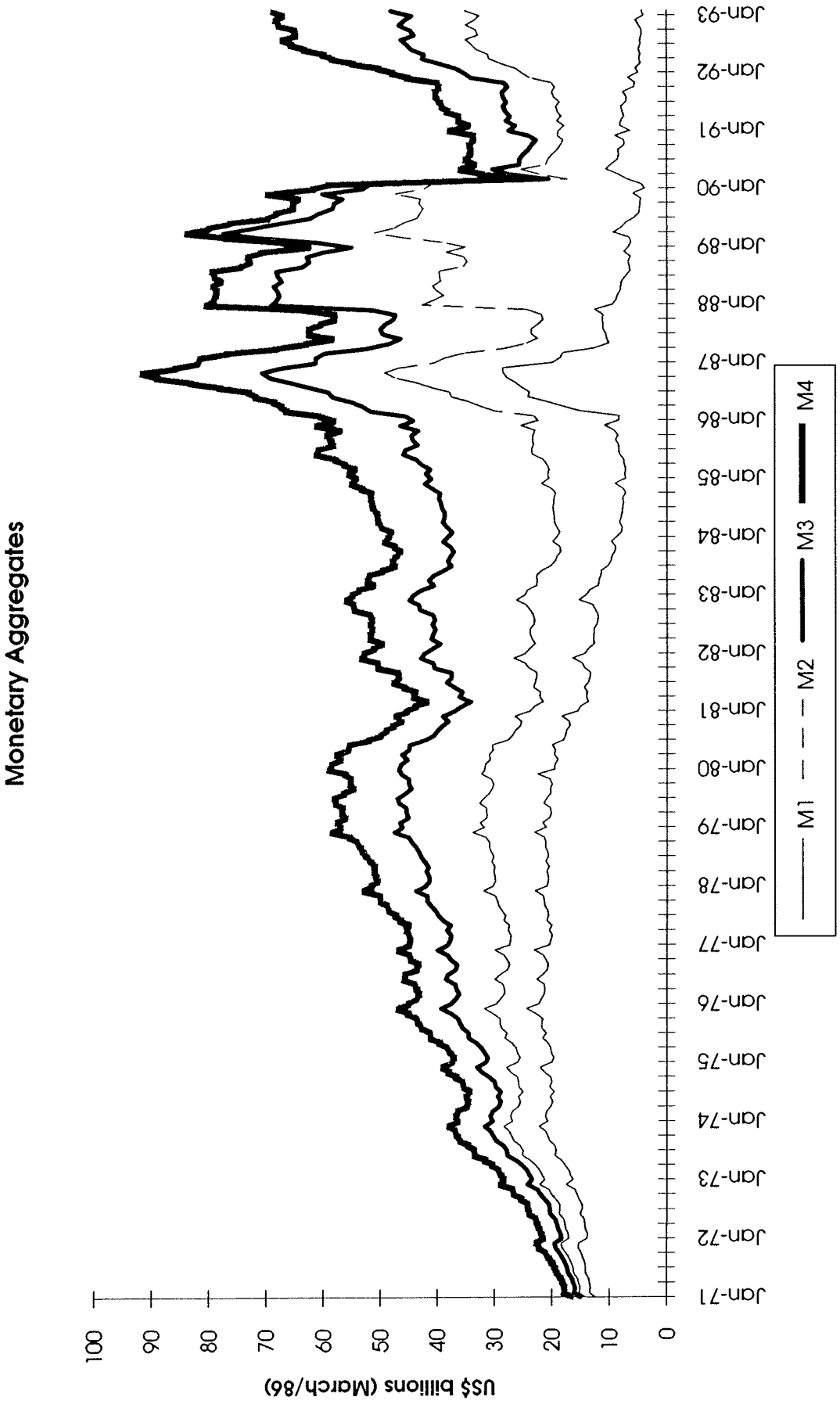

Monetary Aggregates
US$ billions (March/86)
100
90
80
70
60
50
40
30
20
10
0
Jan-71
Jan-72
Jan-73
Jan-74
Jan-75
Jan-76
Jan-77
Jan-78
Jan-79
Jan-80
Jan-81
Jan-82
Jan-83
Jan-84
Jan-85
Jan-86
Jan-87
Jan-88
Jan-89
Jan-90
Jan-91
Jan-92
Jan-93
M1
M2
M3
M4

Figure II

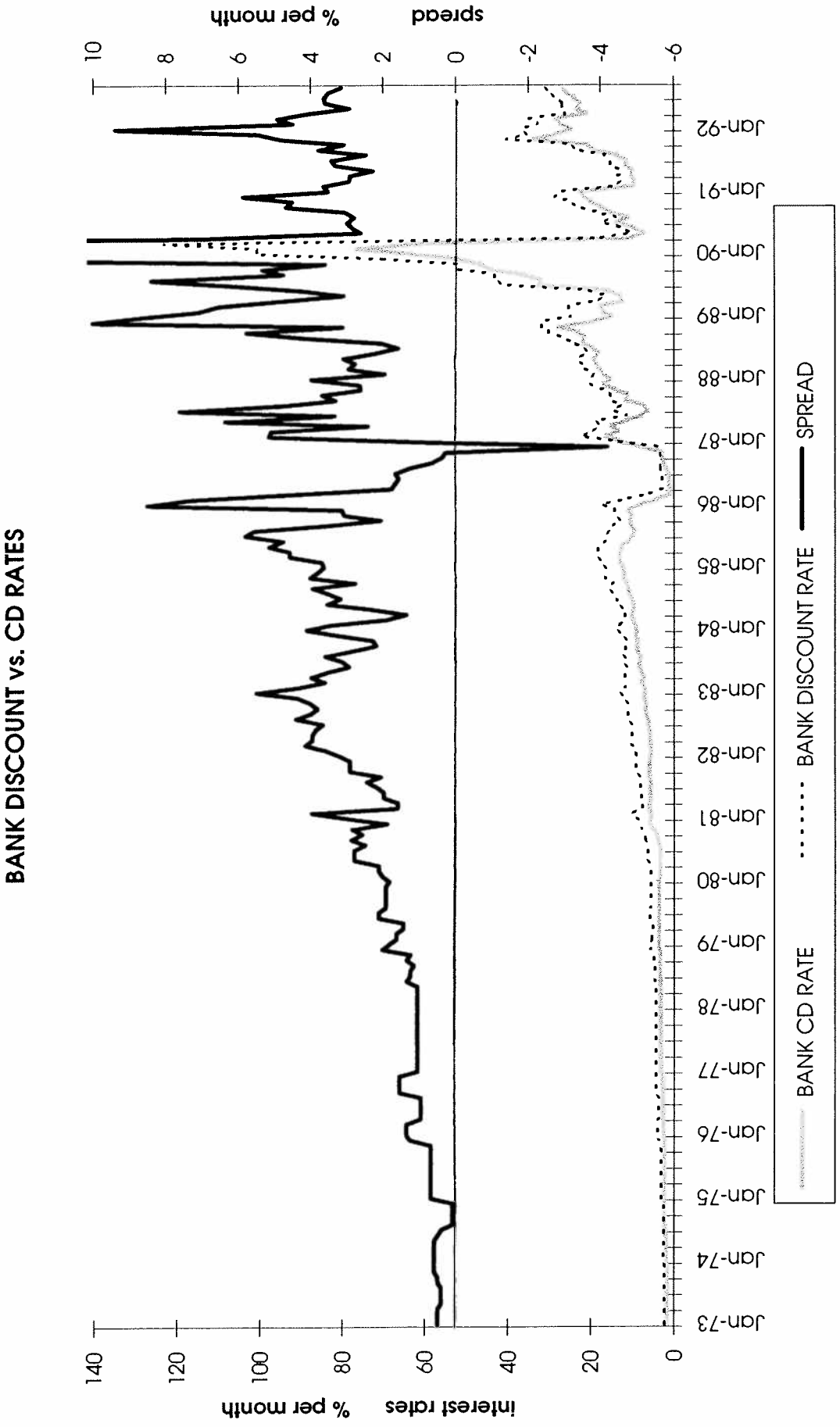
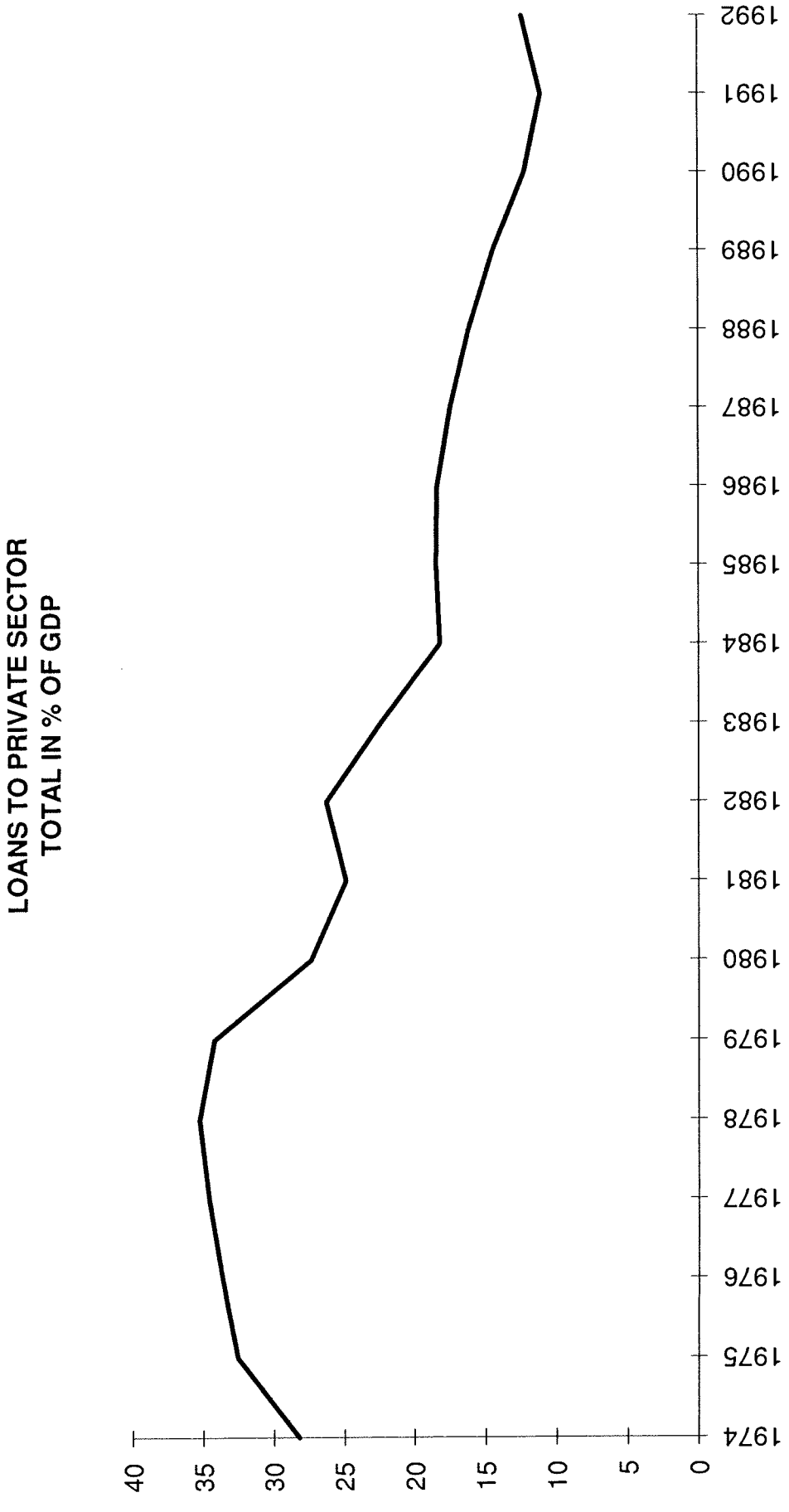

BANK DISCOUNT vs. CD RATES
interest rates % per month
spread % per month
140
120
100
80
60
40
20
0
10
8
6
4
2
0
-2
-4
-6
Jan-73
Jan-74
Jan-75
Jan-76
Jan-77
Jan-78
Jan-79
Jan-80
Jan-81
Jan-82
Jan-83
Jan-84
Jan-85
Jan-86
Jan-87
Jan-88
Jan-89
Jan-90
Jan-91
Jan-92
BANK CD RATE
BANK DISCOUNT RATE
SPREAD

Figure III


LOANS TO PRIVATE SECTOR
TOTAL IN % OF GDP
40
35
30
25
20
15
10
5
0
1974
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992

2. THE FINANCIAL SECTOR AND MACRO FINANCIAL RELATIONS

In the previous chapter it was argued that in several ways one can say that the development of the Brazilian financial system in the past twenty years has paralelled the evolution of the inflationary process in the Brazilian economy. Both early sixties' institutional reforms and more recent trends concerning banking regulations as well as the choice of tools of monetary policy have occurred in a context of policy response to what seemed to be the major forces driving inflation. The rise and fall of institutions, the development of financial instruments as well as the patterns of organization of the financial industry, from the sheer size of banks, number of institutions, their degree of concentration and operational strategies have, on the other hand, been found to respond to the inflationary environment. as well as to the stabilization policies in different opportunities.

In this chapter, the consequences of the present institutional arrangement will be examined with special emphasis in the bearing of frustrated stabilization attempts for the development of the financial system. Finally, some conclusions will be drawn for policy-relevant issues as a new kind of financial repression seems to have been derived from the Brazilian unique experience of high and persistent inflation.

2.1. High Inflation and the Financial System

High inflation is attractive but potentially destructive for financial markets. High and unstable rates make impossible the determination of an interest rate capable to match supply and demand for loans as the risk premium necessary to compensate for future interest rates become prohibitive. The combination of risk aversion with increasing and uncertain inflation has the effect of shortening the time horizon for contracts and thus making some of them irrelevant. The institution of monetary correction in the sixties, at first used to correct the nominal values of tax-related debts to counteract the incentive to postpone tax payments, then as a means to update the nominal values of mortage loans and their main funding, passbook

savings accounts, turned gradually into a panacea as there was a generalized trend to promote the indexation of contracts. This move was, to be sure, instrumental for allowing the functioning of the economy in the context of high inflation. A host of financial innovations, contracts and practices developed around the idea that the "appropriate" indexation rule could do the job of compensating risk avert investors and debtors for the high risks associated with high inflation.

As seen in the previous chapter, the indexation-based system spread in practically all fronts, and led to a fantastic growth of financial intermediation for whatever criterion one chooses (number of institutions and branches, employment in the financial sector), as well as in sophistication of operations in the wake of a wave of financial innovations in the credit as well as in the money markets.

It will be argued below (section 2.1.2) that there is a significant difference between the survival and adaptation of financial intitutions in chronic inflation regime and its role in the transition to what one may call "mega-inflation" a high and unstable inflationary environment in which the potential volatility of the monthly rate leads to the belief that the basic rules of the game may be changed in the context of attempts at stopping high inflation by means of price freezes and other coordination mechanisms.

2.1.1. Public Debt and Money Substitutes

The evolution of the system of recent years occurred in the context of a highly disorganizing inflation as well as no less disorganizing stabilization policies. In this context, the effects of an inflation rate which in twenty years accelerated from 20% per year to more than 20% per month operate profound changes in the financial institutions, as rules and procedures that develope which operate an evolutionary transformation of the financial system in its adaptation to a changing environment.

One major characteristic of this evolution must have become clear from the previous chapter: a partnership developed between the government and the financial system to supply money substitutes thereby preventing the megainflation to degenerate into an open hyperinflation and the consequent flight from domestic assets, as happened in most countries with a similar inflationary experience.

This partnership started with the strategic decision, following the financial reforms of 1964/65 to establish a market for government securities, an attempt of the policy-makers to avoid the need to "resort to inflationary finance", meaning printing "money" to finance government deficit, as stated in the the macroeconomic diagnosis of the PAEG (the 1964 first military government's economic plan).

The Central Bank has been successful, over the years, in its task of supplying money substitutes. At first, it supplied it directly to the "non-financial" public. Then by providing liquidity to assets held as counterparts of private deposits in private institutions. In some cases the latter issued indexed substitutes to demand deposits based on assets of up to 20 years of maturity. There was a growing economic integration, at first between banks and nonbanking financial institutions, then through the "financeirização" (the process of increasing prevalence of financial operations) of non-financial institutions. In the former case, it gradually led to the organization of multiple banks. Integration of different institutions in the same financial group required the growing importance of the so-called "treasury operations", mechanisms for administration of liquidity of the banks' assets. Such activities become more essential to the operation, than the provision of credit in which the screening of creditworthness and the attraction of funding of matching maturities are the main job.

There was a second process of integration between banks and non-banking activities through take-overs of non-financial businesses or by acquisition of partial control through the participation in holding companies set up to diversify the financial groups activities.

In the financial sector, the importance of treasury operations ended up leading to a concentration on the daily trading of public securities of all maturities, which could be used as bank reserves, and therefore were object of frequent transactions among banks and between the banking sector and the Central Bank. Since the Central Bank acted as a dealer of government bonds, the guarantee of liquidity for such securities became an acceptable role in the 1970's since this would contribute to expand the public's demand for public debt. By the same move, banks and non-banking institutions like brokerage houses and "distribuidoras" were interested in the income that could be obtained as brokers and dealers of public securities. The higher the rate of inflation, the higher the spreads and thus the possible gains from arbitrage opportunities.

In the non-financial sector, cash management operations are means to escape or at least minimize the payment of inflation tax. For some institutions -- like supermarkets who were typically cash-generators because they sell cash and have deferred payments as normal business practice -- this fact led the financial activities to become a major source of revenue. With high inflation, a retailer with deferred payments may operate with a **negative nominal profit margin**, provided the nominal interest it receives from short term deposit is sufficient to pay for its current expenditures plus the cost of capital. The intermingling of financial and non-financial activities of non-financial institutions is the essence of this process of "financeirização" of several activities, which became widespread in the Brazilian experience with high inflation.

In macroeconomic terms, what happened is that the phenomenom of currency substitution (see Dorbusch and Giovannini, 1991) which is typical of high inflation experience (Argentina, Bolívia and even in Mexico, with a much smaller inflation rate) was avoided thanks to the successful provision of "domestic substitutes" by the Central Bank with the help of the financial system. But the costs of this experience are yet to be appraised as it is difficult to evaluate the full consequences in terms of economic distortions and inefficiencies generated by

the prevalence of financial activities over practically every activity in the economy, motivated by the high premia involved in the avoidance of the inflation tax.

2.1.2. High Inflation and Mega-inflation

The success obtained in adapting the financial system to work in conditions of high inflation, as seen in the previous section, may have generated important distortions in the working of the economy, most of them related to the way "cash management " activities spread over the non-financial sectors of the economy. The macroeconomic phenomenom is that as the demand for money is reduced by the high inflation and the very success of the provision of efficient money substitutes, the rate of inflation is bound to become more resistant to demand policies -- due to inertia of formal contracts as well as to informal contracts based on backward looking expectations, -- and with tendency of the monthly rate to drift upwards, under the effects of supply shocks. As indexation spreads, this asymmetry of effects (known in the literature as the "Fischer-Gray result") depends, on the other hand on the fulfilment of contracts.

In other words, currency substitution which could lead to open hyperinflation may be avoided, as the Brazilian experience shows, as long as indexation contracts -- the new basis for "anchoring nominal values" become widespread and are respected. Needless to say, minimizing the distortions derived from inflation does not mean eliminating them. Thus a dangerouly high inflation may be observed as the one prevailing in Brazil in the first half of the eighties, as annual rates went from 40% at the end of the seventies to 100% in 1980/82 and to 200% in 1983/85.

The higher the inflation rate the harder (both for political and economic reasons) it is to stick to universal rules concerning indexation. Three reasons may be given for that: (a) financial fragility generated by the fact that small discrepancies in the relative price of some debtors may generate wide inconsistencies between revenues and loan repayment commitments; (b) small differences in relative incomes may be over-amplified by different adjustment regimes

(either the frequency of wage and other income adjustments or the degree of recomposition of previous peaks of real values); (c) since not all debts or credits are corrected on the basis of backward looking measures -- the typical indexation, differences in expected rates may generate wide differences in real values of indexed debts versus discount debts (which tend to diminish but do not disappear, as exemplified by the case of intercompanies trade credit).

The attempts to stop inertial inflation through a break with past rules as happened in the second half of the eighties (see section below) gives rise to another element in the behavior of economic agents which has an important bearing on the working of the financial system: the uncertainty about the rules.

In the case of the Brazilian economy this new regime led to an aggravation in the process of shortening the length of contracts of financial applications, as well as increasing the liquidity premium, charged by wealth-owners to hold domestic assets instead of dollars.

Since in Brazil current transactions have not thus far been dollarized, the demand for Brazilian currency is explained by the high transactions cost of holding dollars. Currency substitution has certainly occurred to some extent, and is specially important when uncertainty as to the maintenance of the rules of the financial markets is higher. Personal holding of foreign exchange as "temporary abode of purchasing power", which in the famous Milton Friedman's phrase defines "money", has never replaced domestic assets, in spite of the dramatic change in indexation rules along the years.

This "mega-inflation" regime has however other important implications, both for the working of the financial system once stabilization is achieved and for the demand for public bonds as will be taken up in Chapter 3.

The higher the risk of changes in rules the higher is the dependence of demand for bonds on repurchase agreements, and this has been recognized as a potential source for further

instability: if the Central Bank issues reserves in exchange for government bonds considering them as perfect substitutes, brokers are encouraged to behave like banks by increasing their leverage and therefore their exposure to default or illiquidity. In the mid-eighties, increased need for inflationary finance may have led the Central Bank to comply with increased leverage of non-banking financial institutions, based on the mid-sixties mandate of creating a market for government debt. Needless to say, when the carrying cost of such institutions is underestimated, there is pressure for Central Bank action to bail out its partners in the public bond market. Conflicts between the role of Central bank as dealer of Federal Bonds and Monetary Authority, as mentioned earlier, have been at the center of the debate over the possibilities of active monetary policy in Brazil. Only in the last two years a serious move has been made to completely separate the Central Bank from the Treasury operations thereby complying with the 1988 Constitution which prohibits the Central Bank to finance the Treasury.

2.1.3. Financial Innovations

The long experience with high inflation has given rise to a very sophisticated financial system in Brazil. The spreading of cash management activities mentioned earlier demands expertise in arbitrage operations, as securities (private and public) have to be traded daily in the open market as well as in exchanges. The possibilities of capital gains attract good analysts and specialized agents with open eyes for arbitrage opportunities, and a keen interest in the latest financial management techniques. As observed by Fanelli (1990) in high inflation regimes, capital gains opportunities tend to dominate rates of return considerations, and this fact is aggravated when inflation is high and with a large variance as the "signal" sent by real rates changes are distorted by the "noise" of inflation variability.

The experience in trading securities in a high inflation environment opens space thus for the spread of sophisticated financial techniques which are one way or another incorporated into the box of tools of managers and analysts and are bound to generate some kind of permanent

financial culture as techniques generated by the speculative activity spillover to other activities. One example is futures trading.

As analysed by Parcias (1990), futures trading were introduced and for a long time confined mainly to agricultural commodities markets (especially coffee and cattle). In 1960, 92% of the contracts referred to grains an cattle and already in 1983 financial contracts corresponded to 38% of the traded contracts. With high inflation the picture changes.

Started in 1986, the BMF (Futures and Commodities Exchange), for example is today ranked as the sixth futures exchange in the world in number of traded contracts (See Tavares, 1992). In the first semester of 1992, the BMF traded an average of 140,000 contracts each day, of which 50% referred to future contracts of interfinancial deposits, which is an instrument of hedge against interest rate variations.

Although the spurt of market for derivatives (options and futures) has been motivated by the high inflation environment, however, their avaliability constitutes a financial innovation in the technical sense that they alter the demand for securities and the way risk is allocated in the economy. The long run implications of such innovations are hard to establish, but in all likelihood they will be useful instruments in a more financially open economy as they permit a wider choice of risk to asset holders and therefore they may contribute to lower the costs of intermediation in a more stable economy.

2.2. The Financial System and Heterodox Stabilization

The difference between the well-understood relationships between high inflation and the financial system and the Brazilian experience of the second half of the eighties is well illustrated by the effects of heterodox stabilization attempts.

The main characteristics of the three Cruzado plans (reviewed in Modiano, 1989) and the two Collor Plans (Carneiro 1990, 1991) from the viewpoint of macro-financial relations and their bearing on the design of stabilization policies, were that all of these programs tried to obtain a drastic deceleration in the rate of inflation and provoked a intervention in private contracts, by means of modifying clauses presiding over the correction of monetary values.

These heterodox experiments, however, were not the only frustrated stabilization attempts to have important effects on the financial system. From 1979 to 1981 the stabilization policies ranged from a cap on interest rates plus a devaluation which resulted in a loss of credibility as well as of US$ 3 billion of foreign reserves to a liberalization of interest with a ceiling on banking credit with domestic funding in a desperate attempt at reverting external flows.

The result of these policies on the financial sector again was to enhance the process of concentration through the merger of a number of institutions. Between 1979 and 1982 the number of broker firms ("corretoras" and "distribuidoras") was reduced from 733 to 689. The jump of the inflation rate to a new plateau after the second oil shock and the change in the wage readjustment law had an important impact on financial activities in Brazil. Banks became more important intermediaries as they absorbed a number of brokerage houses and distribuidoras . The number of bank employees, for example grew from 269.618 in 1979 to 384,966 in 1983, whereas the number of branches increased from 17, 000 to 24,400 in the same period, as inflation went from the 40% to the 200% annual rate, while real per capita income declined by almost 7%. It is important to point out that this expansion of the financial sector was not followed by a significant increase in the amount outstanding loans to the public. Finally, it may be pointed ou that this dramatic increase in banking activities was not caused by the entrance of new institutions into the market but by the expansion of the established ones. While the number of bank's headquarters remained practically unchanged during the 1979-85 period, the number of employees at the largest private domestic bank (Bradesco) between 1981 and 1984 increased by more than 50%. After 1985, however, the heterodox

experiments changed the outlook for the financial industry by making explicit its exposure to changes in the basic rules of the game.

2.2.1. The Cruzado Plans

Financial intermediation was supposed to play an important role in the transmission mechanism of inertial inflation. A sketch of this mechanism would be as follows: generalized indexation made the inertial component the most important element for the determination of inflation, in the sense that a lower bound for the present rate was determined by the past rate to which supply or demand shocks would be added. Whenever a supply shock such as a devaluation or a cropfailure signalled an acceleration of price increases, real liquidity decreased, and rates of interest tended to rise as banks fought for scarce reserves. If the Central Bank refused to accomodate, iliquidity of the marginal firms appeared in the form of higher bids for reserves and thus more pressure for financial assistance was put on the Central Bank. Rescue operations ended up increasing liquidity of the system and thus sanctioned the higher rate.

Because of the long tradition of inflation, financial savings tended to be channelled to short run assets with a continuous process of recontracting of rates. Therefore, a large portion of human and technical resources in the economy, both within the financial system and in the productive sectors alike have been devoted to forecasting inflation and monitoring yields in the financial markets. When on February 1986 the government decided to promote a monetary reform devised to bring inflation to a sudden stop, based on the end of short run indexation, one immediate concern was with what would happen with the financial system. In other words, how hard would be the adjustment of the existing system to low inflation rates.

Immediately after the announcement of the Cruzado plan the government set a zero target for inflation in an effort to erase inflationary expectations from the memory of economic agents. In addition to the possible loss of inflation tax revenue by the banking system, two phenomena

were crucial for the future development of the financial sector at that junction: high uncertainty as to the rules since the programmme meant a discontinuity of policy and was accompanied by news that a major financial reform was being considered by the government; strong shifts on the portfolios with higher demand for money to replace interest bearing near monies. For the financial system as a whole, this meant that the market for banking activities would be shrinking.

This state of affairs was expected to generate: [a] bankruptcies of the marginal firms in the financial sector; [b] redresssing of bank operations including the introduction of fees for banking services that were implictly charged on the holding of idle deposits; [c] major adjustments of surviving firms including decrease in employment and number of branches.

The speed and the costs of the adjustments would depend of course on the kind of monetary policy that would be followed by the Central Bank after March. With lower inflation, a higher stock of money was desired by economic agents but it is hard to say how much higher. In such situations if the Central Bank follows restrictive policy or underestimates the rise in the demand for money, interests rates will rise and banks will loose more both by smaller deposits and by higher costs of bank reserves. Otherwise, if the Central Bank accomodates too much or overestimates the demand for money, there is a risk of pumping excess demand into the system.

An aspect to bear in mind was that the first cruzado was announced as a nonrecessive alternative to end inflation. Although the government could count on full support of the population immediately after the progamme was launched, most of the opposition concentrated on the possible recessive effects of the price freeze. Thus, the government chose to immediately reduce the nominal interest rate with three things in mind: [i] to underline the possibilities of downward corrections of nominal prices in view of declining financial costs; [ii] to reinforce expectations of zero inflation, so that agents could take nominal rates as the probable real rates of interest: [iii] to stimulate economic activity for fear that high uncertainty

brought about by the drastic change of rules might exert a contractionary effect on investment. Therefore, it is easy to understand that the bias of post-cruzado monetary policy would be towards excessive monetization. By the end of 1986, high inflation was back and expectations seemed to be explosive

The second Cruzado shock, better known as plano Bresser after Minister Bresser Pereira, came as a blessing to the banking system which had expanded the credit supply in the wake of the optimistic upsurge of economic activity and rapid decrease in the market for cash-management services following the fall in the rate of inflation. With the return of double digit monthly inflation in early 1987, there was a serious deterioration in the quality of banks assets as hopes for a successful recovery of the level of activity with low inflation dwindled away.

Besides the short-lived freeze, the plan had new conversion table for fixed rate assets thereby introducing a number of exceptions which gave rise to a swarm of of legal disputes as income was transferred from creditors to debtors without the resort to a monetary reform.

The third Cruzado shock, officially called Summer Plan (an inescapable reference to the Argentine Spring Plan which preceded the hyperinflation of early 1989) was announced in January 1989 as expected inflation surpassed the Cagan magic hyperinflationary threshold of 50% per month. A monetary reform with a ban on short run (less than three months) indexation and high post freeze nominal interest rates (of 14.8% in February and 13.1% in March for inflation rates of 3 to 7%) in an attempt to induce the return of fixed interest short run financial operations, while floating indexed operations should be confined to longer contracts. In April 1989, with the return of double digit inflation, short run indexation was back, and once again leaving behind a host of legal actions most of which are still unsettled.

2.2.2. The Collor Plans

The process of repressing hyperinflation would still endure two other plans with serious interventions in financial contracts and indexation rules. The first Collor plan, which began by blocking access of economic agents to around 10% of GDP of their financial assets (thereby reducing M4 from 15.7% of GDP in March 13 to 5.2% in March 19 when financial markets opened) was the most serious intervention in private contracts ever made in Brazil. Once again, the exceptions to the rule of access to liquid assets determined the early return of liquidity, and, possibly -- together with the inability of the government to administer the interesting indexation law it managed to approve in Congress -- also the return of high inflation rates. (see Carneiro, 1990 for details).

The experiment with active monetary policy of the second semester of 1990 put an end to the automatic purchases of Federal bonds by the Central Bank. Indexed bonds which had prevailed as the main instrument of government finance in the years since the first Cruzado, were replaced by the traditional Treasury Bills (LTN's), sold at a discount which somehow gave back to the Central Bank some control over the money supply. Interest rates variability increased as banks had to finance their occasional shortage of reserves among each other before the high short run rate stimulated them to go for Central Bank finance. The experiment came to a sudden end when, in December 1990, it became clear that there was no political power to let some highly indebted state banks go under.

The second Collor Plan, in February 1991, changed radically the indexation rules prohibiting short run backward looking indexation and introducing a forward looking referential rate of interest (TR) determined each month by the Central Bank on the basis of the cost of 30-day CD rate. This rule permits more flexibility to the Central Bank to vary the short run interest rates without the inconveniences of opening wide discrepancies among similar assets like the passbook savings and 30-day deposits. The new legislation also introduced the so-called

FAF's, or (Financial Applications Fund) managed by banks which could be final holders of public bonds.[8] Their quotas replaced overnight indexed accounts for individuals, which were prohibited. A number of alternative short run financial assets were allowed to be issued, with great flexibility for specialized closed funds.

The recomposition of liquidity after the restoration of the short run liquidity took place required a very conservative monetary policy with record-high interest rates but otherwise the restoration of basic confidence in the domestic assets has been achieved with a surprising success, in the middle of a most severe political crisis which led to the impeachment of the President. The door, however had been open by Collor plan to a different kind of risk, which is the nightmare of financial asset-holders every time there is talk of "financial reform"in the daily papers.

The degree of financial liberalization achieved following the second Collor plan is the highest in the Brazilian financial history. Interest rates are still very high as the government keeps talking about the need of a new stabilization plan. Financial reform is always among the policy measures which are supposed to accompany the next stabilization program, as discussed in Chapter 3 below.

2.3. Post Stabilization

The outcome of the Brazilian mega-inflationary experience is yet hard to determine, since it may depend, in a crucial way on the nature of stabilization policies which are enacted. Needless to say, some kind of open hyperinflation which results from a flight from domestic assets cannot be ruled out as a possible scenario. In this case, the end of a private banking system may be the outcome, since default of public debt would probably contaminate private assets and thus bring about a run on Funds quotas which would have the effect of undermining

[8]They hold today an estimated 20 to 30% of the federal bonds outstanding.

the public's confidence in private banks. Proposals for dollarization of financial assets are based on the belief that this lack of confidence might be circumscribed to assets denominated in cruzeiros, as it may well be the case. Similar reasoning is behind the proposals of dollar-denominated public debt linked to a collateral based on the Central Banks reserves, possibly under custody of a "neutral "agency.

The fact of the matter is that all proposals have in common the belief that the present private core of the financial system is likely to survive a process of flight from domestic assets if only the government allows "financial dollarization". It is legitimate, therefore, to speculate on what features could be expected from the Brazilian financial system post-stabilization.

The first observation is, of course that from the supply side of financial intermediation, the financial system is today much stronger as a potential credit supplier than it has ever been, for reasons already touched upon in section 2.1 above, related to the technical expertise in financial analysis, risk evaluation and the pattern of technical financial innovations which are today part and parcel of the daily financial business. A decrease in treasury and brokerage activities would certainly be in order but conversion to the tasks necessary to expand loans is not likely to be hard to accomplish.

On the demand side, as can be seen in the statistical annex, there has been an extraordinary shrinking of credit as a proportion of GDP, from around 35% of GDP in the midseventies to less than 12% in the nineties. This has led to a situation where a virtually credit-less economy, in many ways similar to what Mackinnon called a financially repressed economy is operating now, as the official financial system cannot perform its regular task of supplying loans to the private sector.

An important part of this decrease in total debt of the private sector refers to families' debt (see table in the Annex) as consumer credit has to be supplemented by informal credit activities such as the financing based on pre-signed checks which are discounted by retailers in

non-banking institutions. Factoring activities based on the work of independent agents are also similar to curb market activities of the financially repressed traditional economies. The reasons behind the present financial repression are now the effects of a long period of adaptation of the Brazilian financial system to high inflation.

As will be seen in the next chapter, there seems to be ample room for credit-led growth based on consumer's credit, personal, mortgage, as well as firms which in a more stable environment will be eager to take medium and long run loans.

3. Policy and Reform Proposals

As part of broader economic reforms and the stabilization effort itself, the Brazilian financial system is bound to be changed in may aspects in the coming years. The 1988 Constitution established very broad guidelines for the regulation of the financial sector. For those guidelines to become operational, they still need to be regulated by complementary legislation, which is currently being discussed by the Congress. On the other hand, the Constitution itself will probably be extensively amended in the near future. This section looks into some of the policy issues involved in the discussion of the pathways to financial reform in the country.

As seen in the previous chapters, the recent evolution of the financial system was extensively influenced by the behavior of inflation and by the whims of a row of anti-inflationary shocks. It was also distorted, particularly since the mid eighties, by the strain of public sector financing, which reduced the importance of the more traditional roles of financial institutions and made them more vulnerable to a domestic public debt default, as was partly imposed in March 1990.

The required reform of the financial sector has to be based on two needs. Enhancing the possibilities of the stabilization policy and -- looking beyond stabilization -- strengthening the financial sector that will emerge from the ongoing crisis. The two first sections below discuss reforms that are mainly, though not entirely, inspired by the first of those needs: giving more

independence to the Central Bank and reconstructing the state-owned financial institutions. The third section speculates about the shape of the financial sector that will emerge from a successful stabilization effort and the policies that could strengthen it and foster its development.

3.1 Towards a More Independent Central Bank

Recently, there has been an extensive debate in Brazil concerning the desirable degree of independence of the Central Bank, inspired by a critical view of the consequences of the present institutional arrangements for the efficiency of stabilization policies.

The well known argument in favor of an independent central bank has been neatly stated by Cukierman [1992, p. 350] as follows:

> "The conveyance of authority to the Central Bank by political authorities can be viewed as an act of partial commitment. By delegating some of their authority to a relatively apolitical institution, politicians accept certain restrictions on their future freedom of action. The main motive for such delegation is usually the preservation of price stability. This objective competes with a number of other objectives such as high economic activity, financing of the budget, [etc.]. By delegating some of their authority to the Central Bank, political authorities try to reduce the set of circumstances under which price stability is sacrificed in order to achieve other objectives. The higher the independence of the Central Bank, the stronger will be the commitment".

Recent research efforts have produced interesting comparative studies on how the degree of independence of the Central Bank varies across countries. In some of those studies, an index that could establish a measure of the degree of independence of the monetary authorities was constructed. The simplest of those indices is based on the aggregation of various proxies for the degree of independence which is conferred to the Central Bank by law in each country. According to the overall legal independence index produced by Cukierman [1992] -- which varies from zero (minimum independence) to one (maximum independence) -- Switzerland with .68 would have the most (formally) independent central bank, closely followed by West Germany with .66. In this same scale the Brazilian central bank would reach .26. But it is

certainly curious to notice that, although Japan with .16 was classified as having one of the 6 less independent central banks in a sample of 68 countries, it could display the lowest yearly geometric average inflation rate during the eighties of the whole sample (3%) along with Switzerland and West Germany, in contrast to a 230% rate of Brazil.[9] Table 3.1 below allows a comparison of the various indicators of legal independence -- which are aggregated into the overall legal independence index -- for West Germany and Brazil.

The list of variables of table 3.1 and the low marks attributed to the Brazilian legislation on some of them helps to identify the pathways for a reform designed to give more independence to the Central bank. In fact, since 1992 Congress has been discussing, within a broader reform of the financial system, how to grant more independence to the Central Bank. An already long experience of annual three-digit inflation has led to widespread belief in Brazil that granting independence to the Central Bank could be the sole required step towards a successful stabilization policy. And the discussion on how independence should be granted has given perhaps to much emphasis to the first four dimensions listed in table 3.1, concerning the hiring and dismissal of the directory of the Bank. However, even firm defenders of the independence of the Central Bank recognize that such independence" is more effective as a preventive than as a remedial device". And that "when inflation reaches hyperinflationary dimensions, the granting of formal independence to the Central Bank without complementary measures is usually not sufficient for the restoration of price stability". At the brink of hyperinflation stabilization policy requires "active participation of the central government as well as of other institutions and the simultaneous deployment of policy measures from several areas".[10]

---

[9] France with a .28 in the same scale is another major "anomalous" case, but as noticed in Swinburne and Castelo-Branco [1992], one could argue that the French monetary policy is largely disciplined by the EMS arrangements.

[10] Cukierman [1992], p. 449. The same author also recalls a well known historical lesson on the misuse of central bank independence. "A dramatic illustration is the privatization of the Reichsbank during the post-World War I German hyperinflation. In May 1922, at the insistence of the Allies, the president of the Reichsbank was made accountable to an independent board of directors rather than to the German chancellor. The hope was that this institutional change would decrease the discounting of government bills at the Central Bank. Instead the Central Bank continued to discount government bills at a high pace and, in addition, started to discount bills of private industrialists and bankers who, after the change, had better representation on the board of the Reichsbank. Rather than use its newly acquired independence for stabilizing monetary growth, the new board continued to accomodate the budgetary deficit while simultaneously allowing particular groups to get a share of revenues from seignorage."(p. 449)

Table 3.1
Indicators of Legal Independence of the Central Bank during the 1980's

Definition of variable	West Germany	Brazil
Term of office of CEO	1.00	0.00
Who appoints the CEO?	1.00	0.50
Provision for dismissal of the CEO	1.00	0.00
Is the CEO allowed to hold another office?	0.00	0.00
Who formulates monetary policy?	0.67	0.33
Government directives and resolution of conflict	1.00	n.a.
Is the central bank given an active role in the formulation of government's budget?	0.00	0.00
Central Bank objectives	1.00	0.00
Limitations on advances	0.67	0.67
Limitations on securitized lending	0.67	0.00
Who decides control of terms of lending?	0.67	0.00
How wide is the circle of potential borrowers from the central bank?	0.33	1.00
Type of limit when such limit exists	1.00	n.a.
Maturity of loans	1.00	0.00
Restrictions on interest rates	0.25	0.25
Prohibition on lending in primary markets	0.00	0.00
Overall legal independence (1)	.66	.26
n.a.: non available (1) ranges from zero (minimum independence) to 1.00. Source: Data from Cukierman [1992].		

Congressional debate on the extent of the independence to be granted to the Central Bank has led to two rival proposals, both formulated by Congressmen.[11] The first one, the Maia proposal[12], would involve bolder changes. The Central Bank would be run by an executive directory of five members, supervised by a counseling board of eleven members, four of them belonging to the directory. The members of both bodies would be chosen by the President and submitted to the Senate for a term of six years on a staggered basis. Dismissals would have to be approved by a 60% majority of the Senate.

The other proposal, known as the Serra proposal,[13] was inspired by the fear that the degree of independence of the Central Bank defended in the Maia proposal could lead to difficult conflicts in the steering of a consistent macroeconomic policy. Accordingly, the Serra proposal envisages the creation of a Financial Policy Board, comprising four members of the Administration (the minister of the Economy, the National Secretary of Finance, the chairman of the Security and Exchange Commission, the chairman of the Insurance Companies Overseeing Board) and four members of directory of the Central Bank.[14] That board would "formulate the monetary, credit and exchange rate policies".

It is highly probable that Congress will approve in the near future a reform granting more independence to the Central Bank. But it is certainly hard to believe that such a reform is all that is needed to take the Brazilian economy out of mega-inflation. Before the country develops ingrained social preferences for low inflation and the prevailing propensity to accommodate conflicting claims through the fiscal budget disappears, a more independent Central Bank alone will not be able to lead a successful stabilization effort. There are grounds to believe that only when such ingrained social preferences for low inflation are developed will the Central Bank be truly, besides legally, independent.[15]

---

[11] See Rigolon [1992] for a detailed discussion of both proposals.See also Dias, Afonso, Patury and Parente [1992].
[12] After Deputy Cesar Maia from Rio de Janeiro.
[13] After Deputy José Serra from São Paulo.
[14] As the Ministry of Economy was split again in the two ministries in October 1992, the proposed composition of that board would have to be changed accordingly.
[15] See Swinburne and Castelo-Branco [1992] on this point.

But in the short run, an independent Central Bank may be a fundamental step to finally allow the monetary authorities to give a proper treatment to long delayed problems stemming from the operation of public financial institutions, as will be seen in the next section.

3.2 Reforming Public Financial Institutions

Public financial institutions have traditionally played a fundamental role in the process of savings allocation in Brazil. But in recent years, a good deal of the criticism on the working of the financial markets in Brazil has concentrated on important segments of the public banks: compulsory savings allocated through administrative rather than market oriented criteria, political misuse of workers' pension funds and federal and state governments' abuse of public commercial banks are some of the issues.

The behavior of commercial banks owned by states has been one of the main factors hampering a successful stabilization policy, as state governments, borrowing excessively from their own banks, have managed to operate under a soft budget constraint. What happened in 1990 well illustrates some of the involved difficulties. The central government efforts of fiscal austerity were partly offset by state and local governments overspending, motivated by a fierce electoral dispute at state level. And this also had an impact on the steering of monetary policy, since part of the higher borrowing requirements of state and local governments was financed by the states' banks, which ended up being bailed out by the Central Bank, under the political pressures of governors.

From mid-1991 to mid-1992 the Central Bank managed to obtain enough political backing to keep a reasonable control over states's banks. But with the political crisis that led to the impeachment of Collor in late September 1992, the Central Bank faced increasing difficulty to go ahead with that control. Those difficulties seem to continue under the Itamar Franco

Administration, as it tries to get political support from state governors.[16] The most problematic banks are those owned by the economically largest, and therefore, most powerful states, whose governors are a potential threat to the Administration, particularly due to their strong direct influence on the their states' federal deputies and senators.

Most states' banks are clearly over-staffed and have a substantial part of their assets which is non-performing. Usually such situation is the result of excessive loans to either the state government itself or its public enterprises and agencies. Though there is a legal ban on financial institutions making loans to their own controlling shareholders, that impediment is clearly overlooked in the case of states' banks. Another part of their assets, often also largely non-performing, are loans made under strong political considerations to privileged private borrowers.[17]

As mentioned above, control over states' banks is a policy area for which a more independent Central Bank could make an immediate crucial difference. Probably the political baking from the President could still be needed in face of a serious conflict between the monetary authorities and the states. The obvious example being the decision to let one of the banks of the largest sates go under or put it under the intervention of the Central Bank. But even so, an independent Central Bank could tip the scale in favor of the monetary authorities in such a way as to change the behavior of states's banks to the point of turning that kind of measure unnecessary. Hopefully dissuasion rather than punishment could prevail under a more independent central bank, contributing to a more credible monetary policy.

Federal financial institutions often reproduce at the national level the behavior of states's banks. They operate under strong pressures from state governors, mayors and private lobbies, and typically constitute the most difficult area the Finance minister has to control. Directors

---

[16] The difficulties imposed on stabilization policy by states and local governments are analyzed in Werneck [1992].

[17] Werlang and Fraga [1992] atribute the bad allocation of funds in states's banks to the high turnover of politically chosen directors.For more a detailed analysis of states's banks one should turn to Andrade [1992].

are often chosen by the President of the Republic himself, what makes them feel quite strong to resist directives from the Finance minister. Direct indication of directors by governors and other influential politicians is a common procedure. The performance of those institutions is also affected by over-staffing. Pay levels are usually above the market average. Non-performing assets are very important, particularly in *Caixa Econômica Federal*, as a large part of its loans was made to state and local governments and its agencies.

Also in the case of federal financial institutions, a more independent Central Bank could certainly help to bring them under control. A more structural solution could involve privatization, an idea which is bound to lead to a fierce opposition from the well organized employees unions and the strong network of public financial institutions' executives who have become Congressmen. Starting by the less problematic commercial banks, the federal government could lead the way for similar efforts at the states level.

3.3 After Inflation: Reconstruction of the Financial System

The decade long crisis of the Brazilian economy and the unsolved chronic high inflation problem should not prevent one from looking beyond the crisis and trying to see what kind of financial system will emerge from a successful stabilization program, and identifying the policies that could strengthen its development.[18]

Of course, much will depend on the shape of the stabilization program itself. A major watershed will be established by how the program will tackle the domestic public debt problem. Though the domestic debt corresponds to only slightly more than 10% of the GDP, as seen in the previous chapter, debt service represented a sizable part of the public budget in 1992, as the risk of default -- particularly since the Collor Plan I in March 1990 -- has led to a very high risk premium in interest rates.[19] On the other hand, when public debt is perceived as

[18] A discussion along these lines has already been conducted by Bodin de Moraes [1993].
[19] According to preliminary estimates, the public sector primary surplus reached 1.9% of GDP in 1992, leading to a 2.3% of GDP operational deficit, after interests on public debt are taken into consireration. Out of

exceptionally risky, the very short run structure of the debt leaves the economy exposed to a sudden loss of confidence in public bonds, that could mean the first step towards open hyperinflation, as investors would briskly try to convert their bond holdings into foreign currency or real assets.[20]

That possibility has drawn a great deal of attention in the Brazilian economic debate to possible ways to "solve" the domestic debt problem in order to enhance the possibilities of a stabilization program.[21] Of course, public bond holders rightly see this public discussion on the domestic public debt as an indication of an increasing risk of default, and that forces interest rates up heating up the discussion on the possible solution to the debt problem.[22] Naturally, the perverse effects of this vicious circle may be amplified when the Administration seems to have some sympathy with this kind of "solution" and fails to be convincingly emphatic about its firm decision to avoid a new domestic debt default. A specially feared default is the mandatory conversion of very short term liquid bonds into much less liquid long term ones. However, it seems that this kind of conversion could be perfectly avoidable if government's creditworthiness were restored through a consistent stabilization plan, which would naturally increase the demand for longer bonds, thereby leading to a longer term structure of the public debt. The difficulties of the present debate stem from a chicken-egg problem. What should come first? Should credible stabilization precede or follow a longer debt structure?

A default would deeply affect not only government's access to the loans market but also the financial system that will emerge from the crisis. On one hand, there is no room for a "surgical" operation that could restrict and control the effects of the default, as illustrated by

---

the 4.2% of GDP paid as interests, 1.2% od GDP corresponds to interests on the foreign public-sector debt and the remaining 3.0% of GDP to interests on the public-sector domestic debt.

[20] The decision to block for 18 months a large part of financial assets in March 1990 in the first day of the Collor Administration has been inspired by the fear of the difficulties that would be imposed by this sudden change in the composition of portfolios caused by the high uncertainty on what the new authorities would do about the domestic public debt. See Carneiro and Goldfajn [1990] and Werneck [1991a].

[21] See, for example, Giambiaggi and Zini [1992].

[22] Marques and Werlang [1988] and [1989].

the Collor I experiment. It is true that approximately 20% of the public debt is being financed by short run funds -- *FAFs, fundos de aplicação financeira* -- in which the risk is borne by the investors and not by the managing financial institution.[23] But the possibility of combining inflation sheltering with a high degree of liquidity has drawn to public bonds a sizable part the economy's financial wealth, including a substantial fraction of the working capital of corporations. Banks have also financed a part of the domestic debt through certificate of deposits and even passbooks. A public debt default could therefore lead to chain reaction of bankruptcies that could profoundly change the present face of the financial system.

On the other hand, as was seen above, over the eighties public debt financing has become perhaps the major role of the Brazilian financial system, and if that role were suddenly wiped out by a default, the system that would survive would be quite different from that which would emerge from a stabilization program which would not resort to a domestic debt default, since the debt would still be financed in the stabilized economy. Including a domestic public debt default as part of the stabilization program could mean to give up issuing of new debt for a number of years. As it is well known, it is the fear of not having access debt financing in the future that keeps governments away from default.

It should be noticed that most of the discussion on the domestic public debt has centered on the stock of outstanding federal bonds. However, there are many other forms of public sector liabilities that may end up being only partially paid back.-- The most notorious being the FCVS, a government liability owed to financing institutions, which resulted from compensations for past subsidies to home mortgage contracts[24] The other one involves the FGTS -- the retirement fund described in chapter 1-- a large part of which was used to finance state and municipalities through long term loans which have generally been non-performing.[25]

---

[23] The 20% share includes DER, indexed deposits which resulted from the unblocking of cruzado deposits..
[24] Estimates of the magnitude of FCVS range from US$ 20 to US$ 30 billion, what means from 5 to 7% of the GDP.
[25] The latest available estimate, referring to April 1992, the value of FGTS amounted to US$ 24 billion, approximately 6% of GDP.

Of course, the extent of the default on those other forms of public sector debt may also affect the financial system in a very substantial way.

But even without a default, intermediation of public debt is bound to loose importance after stabilization to other more traditional roles of the financial system, since cash management activities are bound to become less profitable. That means that stabilization could bring in its wake the reconstruction of private credit operations which have been dwarfed by high inflation and the fiscal crisis of the state. As already mentioned above, there seems to exist much room for credit-led economic growth after stabilization. In a less uncertain environment, demand for consumers' credit -- both for personal and mortgage loans -- is bound to have a sharp increase and firms will certainly have a much higher propensity to take medium and long run loans. As sources of funds, insurance companies and pension funds seem to be the candidates to replace the compulsory sources of savings of the high inflation tradition

But stabilization will also bring the need to dismantle the enormous inflation-tax collecting structure that was built up over the long high inflation period. Previews of this kind of adjustment were provided by earlier short experiences of rapidly falling inflation -- particularly in 1986, after the Cruzado Plan -- during which the financial sector showed an amazing capacity to adapt to the changing environment, rapidly closing down hundreds of branches and carrying on mass dismissals.[26] In fact, that has served as a warning to many financial groups. When inflation re accelerated, actually reaching rates much higher than those observed before the Cruzado Plan, those groups did not rebuild their inflation-tax collecting structures as they used to be. Not all branches were re-opened neither all clerks re-hired. Resort to computerized technology gained speed in order to offer to the public new ways to combine protection against inflation with a high degree of liquidity. Also, service charges, which were introduced during the Cruzado Plan period, were not eliminated afterwards.

[26] See Carneiro and Bodin de Moraes [1988].

Yet, a new round of adjustment will be required if annual inflation is reduced to a two-digit rate. Some the large government-owned commercial banks may find it hard to adapt to the changing circumstances. It has been estimated that no more than 5 or 6 of the largest banks will be able to maintain big national networks of branches. But even so those networks would be much smaller than the present ones, since it is estimated that the role of approximately three fourths of the branches is basically to receive deposits.[27] The mid-sized banks will probably be under great strain and will have to cutback costs and find new opportunities. This segment would probably resort to merging and acquisitions to face the new environment. Many small banks, which have proliferated since the 1989 de-regulation, most of them well capitalized institutions, may be closed down without much difficulty or turn to investment banking. Small and mid-sized banks may exploit some market niches which the large ones will probably find very hard to occupy.[28]

All that suggests a simple political economy consideration. It is not only the stabilization program that will affect the shape of the financial system. There may be possible effects in the opposing direction. Concern of policy makers with the possible impact of stabilization on the financial sector is bound to affect both the direction and the pace of the stabilization program itself. In the design of the stabilization program, much weight will probably be attributed to avoid putting too much strain on the financial sector and imposing on it an exceedingly fast adjustment requirement. Smooth or abrupt adjustments could make much difference.

Less segmented financial markets would make the adjustment somewhat less difficult. Even though the degree of segmentation is certainly much more limited today than the mentors of the mid-sixties reform had envisaged, financial markets remain highly segmented in the Brazilian economy. And in most cases segmentation results from unnecessary regulation which simply hinder a more efficient allocation of funds by the financial system.

---

[27] See Barros, Pinotti and Barros [1991].

[28] Elaborate financial engeneering and specialized credit operations, for example, have typically proved to be difficult to carry on within a large multiple bank.

Another issue to be considered is what will happen to the market share of foreign banks after stabilization. It has been argued that only those which already have an established network of branches would remain in the market, their competitive edge being assured by the better access to foreign financing. The others would either leave the country or simply maintain a local office.[29] However, other more probable, possibilities are not hard to visualize. Successful renegotiation of the foreign debt and trade liberalization will certainly attract foreign banks to Brazil, particularly in a growth resumption scenario. Much will depend on the evolution of the regulatory constraints on the operation of foreign banks and the de-regulation of external financial flows.[30]

Deregulating external financial flows constitutes an issue which has deserved increasing attention in Brazil. Most of the debate today concerns much more the timing and rhythm of the deregulation than the essence of the idea itself, which commands a surprising consensus, given the long tradition of capital flows control in the country.[31] The main issues here, which are related to the risks and benefits of liberalizing those flows before successful stabilization has been attained, should be properly examined.

A sizable inflow of foreign capital has been observed in 1991 and especially in 1992. That inflow has been largely explainable so far by direct or indirect repatriation of funds owned by Brazilian investors abroad, caused by the combination of very low international interest rates and extremely high real domestic interest rates, imposed by restrictive monetary policy.[32] But in the near future, after foreign debt renegotiation leads to the re-establishment of normal relations with international financial markets, that inflow may become even more important. Coping with the direct effects of foreign capital inflows on the financial sector, as well as the indirect effects through the strains imposed to the steering of monetary policy, constitutes a relatively new challenge for economic policy in the country.

---

[29] See Barros, Pinotti and Barros [1991].
[30] Bodin de Moraes [1990]
[31] Capital flows controls were imposed in 1930 and were not deactivated for the last six decades. See Abreu [1990].
[32] See Calvo, Leiderman and Reinhart [1992].

Finally, another inspiration for financial reform is the establishment of a long term capital market, an objective which has been in the country's long term policy agenda for decades. The very modest results that were obtained in the past have been mostly wiped out by the effects of high inflation. It constitutes an open question how long it will take for the very short run capital markets to develop into normal ones, even after a successful stabilization experience, particularly if two-digit annual inflation rates persist.

Some difficulties in the way to the construction of a long term capital market in the Brazilian economy have been identified by analysis conducted by Carneiro and Bodin de Moraes [1988] and Carneiro and Werneck [1992]. The enthusiasm with the possibility of fostering the emergence of such a market, which partly inspired the mid-sixties reform[33], has disappeared in face of rampant inflation. It is widely accepted that very little can be accomplished as to the establishment of a vigorous long term capital market as an important channel to transform popular savings into private investment, before a serious stabilization effort manages to stop high inflation. Even when indexed loans are available, high inflation is bound to turn them excessively risky.[34] The discussion of this issue have therefore to be based on the assumption of a post-stabilization scenario.

Even if one is very optimistic about this, it will probably take a long period before the state can step out of its historical role as a major supplier of long term finance for private investment. The National Economic and Social Development Bank (BNDES) is one of the few public financial institutions in Latin America which has a commendable past, having been reasonably sheltered from political abuse by a stable and professional staff.[35] But there seems be room to foster the private leg of a long term capital market. One possibility would be to allow the

---

[33] See Behrens (1978).

[34] See Dreizzen [1985] on this point.

[35] An important exception was the policy followed in the mid-seventies, when BNDES was forced by the government to establish a cap of 20% yearly on the indexation of its long term loans. That led to enormous subisidies to the industrial sector as inflation accelerated to more than 200% in the early eighties. See Najberg [1989].

BNDES to co-finance long term loans, providing liquidity to private financial institutions when loans had to be re-financed in face of rising interest rates. That arrangement would reduce the risk of engaging in long term financing and could induce long term loans well above what BNDES would be able to support alone. It would also decrease the importance of administrative allocations in long run financing, since investment projects would also be evaluated by private institutions.[36]

[36] For a fuller discussion of that proposal, see Carneiro [1992].

REFERENCES

Abreu, M. de P. (ed.) [1989]. **A Ordem do Progresso: Cem Anos de Política Econômica Republicana, 1889-1989**. Rio de Janeiro: Campus.

Andrade, E. [1992]. "Os Bancos Estaduais no Brasil: Do Final dos Sessenta à Crise dos Anos Oitenta", M. A. Dissertation, Departamento de Economia, PUC-Rio.

Behrens, Alfredo [1978]. "O Papel dos Bancos de Investimento como Instituições de Crédito a Longo Prazo", **Revista Brasileira de Mercado de Capitais**, vol. 4, No. 10, Jan/Apr.

Barros, J. R. M., M. C. Pinotti and M. C. Barros [1991]. "O Mercado Financeiro em um Cenário de Estabilização", MBE Associados, São Paulo.

Bodin de Moraes, P. [1986]. "Essays on Stabilization Policies", PhD Dissertation, Massachusetts Institute of Technology, Cambridge, Mass..

Bodin de Moraes, P. [1990]. "Foreign Banks in the Brazilian Economy in the Eighties", Texto para Discussão N. 241, Departamento de Economia, PUC-Rio.

Bodin de Moraes, P. [1993]. "Financial Sector in a Highly Inflationary Economy: How to Finace Growth after Stabilization?", Departamento de Economia, PUC-Rio, mimeo.

Bresciani-Turroni, C. [1937].**The Economics of Inflation. A Study in Currency Depreciation in Post-War Germany**, George Allen & Unwin Ltd., London.

Calvo, G. A., L. Leiderman and C. M. Reinhart [1992]. "Capital Inflows and Real Exchange Rate Appreciation in Latin America: The Role of External Factors", IMF Working Paper, Research Department, August.

Carneiro, D. D. [1992]. "O Mercado de Capitais de Longo Prazo e o Papel do BNDES". Departamento de Economia, PUC-Rio, dezembro, mimeo..

Carneiro, D. D. and P. Bodin de Moraes [1988]. "La Inflación y la Evolución del Sistema Financiero Brasileño", in C. Massad and R. Zahler (eds.). **Deuda Interna y Estabilidad Financiera**, Grupo Editor Latinoamericano, Buenos Aires.

Carneiro, D. D. and I. Goldfajn [1990]. "Reforma Monetária: Prós e Contras do Mercado Secundário", in C. Faro (ed.). **Plano Collor: Avaliações e Perspectivas**. Rio de Janeiro: LTC - Livros Técnicos e Científicos.

Carneiro, D. D. and R. L. F. Werneck [1992]. "Public Savings and Private Investment: Requirements for Growth Resumption in the Brazilian Economy", Texto para Discussão n. 283, Departamento de Economia, PUC-Rio, June.

Cukierman, A. [1992]. **Central Bank Strategy, Credibility, and Independence: Theory and Evidence**. Cambridge, Mass.: The MIT Press.

Cukierman, A., S. B. Webb and B. Neyapati [1992]. "Measuring the Independence of Central Banks and Its Effects on Policy Outcomes", **The World Bank Economic Review**, Vol. 6, N. 3, September.

Dias, G., J. R. R. Afonso, L. C. R. Patury and P. P. Parente [1992]. "A Lei Complementar do Sistema Financeiro Nacional: Subsídios e Sugestões para a sua Elaboração", **Cadernos de Economia**, N. 07, Programa Nacional de Pesquisa Econômica, Brasília.

Dreizzen, J. [1985]. **O Conceito de Fragilidade Financeira num Contexto Inflacionário**, BNDES: Rio de Janeiro.

Fonseca, D. S. [1992]. "Rentabilidade dos Bancos Comerciais: Um Exercício de Decomposição", Monografia de Graduação, Departamento de Economia, PUC-Rio.

Giambiagi, F. and A. A. Zini Jr. [1992]. "Renegociação da dívida Interna Imobiliária: Uma Proposta", outubro, mimeo..

Goldsmith, R.W. [1986]. **Brasil 1850-1984: Desenvolvimento Financeiro sob um Século de Inflação**, Harper & Row do Brasil Ltda., São Paulo.

Lohman, S. [1992]. "Optimal Commitment in Monetary Policy: Credibility versus Flexibility," **American Economic Review**, 82.

Marques, M. S. B. and S. R. C. Werlang [1988]. "Moratória Interna, Dívida Pública e Juros Reais", Instituto Brasileiro de Economia, Fundação Getúlio Vargas, mimeo..

Marques, M. S. B. and S. R. C. Werlang [1989]. "Deságio das LFTs e a Probabilidade de Moratória", Escola de Pós-Graduação em Economia, Fundação Getúlio Vargas, mimeo..

Najberg, S. [1989]. "Privatização de Recursos Públicos: Os Empréstimos do Sistema BNDES ao Setor Privado Nacional com Correção Monetária Parcial", M. A. Dissertation, Departamento de Economia, PUC-Rio.

Persson, T. and G. Tabellini [1990]. **Macroeconomic Policy, Credibility and Politics**, Harwood.

Rigolon, F. J. Z. [1992]. "A Independência do Banco Central: O Caso do Brasil", Departamento de Economia, PUC-Rio, mimeo.

Rogoff, K. [1985]. "The Optimal Degree of Commitment to an Intermediate Target", **Quarterly Journal of Economics**, 100.

Silva, M.R. [1989]."Estrutura de Mercado: Determinantes e Implicações sobre a Política Monetária" M. A. Dissertation, Departamento de Economia, PUC-Rio.

Swinburne, M. and M. Castello-Branco [1991]. "Central Bank Independence: Issues and Experience", IMF Working Paper, Central Banking Department, June.

Vasconcelos, J.R. and R.S. Ogasawara [1992]. Änálise Econômico-Financeira dos Bancos Estaduais", Documento de Política no.7, Instituto de Pesquisa Econômica Aplicada (IPEA).

Werlang, S. R. C. and A. Fraga [1992]. "Os Bancos Estaduais e o Descontrole Fiscal: Alguns Aspectos", Ensaio Econômico n. 203, EPGE-FGV, novembro.

Werneck, R. L. F. [1991a]. "Oportunidades Perdidas na Política de Estabilização de 1990", in Faro, C. (ed.). **A Economia Pós Plano Collor II**. Rio de Janeiro: Livros Técnicos.

Werneck, R. L. F. [1991b]. "A Crise Financeira dos Estados", **Carta Econômica**, ANBID, ano X, agosto.

Werneck, R. L. F. [1992]. "Fiscal Federalism and Stabilization Policy in Brazil", presented in the "Seminar on State Reform and Stabilization Policy in Latin America", held in Washington, DC, promoted by the Latin American Macroeconomic Research Network and sponsored by IDRC, Ottawa, Canada.

STATISTICAL ANNEX

A - National Accounts Statistics

List of Tables :

Table 1

NATIONAL ACCOUNTS

GROSS DOMESTIC PRODUCT - 1970/91 (GDP Ratio)

Year	Households' final consumption	Publ.Adm. final consump.	Gross fixed invest.	Inventory invest.	Exports	Minus : imports	Expenditures = GDP
1970	68.6	11.3	18.8	1.7	7.0	7.4	100.0
1971	69.4	11.1	19.9	1.4	6.5	8.2	100.0
1972	69.6	10.8	20.3	0.9	7.3	8.9	100.0
1973	69.2	9.9	20.4	1.7	7.8	9.0	100.0
1974	72.0	9.3	21.8	2.5	7.7	13.3	100.0
1975	67.9	10.2	23.3	2.4	7.2	11.0	100.0
1976	68.9	10.5	22.4	0.6	7.0	9.4	100.0
1977	69.2	9.4	21.3	0.7	7.2	7.9	100.0
1978	68.5	9.7	22.3	0.8	6.7	7.9	100.0
1979	69.1	9.9	23.4	-0.2	7.2	9.3	100.0
1980	69.9	9.1	22.8	0.4	9.0	11.2	100.0
1981	67.8	9.4	23.1	0.1	9.5	9.8	100.0
1982	69.0	10.2	21.8	-0.3	7.7	8.4	100.0
1983	70.4	9.9	18.6	-1.5	11.7	9.3	100.0
1984	69.0	8.7	17.7	-1.2	14.2	8.3	100.0
1985	65.9	9.8	16.9	2.2	12.2	7.1	100.0
1986	67.8	10.6	19.0	-	8.8	6.3	100.0
1987	62.4	12.1	22.2	-	9.4	6.2	100.0
1988	59.6	12.6	22.7	-	10.9	5.7	100.0
1989	57.8	14.3	24.8	-	8.2	5.0	100.0
1990	61.4	15.5	21.5	-	7.2	5.5	100.0
1991	64.7	14.4	18.9	-	8.5	6.5	100.0

Source: IBGE - National Accounts Department.

Note: Inventory investment included in households' final consumption since 1985.

Table 2

NATIONAL ACCOUNTS

GROSS NATIONAL DISPOSABLE INCOME 1970/91

(Gross National Income Ratio)

Year	Final consumption	Households' final consumption	Publ. adm. final consumption	Gross savings
1970	80.6	69.2	11.4	19.4
1971	81.2	70.0	11.2	18.8
1972	81.1	70.3	10.9	18.9
1973	79.8	69.8	10.0	20.2
1974	82.0	72.6	9.4	18.0
1975	79.2	68.9	10.3	20.8
1976	80.6	69.9	10.6	19.4
1977	79.9	70.4	9.6	20.1
1978	80.0	70.1	9.9	20.0
1979	81.2	71.0	10.2	18.8
1980	81.6	72.2	9.4	18.4
1981	80.5	70.7	9.8	19.5
1982	83.6	72.8	10.7	16.4
1983	85.4	74.9	10.6	14.6
1984	82.5	73.3	9.2	17.5
1985	79.9	69.5	10.4	20.1
1986	82.1	71.0	11.1	17.9
1987	77.4	64.8	12.6	22.6
1988	75.0	62.0	13.1	25.0
1989	74.3	59.6	14.7	25.7
1990	78.7	62.9	15.8	21.3
1991	80.9	66.1	14.8	19.1

Source: IBGE - National Accounts Department.

Table 3

NATIONAL ACCOUNTS

CAPITAL ACCOUNT - 1970/91 (GDP - Ratio)

Year	Gross Savings	Minus: Current Account Surplus	Gross Investment Financing
1970	19.26	(1.32)	20.58
1971	18.62	(2.66)	21.29
1972	18.65	(2.53)	21.18
1973	20.03	(2.01)	22.04
1974	17.86	(6.45)	24.32
1975	20.53	(5.16)	25.69
1976	19.12	(3.91)	23.03
1977	19.75	(2.28)	22.02
1978	19.55	(3.47)	23.03
1979	18.32	(4.80)	23.13
1980	17.80	(5.42)	23.22
1981	18.74	(4.47)	23.20
1982	15.57	(5.89)	21.46
1983	13.69	(3.46)	17.16
1984	16.49	0.02	16.46
1985	19.04	(0.11)	19.14
1986	17.10	(1.96)	19.06
1987	21.74	(0.49)	22.23
1988	24.00	1.27	22.72
1989	24.99	0.23	24.76
1990	20.75	(0.73)	21.49
1991	18.70	(0.19)	18.90

Source: IBGE - National Accounts Department.

Table 4

BRAZIL - Gross Domestic Product, Total Value and Per Capita - 1970/91

Year	Gross Domestic Product				Population	GDP - Per Capita Value				GDP Deflator	
	Prices/1		Real Product Indexes		(1000 hab)	Prices/1		Real Product Indexes		Index	
	Current Prices	1980 Prices	Base 1980	Annual (%) Change		Current Prices	1980 Prices	Base 1980	Annual(%) Change	Base 1980	Annual (%) Change
1970	194	5,419	43.5	-	95,847	0.002	0.057	53.9	-	3.6	-
1971	258	6,037	48.5	11.4	98,226	0.003	0.061	58.6	8.7	4.3	19.2
1972	347	6.758	54.3	11.9	100,624	0.003	0.067	64.0	9.3	5.1	19.9
1973	512	7,700	61.8	13.9	103,050	0.005	0.075	71.2	11.3	6.7	29.6
1974	745	8.336	67.0	8.3	105,516	0.007	0.079	75.3	5.7	8.9	34.4
1975	1,050	8,763	70.4	5.1	108,032	0.010	0.081	77.3	2.7	12.0	34.0
1976	1,635	9.654	77.5	10.2	110,598	0.015	0.087	83.2	7.6	16.9	41.3
1977	2.496	10,130	81.4	4.9	113,207	0.022	0.089	85.3	2.5	24.6	45.5
1978	3,618	10,629	85.4	4.9	115,859	0.031	0.092	87.4	2.5	34.0	38.1
1979	5,964	11,348	91.2	6.8	118,553	0.050	0.096	91.2	4.3	52.6	54.4
1980	12,450	12,450	100.0	9.7	118,623	0.105	0.105	100.0	6.3	100	90.3
1981	24,408	11,895	95.5	-4.5	122,918	0.202	0.098	93.7	-6.3	205	105.0
1982	49,676	11,959	96.1	0.5	123,256	0.403	0.097	92.4	-1.3	415	102.4
1983	114,010	11,546	92.7	-3.5	125,640	0.907	0.092	87.6	-5.3	982	138.0
1984	369,149	12.153	97.6	5.3	128,070	2.882	0.095	90.4	3.3	3,037	209.3
1985	1,386,535	13,117	105.4	7.9	130,547	10.621	0.100	95.7	5.9	10,571	248.1
1986	3.673,071	14,114	113.4	7.6	133,072	27.602	0.106	101.1	5.6	26,025	146.2
1987	11,573,643	14,621	117.4	3.6	135,646	85.322	0.108	102.7	1.6	79,155	204.1
1988	86.551,111	14,606	117.3	-0.1	138,270	625.957	0.106	100.7	-2.0	532,585	572.8
1989	1,271.755,529	15,085	121.2	3.3	140,944	9,023.126	0.107	102.0	1.4	8,430,370	1482.9
1990	32,780,993,700	14,423	115.8	-4.4	143,670	227,980.656	0.100	95.7	-6.2	226,940,493	2591.9
1991	164,990.697,900	14,559	116.9	0.9	146,449	1,126,655.566	0.099	94.7	-1.0	1,133,281,474	399.4

Source: IBGE - National Accounts Department.

(1) in CR$ 1.000

Note: Population on first of July.

Table 5

GROSS DOMESTIC PRODUCT (GDP) AND GROSS FIXED INVESTMENT (GFI)

1970/1991 - (CR$ 1000)

Year	GDP Current Prices	GFI Current Prices	GFI/ GDP (%)	GDP 1980 Prices	GFI 1980 Prices	GFI/ GDP (%)
1970	194	37	18.83	5,419	1,115	20.57
1971	258	51	19.91	6,037	1,286	21.30
1972	347	70	20.33	6,758	1,501	22.20
1973	512	104	20.37	7,700	1,816	23.58
1974	745	163	21.84	8,336	2,056	24.67
1975	1,050	245	23.33	8,763	2,256	25.75
1976	1,635	366	22.41	9,654	2,415	25.01
1977	2,496	532	21.32	10,130	2,387	23.56
1978	3,618	805	22.26	10,629	2,500	23.52
1979	5,964	1,393	23.36	11,348	2,597	22.89
1980	12,450	2,835	22.77	12,450	2,835	22.77
1981	24,408	5,627	23.05	11,895	2,484	20.88
1982	49,676	10,834	21.81	11,959	2,317	19.37
1983	114,010	21,257	18.64	11,546	1,944	16.84
1984	369,149	65,197	17.66	12,153	1,968	16.19
1985	1,386,535	234,311	16.90	13,117	2,141	16.32
1986	3,673,071	699,147	19.03	14,114	2,633	18.66
1987	11,573,648	2,573,152	22.23	14,621	2,603	17.80
1988	86,551,111	19,665,260	22.72	14,606	2,477	16.96
1989	1,271,755,529	314,863,526	24.76	15,085	2,507	16.62
1990	32,730,993,700	7,032,458,599	21.49	14,423	2,304	15.97
1991	164,990,697,900	31,175,543,897	18.90	14,559	2,209	15.17

Source: IBGE - National Accounts Department.

Table 6

GROSS FIXED INVESTMENT

PUBLIC AND PRIVATE - 1970/91

(Gross Fixed Investment Ratio)

Year	Public Adminst.	Households and firms	Others
1970	23.5	75.4	1.1
1971	21.5	77.4	1.0
1972	19.1	79.8	1.1
1973	18.2	80.7	1.1
1974	17.6	81.1	1.3
1975	16.9	81.7	1.3
1976	18.0	80.3	1.8
1977	15.4	82.5	2.0
1978	14.1	82.3	3.5
1979	10.6	86.4	3.0
1980	10.3	85.8	3.9
1981	11.3	85.3	3.4
1982	11.0	86.5	2.6
1983	10.1	86.8	3.1
1984	11.2	87.3	1.4
1985	13.7	84.1	2.2
1986	16.1	80.5	3.3
1987	14.4	83.0	2.6
1988	13.9	83.5	2.6
1989	11.8	85.6	2.6
1990	16.1	80.7	3.2
1991	16.9	82.5	3.7

Source: IBGE - National Accounts Department.

STATISTICAL ANNEX

B - Financial Statistics

List of Tables :

Table 1

Inflation:
General Price Index,Wholesale Price Index and National Consumer Price Index

(monthly change %)

		General Price Index/1	Wholesale Price Index/2	National Consumer Price Index/3
1991	Jan	19.93	20.32	20.95
	Feb	21.11	21.57	20.20
	Mar	7.25	7.48	11.79
	Apr	8.74	9.04	5.01
	May	6.52	5.45	6.68
	Jun	9.86	8.77	10.83
	Jul	12.83	12.45	12.14
	Aug	15.49	15.60	15.62
	Sep	16.19	15.17	15.62
	Oct	25.85	27.34	21.08
	Nov	25.76	25.52	26.48
	Dec	22.14	21.50	24.15
1992	Jan	26.84	27.11	25.92
	Feb	24.79	25.48	24.48
	Mar	20.70	19.67	21.62
	Apr	18.54	17.80	20.84
	May	22.45	21.23	24.50
	Jun	21.42	20.90	20.85
	Jul	21.69	22.19	22.08
	Aug	25.54	27.40	22.38
	Sep	27.37	27.17	23.98
	Oct	24.94	24.83	26.07
	Nov	24.22	24.43	22.89
	Dec	23.70	23.78	25.58
1993	Jan	28.73	26.69	28.77
	Feb	26.51	26.23	24.79
	Mar	27.81	28.08	27.58

Source: 1 and 2 - Getulio Vargas Foundation; 3 IBG

Table 2

Inflation:

General Price Index,Wholesale Price Index and National Consumer Price Index

(annual change %)

	General Price Index/1	Wholesale Price Index/2	National Consumer Price Index/3
1980	110.24	121.33	99.70
1981	95.19	94.30	93.51
1982	99.72	97.72	100.31
1983	211.00	234.04	177.97
1984	223.81	230.30	209.12
1985	214.75	209.51	239.05
1986	65.03	62.56	58.60
1987	415.83	407.19	395.46
1988	1037.57	1050.22	993.29
1989	1782.85	1748.91	1863.56
1990	1476.85	1449.45	1585.18
1991	480.23	471.67	475.11
1992	1157.84	948.98	1149.05

Source: 1 and 2 - Getulio Vargas Foundation
3 - IBGE.

Table 3

Monetary Base and Money Supply - Annual change (%)

End of Period	Monetary Base	Demand Deposits	Currency held by the public	M1	M4
1980	56.88	69.78	73.74	70.57	72.93
1981	69.86	74.11	79.96	75.30	140.33
1982	86.79	84.95	88.47	85.69	110.43
1983	57.48	100.22	86.82	97.38	150.43
1984	264.09	194.08	232.79	201.85	292.49
1985	257.31	310.17	283.54	304.27	304.14
1986	293.45	319.86	257.48	306.76	94.79
1987	181.47	112.15	195.08	127.45	352.61
1988	622.33	515.99	742.74	570.27	959.00
1989	1754.06	1191.68	1831.20	1384.16	1643.06
1990	2304.20	2341.11	2327.34	2335.71	622.97
1991	291.18	367.74	266.49	328.22	763.58
1992	991.27	858.31	1038.67	918.56	1574.03

Source: Central Bank Bulletin.

Table 4

Monetary Base and Money Supply - in US$ Billion

End of Period	Monetary Base	Demand Deposits	Currency held by the public	M1	M4/*	Diference M4-M1
1980	10.95	17.81	4.55	22.36	57.46	35.10
1981	9.52	15.87	4.19	20.06	70.66	50.60
1982	9.04	14.92	4.02	18.94	75.62	56.68
1983	3.69	7.75	1.95	9.70	49.13	39.43
1984	4.23	7.17	2.04	9.21	60.64	51.43
1985	4.59	8.93	2.37	11.30	74.38	63.08
1986	12.30	25.53	5.78	31.31	98.73	67.42
1987	7.46	11.68	3.68	15.35	96.32	80.97
1988	5.42	7.23	3.11	10.35	102.58	92.23
1989	7.28	6.77	4.36	11.13	129.59	118.46
1990	10.49	9.90	6.34	16.24	56.11	39.88
1991	6.61	7.47	3.75	11.22	93.20	81.98
1992	6.21	6.15	3.67	9.82	112.46	102.64

Source: Central Bank Bulletin.

* Includes federal bonds and bills, savings deposits, time deposits and M1. In 1991 includes also Financial Inv. Funds and Special Earning Deposits.

Table 5

Monetary Base and Money Supply - M4 Ratio (%)

End of Period	Monetary Base	Demand Deposits	Currency held by the public	M1
1980	19.06	31.00	7.92	38.92
1981	13.47	22.45	5.93	28.39
1982	11.96	19.74	5.31	25.05
1983	7.52	15.78	3.96	19.74
1984	6.98	11.82	3.36	15.18
1985	6.17	12.00	3.19	15.19
1986	12.46	25.86	5.85	31.72
1987	7.75	12.12	3.82	15.94
1988	5.28	7.05	3.04	10.09
1989	5.62	5.23	3.36	8.59
1990	18.69	17.64	11.29	28.94
1991	7.09	8.02	4.02	12.04
1992	5.52	5.47	3.26	8.73

Source: Central Bank Bulletin.

Table 6

Monetary Base and Money Supply - % GDP

End of Period		Monetary Base	Demand Deposits	Currency held by the public	M1	M4	Difference M4-M1
1980		4.24	6.89	1.76	8.65	22.23	13.58
1981		3.50	5.83	1.54	7.36	25.94	18.58
1982		3.34	5.51	1.48	6.99	27.90	20.91
1983		1.81	3.80	0.95	4.75	24.06	19.31
1984		1.99	3.38	0.96	4.34	28.56	24.22
1985		1.95	3.79	1.01	4.79	31.55	26.75
1986		4.45	9.24	2.09	11.33	35.71	24.38
1987		2.38	3.72	1.17	4.90	30.73	25.83
1988		1.46	1.94	0.84	2.78	27.55	24.77
1989		1.32	1.23	0.79	2.02	23.51	21.49
1990		1.99	1.88	1.20	3.08	10.65	7.57
1991		1.46	1.65	0.83	2.48	17.27	14.79
1992	*	1.40	1.39	0.83	2.22	25.37	23.16

Source: Central Bank Bulletin.

Table 7

Public Sector
Borrowing Requirements - % GDP

	Total Operational	Total Nominal
1980	n.a.	n.a.
1981	6.54	13.73
1982	7.11	16.88
1983	3.18	20.96
1984	2.86	22.86
1985	4.19	28.52
1986	3.63	11.23
1987	5.67	32.21
1988	4.58	52.15
1989	6.85	82.71
1990	-1.30	29.26
1991*	-1.32	25.77
1992**	1.87	35.27

Source: Brazil Economic Program.
* Preliminary data based on methodology in process of review.
** Jan-set estimated.

Table 8

Financial System Loans by Final Lenders - in % of GDP

Year	Total in % of GDP	Monetary Sys. in % of GDP	Banco do Brasil in % of GDP	Comm. Banks /1 in % of GDP	Non-Mon. Sys. in % of GDP
1974	28.20	13.94	5.55	8.39	14.26
1975	32.54	16.53	7.37	9.10	16.01
1976	33.64	16.87	7.71	9.23	16.48
1977	34.58	17.21	7.89	9.33	17.37
1978	35.25	17.37	7.62	9.74	17.88
1979	34.20	16.65	6.89	9.76	17.55
1980	27.37	13.54	5.58	7.97	13.83
1981	24.86	11.70	4.33	7.37	13.16
1982	26.25	11.13	3.64	7.49	15.13
1983	22.43	8.27	2.91	5.37	14.16
1984	18.20	6.07	1.70	4.37	12.14
1985	18.45	6.26	1.55	4.70	12.19
1986	18.40	8.25	2.50	5.75	10.15
1987	17.47	7.61	2.49	5.12	9.86
1988	16.14	6.51	2.67	3.84	9.50
1989	14.39	3.88	2.07	4.63	7.70
1990	12.20	1.98	1.29	5.33	5.58
1991	11.03	2.28	1.44	5.74	3.86
1992	12.34	2.71	1.82	6.46	4.06

Source : Central Bank Bulletin.

Note : 1 - Includes Multiple Banks after 1988.

Textos para Discussão:

293. Simas, C.G.P.; Giambiagi, F. "Renegociação da dívida externa e cashflow dos serviços financeiros do Brasil: Projeções para o período 1993/2022"

294. Garcia, M. P. G; Fernandes, E. "Regulação e supervisão dos bancos comerciais no Brasil"

295. Abreu, M. P. "Latin America in a changing world trade system"

296. Abreu, M.P. "Brazil-US economic relations and the enterprise for the Americas Initiative"

297. Garcia, M. G. P. "Política monetária e formação das expectativas e inflação: Quem acertou mais, o governo ou o mercado futuro?"

298. Bacha, E.L. "Selected international policy issues on private market financing for developing countries"

299. Bacha, E.L. "Latin America's reentry into private financial markets: Domestic and international policy issues"

300. Abreu, M.P.; Werneck, R.L.F. "Privatization and regulation in Brazil: The 1990-92 policies and challenges ahead"

301 . Werneck, R L.F. "Government failure and wretched statecraft: Lessons from the Brazilian vicious circle"

302. Amadeo, E. J. "Retraining under conditions of adjustment . The case of Brazil"

303. Amadeo, E. J. "Entre a lógica particular e a eficiência social: Grupos de interesse e negociação coletiva no Brasil"

304. Carneiro, D. D.; Garcia, M. G. P. "Capital flows and monetary control under a domestic currency substitution regime: The recent Brazilian experience"

305. Abreu, M.P. "A dívida pública externa brasileira em francos franceses, 1888-1956"

306. Abreu, M.P. "The political economy of protectionism in Argentina and Brazil, 1880-1930"