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**INFLATION, CURRENCY
FRAGMENTATION AND
STABILISATION IN BRAZIL:
A POLITICAL ECONOMY
ANALYSIS**

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Abstract

This paper makes a political economy analysis of the Brazilian economy, focusing on the period of high inflation and on the 'Real' stabilisation plan (implemented in 1994). It explains the distributive and monetary aspects of inflation, analyses the reasons for the gradual fragmentation of the currency, and discusses the most important aspects of the Real plan: the de-indexation of the economy, and its rapid liberalisation and internationalisation. Finally, the paper demonstrates that, in spite of its success in reducing inflation, the Real plan remains vulnerable in several important respects. These weaknesses were responsible for the currency crisis of January 1999.

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I. Introduction

The Brazilian economy is the largest in Latin America, and one of the ten largest in the world. Between 1949 and 1980, annual GDP growth in Brazil averaged 7.3 per cent (3.8 per cent per capita). This impressive performance deteriorated sharply after 1980, when growth rates fell to 1.8 per cent p.a. (0 per cent per capita). In contrast, inflation accelerated almost relentlessly, from under 20 per cent in 1972 to 4,200 per cent (annual rate) in mid-1994. After several failed stabilisation attempts the 'Real plan', implemented in 1994, successfully reduced inflation rates to 5 per cent or less. This paper outlines a political economy analysis of high inflation in Brazil,¹ and critically examines the 'Real' stabilisation programme implemented in 1994.

Most studies of Brazilian high inflation can be classified into two groups. The first, including most structuralist, neo-structuralist, post-Keynesian and Marxist contributions, argue that the main causes of inflation were distributive conflicts and the widespread indexation of prices and incomes. In contrast, neoclassical writers generally claim that large fiscal deficits were the main cause of the process.² In this paper, we claim that the distributive conflicts were the main underlying cause of inflation; however, we believe that this 'real' approach is insufficient. In order to explain high inflation, the fragmentation of the currency, and the deterioration of the Brazilian monetary

¹ Brazil experienced several years of high inflation, but not hyperinflation. This distinction is justified because, although inflation occasionally exceeded the conventional threshold of fifty per cent per month, the domestic currency was never annihilated, as it famously was in, for example, Hungary and Germany. For details, see section 2.3.

² Silva & Andrade (1996) survey the debate about the causes of the Brazilian inflation. Cardim de Carvalho (1993), Kandir (1991) and Parkin (1991) provide stimulating non-mainstream analyses.

system more fully, we provide an innovative Marxist interpretation of the Brazilian experience, which integrates theoretically the ‘real’ and ‘monetary’ aspects of inflation.³ Our analysis builds on radical monetary theory, especially on the hypothesis that money is endogenous and non-neutral. The theoretical analysis of inflation is developed in section one. Section two contextualises Brazilian high inflation as a form of monetary crisis. The causes of the deterioration of the Brazilian currency are identified through the relationship between money and production, especially the endogeneity of money and the reproduction of the general equivalent (Brunhoff 1978). Section three explains the main aspects of the Real plan, especially how it has affected the distributive conflict and the supply of money. In its final section, the paper explains why the stabilisation programme remains limited and fragile.

II. Conflict, Money and Inflation

1.1 Conflict Inflation

Non-mainstream writers of different persuasions, especially post-Keynesians, neo-structuralists and Marxists, often argue that distributive conflicts are the most important cause of inflation.⁴ In brief, conflict theories usually presume

³ We employ the terms ‘real’ and ‘monetary’ for illustrative purposes only. The use of these categories is generally unhelpful and often misleading, because capitalist economies are necessarily monetary (Itoh & Lapavistas 1999, Lavoie 1992).

⁴ Conflict theories are surveyed by Dalziel (1990) and Lavoie (1992, ch.7). Burdekin & Burkett (1996) provide an outstanding theoretical and empirical investigation, but see also Boddy & Crotty (1975), Glyn & Sutcliffe (1972), Marglin & Schor (1990) and Rowthorn (1977, chs.5-6). The Brazilian experience is interpreted in this light by Bacha (1982), Bresser Pereira & Nakano (1983), and Mollo & Silva (1987).

that the money supply is endogenous, and that important social groups (unionised workers, monopoly capitalists, rentiers, etc.) have monopoly power and can determine the price of their goods or services strategically. If some of these groups use their market power to increase their share of the national income, and if other groups react using the same weapons, conflict inflation may result. In this case, inflation reconciles *ex post* demands over the national product that are, *ex ante*, incompatible. It is important to point out, first, that these disputes for income take place sequentially rather than simultaneously, because the process of generation and expenditure of income is determined by the structure of the circuit of capital (Fine 1980). Second, conflict inflation necessarily requires the creation of extra money (see section 1.2), in order to accommodate the *a priori* incompatible income demands. Third, the rate of inflation is a positive function of the size of the overlapping claims and the frequency of the price changes, and a negative function of the rate of productivity growth. Finally, inflation rates may become rigid downward if some agents index-link their prices or incomes (inertial inflation). In this case, any negative shock or additional income demand can lead to permanently higher inflation.

In this approach, two types of conflict are usually critical. As indicated above, when large firms have monopoly power, mark up target pricing can lead to conflict inflation. In addition to this, organised labour can seek to establish a 'fairer' distribution of income, or to obtain compensation for losses due to past inflation, which firms may accept in principle but later respond through higher prices. Higher wages, prices and real interest rates potentially increase costs across the economy, and they can set off a self-perpetuating conflict in which the winners can be difficult to identify other than in retrospect. Although

under capitalism there tends to be widespread dissatisfaction with respect to levels and shares of income, the existence of conflict inflation depends on the political, economic, monetary and financial institutions that validate this type of inflation. More specifically, the diffusion of wage and price indexation and lax monetary policies tend to fuel conflict inflation, and they tend to be present in most cases of prolonged high inflation (see section 2).

1.2 Extra Money Inflation

The perception that certain types of monetary institutions tend to accommodate high inflation almost automatically, while others are more rigid, has led to two important developments in the Marxian literature on inflation. First, Brunhoff (1982), Fine & Murfin (1984, ch.7), Kotz (1987), and Weeks (1979), among others, have criticised conflict theories for their relative neglect of the monetary sphere or their strongly monetarist flavour. They have also highlighted the need to develop a monetary, but non-monetarist, theory of inflation, in which the institutional structure of the economy plays an important part. Second, Aglietta (1979, ch.6), Brunhoff & Cartelier (1974), Fine (1980, ch.4), Lipietz (1983) and, especially, de Vroey (1984), developed the theory of *extra money inflation*.⁵ The theory of extra money inflation (for a detailed presentation, see de Vroey 1984) argues that circumstances intrinsic to the circuit of capital regularly create discrepancies between production and money supply, which can be inflationary.⁶ In brief, and somewhat loosely, extra money inflation can happen if extra money (this concept is defined

⁵ Extra money should not be confused with the monetarist concept of 'excess money', as is shown below. Money is not neutral, and extra money may or may not be inflationary, depending on its impact upon the structure of production and the type of expenditure which it induces.

below) validates prices higher than values or lowers the relationship between the value of the output and the circulating money, and if this relationship is not subsequently restored by output growth or the destruction of the extra money (Brunhoff & Cartelier 1974).

Extra money can be created in different ways, by the private *and* by the public sectors. For example, the commercial banking system creates extra money when it refinances the irretrievable debts of the productive sector, in which case purchasing power is injected into the economy even though the value of the marketable output remains constant. Similarly, the central bank creates extra money when it supports banks suffering substantial loan losses through the discount window. For de Vroey (1984), extra money can also be created when public deficits are monetised directly or indirectly (e.g., if the central bank purchases treasury bills held by a private financial institution).

The creation of extra money increases the nominal national income relative to what it would be otherwise. If the extra money is spent rather than saved or destroyed in the repayment of loans, it may induce a quantity response in those industries operating below capacity (the ‘Keynesian’ scenario)⁷. In this case, there will be more money and more commodities at the end of the circuit, which may restore the previous relationship between prices and money at a higher level of income and output. However, if the extra money increases demand in those sectors operating at full capacity, and if additional imports are not available (the ‘monetarist’ scenario), the relationship between prices

⁶ Post-Keynesian horizontalist writers (e.g., Moore 1988) argue that if the money supply is endogenous there can never be excess money supply. For a critique, see Lapavistas & Saad-Filho (forthcoming).

⁷ The injection of money can also induce a rapid increase in industrial capacity and in demand, which may compensate for the extra money.

and money is not restored. A new relationship is established through an increase in prices in this market, ostensibly because of excess demand; this is *extra money inflation*.

Extra money inflation is more likely in monetary systems based on inconvertible paper currency than in any other system, because this type of money introduces additional mediations on the relationship between labour, value and money (Itoh & Lapavitsas 1999). In this monetary system, the role of the state is very prominent, because the state produces the legal tender, regulates the financial system (which produces credit money), and is highly influential on the terms in which the domestic currency is exchanged for foreign currencies. In spite of this influence, the state cannot fully determine or control the myriad of production circuits across the economy. Therefore, when the state creates legal tender or validates the private production of credit money, it may sanction prices that are very imperfect expressions of value.⁸

Extra money inflation does not necessarily interrupt the process of accumulation, and it may even increase total profits (within limits), because the injection of extra money into the economy can facilitate the sale of the output. However, there are limits to extra money-induced economic growth. The continuous production of extra money can introduce distortions into the relationship between prices and values, and between sectors of the economy, because ‘certain commodities sell above while others sell below their value’ (Brunhoff & Cartelier 1974, p.125). The cumulative effect of these distortions

⁸ Marx’s theory of labour, value, price and money is reviewed by Saad-Filho (1997); its relationship with the value of money is critically examined by Fine, Lapavitsas and Saad-Filho (1999) and Mollo (1991).

may, eventually, create severe difficulties for economic reproduction,⁹ because the social stature of the currency is eroded, which may lead to its rejection and the development of currency substitutes (see section 2.3). Obviously, there is a direct relationship between extra money and conflict inflation, because conflicts can lead to long-term, widespread and substantial price increases *only* if extra money is regularly created, and if output fails to respond proportionately.

In spite of the appearances, the theory of extra money inflation is incompatible with the quantity theory of money, first, because extra money is created *endogenously*; it usually derives from the interaction between banks, firms, workers and the state, and its quantity cannot be fully controlled by the monetary authorities. Second, because money is *never* neutral. Its circulation can change the level and composition of the national product, depending on how it is created, how it circulates and how it affects relative prices.¹⁰ Third, the consequences of extra money *cannot be anticipated*, because it may increase output in certain sectors but not in others. Moreover, the state validation of the private creation of credit money offers no guarantee that the output will be compatible with the circulating money (Itoh & Lapavitsas 1999). Finally, the state regulation of the quantity of extra money is always imprecise, because the state cannot control the main variables of accumulation, especially the level and structure of interest rates, the rate of

⁹ This is why Brunhoff & Cartelier (1974, p.125) argue that inflation is a form of the crisis which 'does not rupture the circulation of commodities but, rather, weakens it'.

¹⁰ In mainstream analyses full employment necessarily holds in the short or the long run and money is, correspondingly, neutral in the short or the long run. The problem is merely how long it takes until neutrality holds. In contrast, extra money can change relative prices and the level and composition of output in the short *and* in the long run. There are no necessary proportions between the extra money injected and the rhythm of increase of the price level, as in the quantity theory, because money affects the 'real' economy. In sum, 'monetary' and 'real' analyses are inseparable, in spite of monetarist claims to the contrary.

return of new investment, and the terms of trade (Lapavitsas & Saad-Filho 1999, Mollo 1991, 1999). In sum, the creation of extra money, and its potentially inflationary consequences, cannot be fully controlled by the state, and the state cannot be naively ‘blamed’ for inflation as if it were a fully autonomous institution, which further distinguishes this approach from the quantity theory (Brunhoff & Cartelier 1974).

1.3 Currency Reproduction and Fragmentation

The first basic function of money is the measurement of commodity values and their expression as prices. Although the state can choose the standard of prices (dollars, rupiahs, reais or whatever), the measurement of value involves a social process that is largely independent of the state (see Saad-Filho 1997). The second basic function of money is medium of exchange. In contrast with the quantity theory, and following the endogenous money tradition of Steuart, Tooke, Marx, Schumpeter, Kalecki and the post-Keynesians, we believe that the quantity of circulating money and its velocity are generally determined by the level of output, commodity prices, value of money and the economic institutions, regardless of the monetary regime.¹¹ Changes in output, prices or the value of money can induce changes in the velocity of money or its circulating quantity, especially through changes in hoards or outstanding loans (which are settled by money as the means of payment).

¹¹ Lapavitsas & Saad-Filho (1999) and Mollo (1999) show that Marx’s approach to money endogeneity is richer and more convincing than the post-Keynesian horizontalist analyses in Moore (1988) and Minsky (1986); see also Arnon (1984).

In the international sphere, transactions are settled in international currency (world money). This form of money fulfils the functions outlined above in the global arena. It expresses the price of tradable goods, is generally accepted in foreign transactions, and it preserves through time a relatively stable command over commodities and financial assets located or registered across the globe. The convertibility of the domestic currency into world money, and the size of the central bank's hoards, are important limits on the participation of each country in the world market.

The functions of money are mutually complementary, and they are fulfilled by a set of forms of money which include credit money, central bank money and foreign currency. The articulation between the functions and forms of money, and the smooth convertibility between the latter, is one of the most important features of the monetary system (Mollo 1993). This convertibility depends on a highly specific set of institutions, usually (but not necessarily) regulated at the national level. However, as important as the institutional framework is the rhythm of accumulation. Its smooth flow indicates that relative prices are not severely distorted, which helps to ensure the social recognition of the currency as the general equivalent (Brunhoff 1978). If this is not the case, the currency may be rejected, and substitutes will gradually fulfill certain functions of the currency. This process of currency fragmentation strains the flow of purchases and sales and the process of accumulation as a whole, which reinforces our argument that inflation is a form of monetary crisis.

In contemporary monetary systems, the convertibility between the distinct forms of money depends largely on the state, which introduces an important discretionary element into monetary circulation. Direct state intervention can

help to reduce the costs associated with ‘market-led’ adjustment processes, such as under the gold standard or currency board regimes. However, greater state discretion increases the scope for arbitrariness in the management of the currency, in which case monetary policy can introduce substantial distortions into the expression of values as prices. If this leads to the rejection of, or flight from, the domestic currency, this will be reflected in a systematic increase in the velocity of circulation of money, a decline in the ratio between circulating currency and the value of output, and the devaluation of the currency vis-à-vis world money. In other words, if the currency cannot fulfil certain functions of money, or if the convertibility between certain forms of money becomes complex or excessively costly, the general equivalent will become fragmented and currency substitutes will be introduced.¹² These are the defining features of monetary crises, and high inflation is generally associated with such crises.

II. Inflation and Monetary Crisis in Brazil

II.1 Conflict Inflation in Brazil

It is well known that import-substituting industrialisation (ISI) provided the main thrust of capital accumulation in Brazil between 1930 and 1980.¹³ This mode of development created a dynamic industrial sector, which produced a large variety of consumer goods primarily for the domestic market. In Brazil

¹² For Brunhoff (1978), the *reproduction of the currency* requires the mutual convertibility of the forms of money and the ability of the currency to fulfil all the functions of money continually.

¹³ ISI policies are critically evaluated by Gereffi & Wyman (1990) and Livingstone (1981). The Brazilian experience is reviewed by Baer & Kerstenetzky (1975), Furtado (1972), Hewitt (1992), Lessa (1964) and Tavares (1975).

and elsewhere, ISI was associated with highly concentrated industrial structures, which facilitated the adoption of rigid mark up pricing rules by the leading firms (Considera 1981). These oligopolistic pricing strategies protected the revenue of the largest firms and the highest income brackets against adverse fluctuations in the level of activity or shifts in the composition of demand. However, in the long term they helped to make the economy chronically vulnerable to conflict inflation, because of the rigidity of the price system (Bresser Pereira 1981, 1992, Lafer 1984).

Rapid industrialisation through ISI was also conducive to labour market segmentation. For historical and political reasons, the skilled workers of the leading industries, normally based in São Paulo, were relatively well organised and obtained real wages much higher than the Brazilian median, even under the military regime (1964-85).¹⁴ The high degree of industrial conglomeration may have contributed to these gains. Large firms often offered relatively low resistance to wage demands (especially in the 1980s), because their market power allowed them to transfer the impact of wage increases to prices (Amadeo & Camargo 1991). It is generally accepted that the simultaneous concentration of industry and union activity in the Southeast has played an important role in the growth of regional and income inequality in Brazil.¹⁵

¹⁴ In São Paulo, the largest and most industrialised city in Brazil, executive pay increased by 75% in real terms between 1964 and 1985, while skilled workers' wages increased by 83%. In contrast, unskilled worker wages increased only by 38% and office workers' wages by 33%. In this period, the real minimum wage declined by 43% (Sabóia 1991; see also Amadeo & Camargo 1991).

¹⁵ For a post-Keynesian analysis of the monetary factors contributing to regional inequality in Brazil, see Amado (1997).

Widespread dissatisfaction with the level and distribution of income across categories of workers and regions of the country, and with discrimination based on income, gender, skin colour and other factors, have contributed to the development of distributive and other conflicts across the country. In addition to this, the attempt by small and medium companies to emulate the pricing behaviour of their larger competitors, suppliers and customers, and income disputes between industrial, commercial, financial and landed capital, have produced an increasingly conflictive process of price and wage determination.

Indexation to past inflation was one of the most important policies to manage these conflicts between the late 1960s and the mid-1990s, as it partly contained, and partly shifted them across time. Indexation was institutionalised by the federal government in the late 1960s, primarily in order to create a market for treasury bills.¹⁶ At a later stage the rate of increase of wages was also determined centrally, which helped to repress worker demands and shift the distributive conflict towards the ‘technical’ rather than the ‘political’ or industrial spheres. However, this shift increased the degree of indexation of the economy, as wage increases were rigidly determined by past inflation.¹⁷ The exchange rate, household rents, and many other prices were also index-linked. The indexation of prices and wages increased social stability because it seemed to guarantee future compensation for the losses due to current inflation. However, the distribution of income deteriorated sharply

¹⁶ Usury law restricted annual interest rates to 12%. As inflation rates were usually higher (peaking at 90% in 1964), there was no scope for the development of a deep financial system. The way around this legal restriction was to index-link most financial assets, and apply the 12% limit only to *real*, rather than nominal gains (Studart 1995).

¹⁷ Nominal wages increased once a year until 1979, twice yearly until 1985, approximately every three months until 1987, and monthly afterwards - in which case nominal wages were known only *after* they were paid (see Balbinotto Neto 1991, Barbosa & McNelis 1989, Macedo 1983).

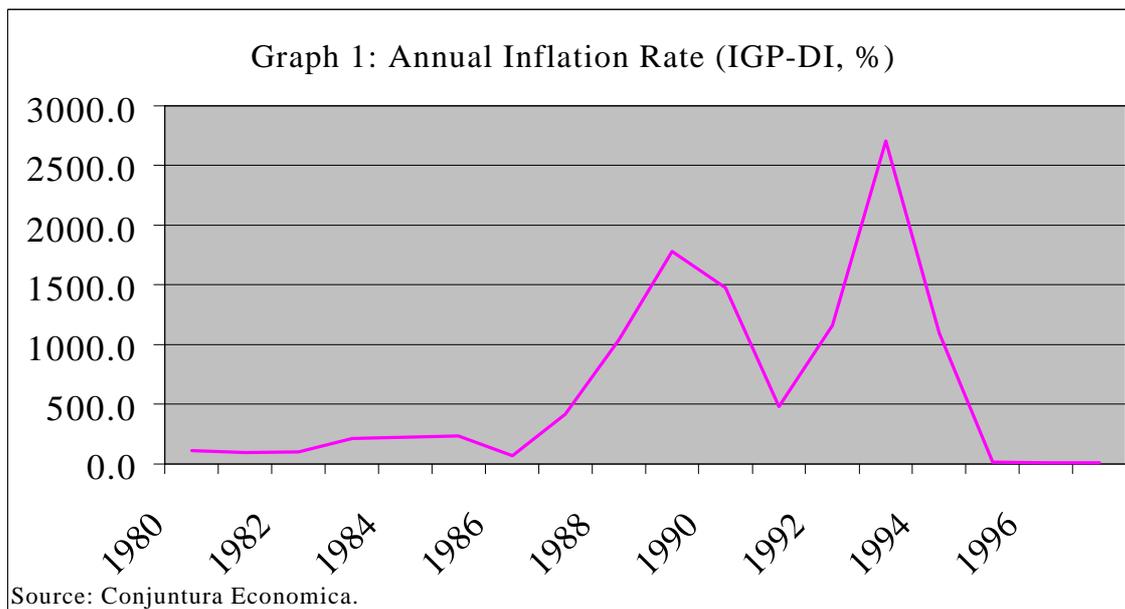
in the period of high inflation. The Gini coefficient increased from 0.56 to 0.64 between 1970 and 1989 (this year's Lorenz curve envelops the former completely). By 1990, the top quintile of the population appropriated 64.6% of the national income, and the lowest quintile only 2.3% (from 61.8% and 2.8% in 1981), one of the highest concentration ratios in the world (Bonelli & Sedlacek 1991, Cacciamali 1997, Ferreira & Litchfield 1996).

The illusion that it fully compensated for the losses due to past inflation was not the only negative consequence of indexation. Indexation also made the rate of inflation rigid downwards, for three reasons. First, because it invites firms and workers to adopt simple pricing rules which perpetuate past inflation by simply projecting it into the future. Second, because in order to protect one's share of the national income it became usual to increase the mark-up when inflation was rising, or when it was expected to rise (the converse did not generally happen). Third, because indexation made the economy prone to rising inflation after negative supply shocks (e.g., the oil shocks of 1973 and 1979-80 and the currency devaluation of 1983). These shocks created a pattern of stepwise rising inflation between 1972-85 (Amadeo 1994). The gradual acceleration of inflation stimulated firms and workers to reduce the interval between their price and wage adjustments, which has a clearly regressive distributive impact because some agents are more able to do this than others. Moreover, it has been abundantly shown in the literature that the shorter the adjustment period the higher the rate of inertial inflation, the more rigid it becomes, and the more sensitive it is to negative shocks. From the mid-1980s, the Brazilian economy became increasingly disorganised, as relative prices were increasingly variable in the

short run. This introduced substantial additional uncertainty into the economy, and made calculation and investment highly complex and risky.

Inertial inflation sharply increased the costs of contractionary monetary and fiscal policies, because higher interest rates or lower government expenditures tended to have little effect on firms' pricing strategy. They could even lead to *higher* prices rather than lower, if the firms tried to maintain their gross profits in spite of their higher financial costs and declining sales. By the mid-1980s, it was generally accepted in Brazil and elsewhere that conventional fiscal and monetary policies were largely ineffective against inertial inflation, and that effective policies would require a co-ordinated de-indexation of prices and wages (Calvo 1992, Dornbusch & Fischer 1986, 1993, Vegh 1992). In Brazil, a group of neo-structuralist writers developed the 'heterodox shock' as a policy alternative.¹⁸ This strategy involves the simultaneous freezing of prices and wages at their average real levels, and the abolition of indexation. The first time a heterodox shock was attempted in Brazil was in February 1986. The 'Cruzado Plan' reduced inflation rates from 15 per cent to 1 per cent per month for several months. However, this and several other plans invariably collapsed after only a few months, and inflation tended to explode in the aftermath (see graph 1).

¹⁸ Heterodox shocks are discussed, from different angles, by Arida & Lara-Resende (1985), Bacha (1988), Bresser Pereira (1987), Bresser Pereira & Nakano (1985), Cardoso & Dornbusch (1987), Dornbusch & Simonsen (1983) and Lopes (1986). For an alternative analysis, see Feijó & Cardim de Carvalho (1992).



The successive failure of heterodox stabilisation programmes contributed to the growing distortion of relative prices, increased the degree of indexation, raised inflationary expectations even further and, at the same time, reduced social tolerance to high inflation. It also sharpened the social tensions associated with high inflation, especially the distributive conflicts involving key worker categories such as São Paulo skilled industrial workers, employees of state enterprises, and civil servants across the country. In spite of this, rising inflation did not degenerate into hyperinflation or dollarisation, mainly because they were contained by the central bank's interest rate policy. In short, the central bank would raise interest rates and increase the liquidity of its bills defensively, in order to avoid the flight from currency into commodities (hyperinflation) or into other reserve assets (dollarisation; see section 2.2).

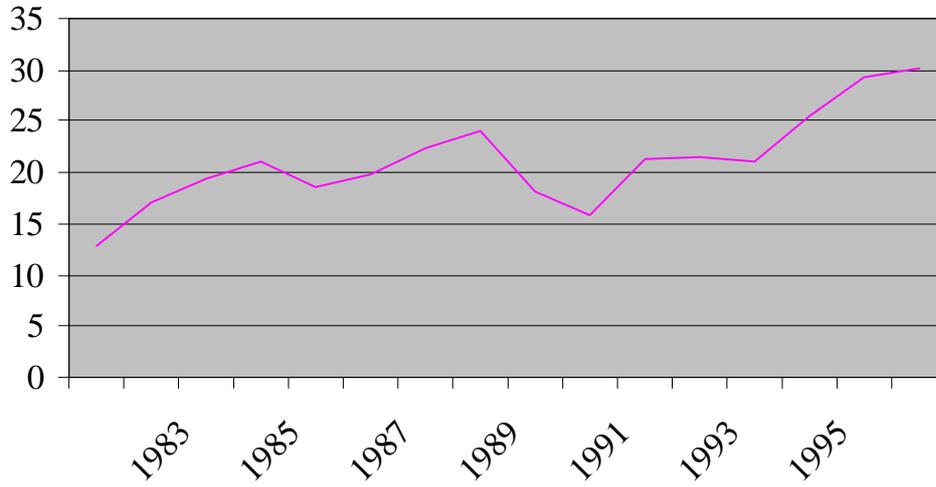
II.2 Extra Money and Inflation in Brazil

The Brazilian government provided generous quantities of extra money in the postwar era, initially in order to support ambitious public and private investment programmes and, later, to try to preserve the level of activity in spite of the oil, debt and other crises. The private financial system was similarly geared to provide extra money liberally (with state support), especially for working capital and consumer credit (industrial investment was normally financed by retained earnings, state-owned banks, or foreign loans; see Lees et al 1990 and Studart 1995). In spite of its obvious shortcomings, this strategy was successful, as is shown by the high growth rates of the period 1947-80. However, in the absence of a robust tax system (Theret 1993), fiscal deficits were generally high, especially in the early 1960s and in the late-1970s. Between 1981-93 the operational public deficit was, on average, 3.3% of GDP, while the nominal public deficit was 33.4% of GDP.¹⁹ These deficits were partly financed by the sale of treasury or central bank bills, and partly monetised (seigniorage gains were, on average, equal to 3.7% of GDP between 1985-93, see Garcia 1996, p.155). The domestic public debt increased rapidly during the 1980s (see graphs 2, 3, 4), because of the high public deficits and the high real interest rates, which were allegedly necessary to attract foreign capital, reduce domestic inflation, and avoid the dollarisation of the economy.²⁰

¹⁹ The nominal public deficit (PSBR) is the difference between total government expenditures and total revenues, including all levels of public administration and the state enterprises. The primary deficit is the difference between non-financial expenditures and revenues, while the operational deficit includes only the real interest paid on the public debt.

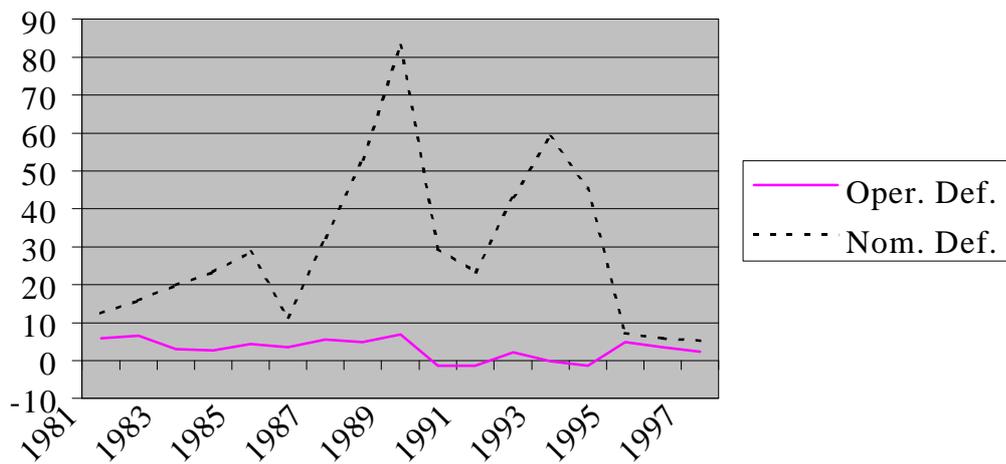
²⁰ The nationalisation of the external debt in the early 1980s was one of the most important sources of disequilibrium in the government budget. Its impact on the domestic public debt is described by Bontempo (1988) and Cavalcanti (1988).

Graph 2: Net Domestic Debt (%GDP)

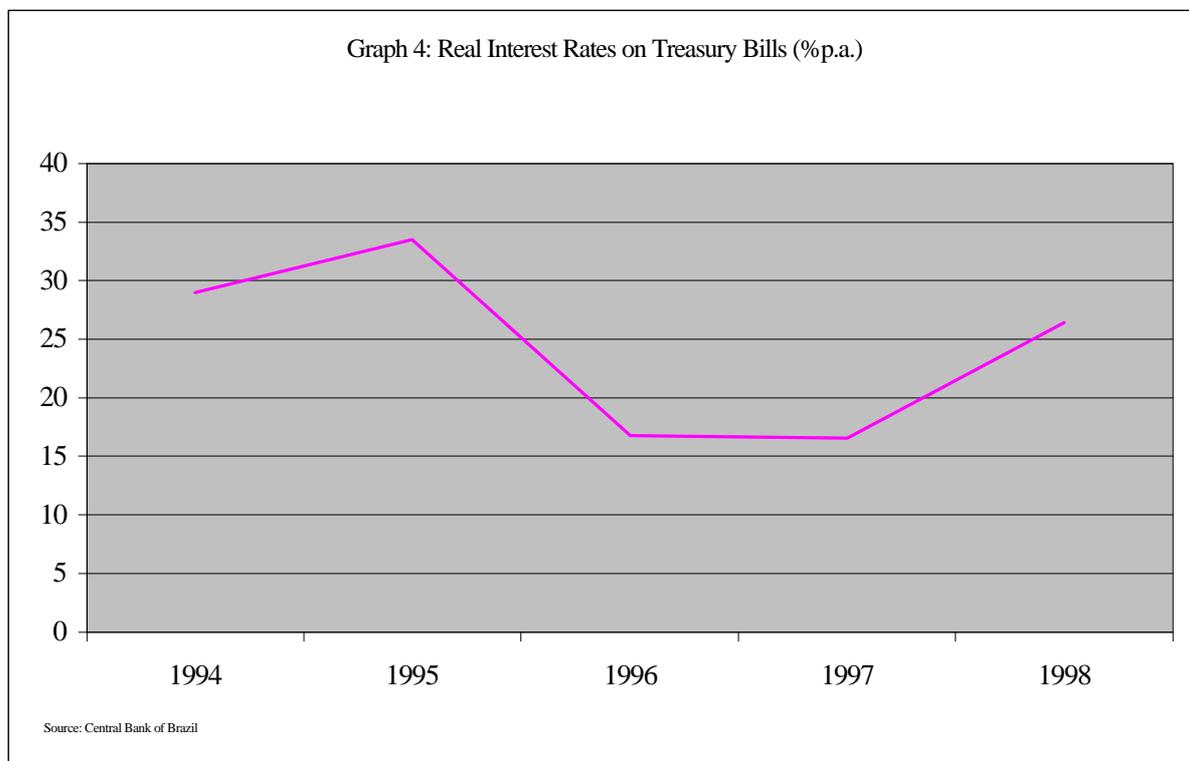


Source: Central Bank of Brazil

Graph 3: Operational and Nominal Public Deficits (%GDP)



Source: Central Bank of Brazil



Between the collapse of the Cruzado Plan in 1986 and the introduction of the Real plan in 1994, the Brazilian government introduced several (failed) adjustment programmes. These programmes usually included important heterodox elements such as price and wage freezes and imposed changes in most existing contracts,²¹ plus conventional contractionary fiscal and monetary policies. It is noticeable that the latter gradually tended to become more prominent, while the former tended to lose relevance in each successive shock. This gradual and uneven policy shift was reinforced further by the increasingly orthodox policies implemented between adjustment programmes.

²¹ Especially de-indexation and changes in pre-contracted nominal interest rates (in order to reflect the substantial decline in inflation following stabilisation).

One of the most important implications of the shift towards orthodoxy was the compression of the investment and current expenditures of all levels of government (because of the contractionary fiscal policy), and the growing weight of domestic interest payments in the federal budget (because of contractionary monetary policy). The increasingly orthodox policy stance of the government also contributed to the depression of private expenditures, because of the decline in aggregate demand and the rising cost and reduced availability of consumer and industrial credit. Persistently contractionary fiscal and monetary policies go a long way towards explaining the economic slowdown in Brazil since 1980 (Bresser Pereira 1996). However, the economic slowdown was insufficient to reduce inflation substantially, because of the indexation of prices and incomes (see section 2.1), the market power of the oligopolistic groups and, paradoxically, because contractionary policies increased the disposable income of the wealthier sections of the society (see below).

In order to create demand for the rapidly growing stock of treasury bills (see above), and to avoid hyperinflation and the dollarisation of the economy, the central bank offered increasingly attractive combinations of interest rates and liquidity for the financial institutions.²² In the mid-1980s, the central bank allowed financial institutions to swap bills for currency on demand, which reduced the cost of the banks' compulsory reserves substantially (*zeragem automática*, see Banco Central do Brasil 1995, pp.37-38, Pastore 1990, Paula 1996 and Ramalho 1995). The perfect liquidity of the treasury bills for the financial institutions guaranteed the stability of the financial markets and

²² When inflation is very high treasury bills remain attractive even at negative real interest rates (as long as alternatives such as dollars remain costly), because the losses associated with holding domestic currency are extremely high. In spite of this, real interest rates in Brazil were generally strongly positive.

created a substantial additional demand for bills, but it dealt a severe blow to the Brazilian currency (see section 3).

Most banks used this additional degree of freedom to offer index-linked current accounts to their high-income customers. Money invested in these accounts earned a share of the nominal interest due on the treasury bills, which could amount to several dozen percentage points per month, and the funds were always available on demand because of the central bank liquidity guarantee. The index-linked accounts provided liquidity and capital gains simultaneously, and were equivalent to the creation of a parallel currency whose value *increased* daily because of the interest paid on the bills (which is, obviously, a form of extra money creation). The injection of extra money through index-linked accounts increased substantially the degree of indexation of the economy, because revenues could be easily swapped for interest-bearing treasury bills. At the same time, however, the distributive conflict became increasingly severe because different forms of income were index-linked in very distinct ways.²³ The indexation of most sources of income partly counteracted the deflationary impact of the high interest rates and the reduction in the fiscal deficit. In sum, the use of high interest rates in order to help to reduce inflation was counter-productive, because they increased industrial costs and inflation, through indexation. They also increased the cost of the public debt and the size of the government deficit, which could be contained only with further expenditure cuts. This shift of the public expenditures toward interest payments was regressive in distributive terms,

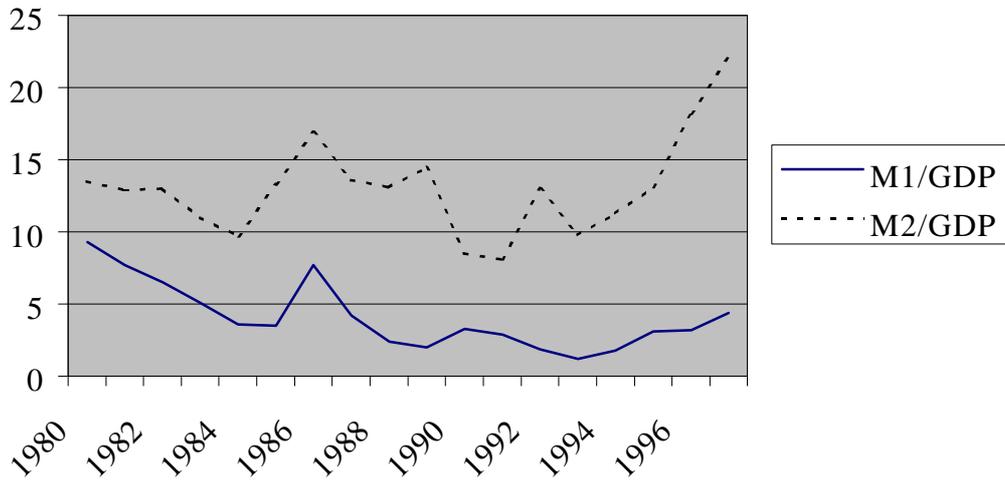
²³ The banks gradually relaxed the conditions for the supply of index-linked accounts, but they always excluded the majority of the population, who was too poor to qualify. Kane & Morissett (1993) estimate that the asset gains of the higher income brackets more than compensated their losses due to inflation between 1980-89. In contrast, inflation reduced the annual income of the poorest quintile by 19%.

because it contributed to the decline in the living standards of the majority while raising those of the rich. These distortions and vicious circles in the economy increased the distortion of relative prices, put into question the role of money as the general equivalent, and accelerated the loss of its stature.

II.3 Fragmentation of the Brazilian Economy

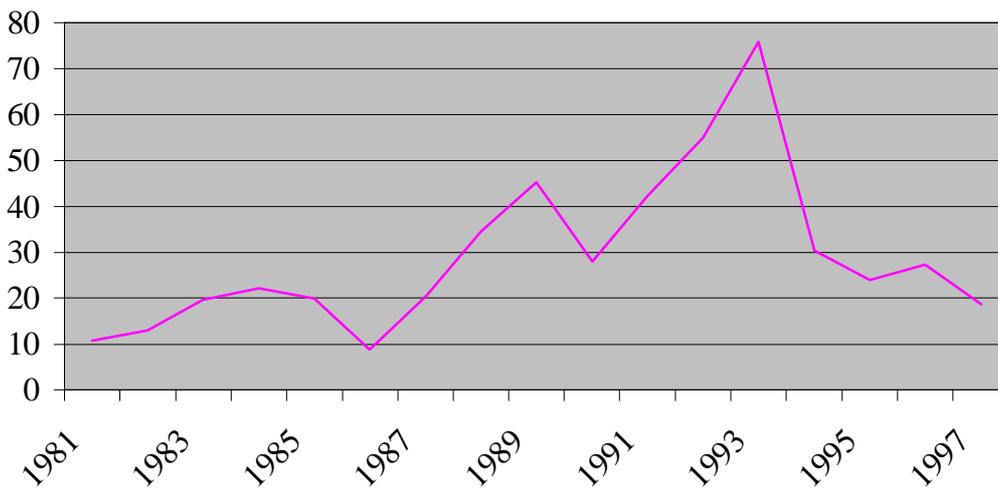
It was shown above that the Brazilian currency became increasingly fragmented in the period of high inflation for three main reasons. First, distortions introduced into relative prices by the distinct forms and degrees of wage and price indexation across the economy; second, distortions created by the monetary authorities, especially high interest rates; third, the increasingly bitter distributive conflict, which was partly due to the differences in wage and price indexation. These distortions gradually reduced the legitimacy of the domestic currency and stimulated the development of substitutes (see sections 1.3 and 2.2). The most remarkable aspect of this process of currency fragmentation was the increasing use of treasury and central bank bills (included in M2) rather than currency, and the increase in the velocity of circulation of money (see graphs 5 and 6, and Salama 1989, Salama & Valier 1990).

Graph 5: M1 and M2 (% GDP)



Source: Central Bank of Brazil

Graph 6: Velocity of Circulation of M1



Source: Central Bank of Brazil

The treasury and central bank bills became increasingly important elements of the monetary system, because they were highly liquid and better stores of value than the domestic currency. As their value was stable in or rising in real terms (depending on the level of the interest rates), the bills were also increasingly used as units of account alongside the Brazilian currency and the US dollar, especially for high-value transactions.²⁴ The flight from the domestic currency into a wide range of substitutes was often destabilising, and it made the economy vulnerable to consumption bubbles and rising inflation. This would usually prompt the central bank to raise interest rates further, while maintaining the liquidity of the government bills in circulation. However, it was shown above that high interest rates were inflationary, because of their impact on production costs. Moreover, they diverted potentially productive resources into financial speculation, which worsened the supply constraint in what was still a relatively closed economy, as far as consumer goods were concerned. In addition to this, high real interest rates fuelled the fiscal deficit through the increasing cost of servicing the stock of the public debt. The rapid growth of the domestic public debt and the increasing liquidity of its stock created severe problems for monetary policy. High interest rates increased the debt service and the fiscal deficit, and led to higher inflation through indexation. In spite of the expectations to the contrary, they *increased* aggregate demand, because of the wealth effect (Kane & Morisset 1993). In contrast, the high liquidity of the treasury and central bank bills facilitated the creation of extra money and fostered dollarisation, which was potentially (hyper)inflationary.

²⁴ Grossi (1995) shows that houses and second-hand cars were increasingly priced in dollars or treasury bills by the late 1980s. For a neoclassical account of the currency collapse, see Barbosa et al (1995).

The financial institutions were among the main beneficiaries from high inflation, because they captured a large part of the inflation transfers (Lees et al 1990), and because they were the main holders of treasury bills. Part of these gains was transferred to their high-income customers (as shown in section 2.2). High inflation forced companies and wage earners to devote increasing amounts of resources to financial management, commodity speculation, and the conversion between different forms of money. Frequent and unpredictable short-term relative price shifts reduced the ability of the currency to function as the general equivalent. Moreover, the pessimistic expectations helped to depress the level of investment, while large funds were held unproductively, especially as treasury bills. The gradual collapse of the currency rewarded financial strategy more handsomely than production, and turned Brazilian banks into highly sophisticated organisations, able to extract large profits from speculation disguised as defensive indexation. These distortions led to the rejection of the currency, and they helped to legitimise not only the increasing use of alternative forms of money, but also the harsh stabilisation policies introduced since 1980.

III. The Real Plan

The Real plan has virtually eliminated inflation in Brazil because it has repressed the distributive conflict and contained the process of (extra) money creation. However, it will be shown below that, in spite of its success in reducing inflation, the plan remains fragile and potentially vulnerable mainly because of its social impact.

III.1 Curbing High Inflation

The Real plan was the outcome of many years of research by the same group of academics that had designed the first heterodox shock (see section 2.1).²⁵ In March 1994, when inflation was approaching 50% per month, the government created the URV (Unidade de Referência de Valor), a unit of account linked to the US dollar. Under this transitory monetary system, each commodity had two prices, one fixed in URV, and the other determined daily in the domestic currency. The URV helped to stabilise the real wages and the key prices in the economy, and it prevented their reduction in real terms because of the rampant inflation in the old currency. Stability in these prices provided the anchor for the gradual emergence of a coherent price system in URV, free from the distortions introduced by high inflation.

In July 1994, after the new price system had been established, the URV was transformed into the Real. The government's publicity machine created great excitement because the Real's floor exchange rate, R\$1 = US\$1, allegedly 'proved' that the Real and the dollar were equally strong. (This trick required that prices in the old currency were divided by 2,750; in spite of its apparent complexity, the transition was easily managed by most Brazilians, who had become highly proficient in currency changes and complex price calculations.) Policy-makers strongly believed that stabilisation should be accompanied by contractionary policies in the short-run, in order to avoid consumption bubbles. Interest rates were set at 8% per month from the start of the

²⁵ See Amadeo (1996), Bacha (1995) and Nogueira Batista (1993). The Real plan was first outlined by Arida and Lara-Resende (see Arida & Lara-Resende 1986), inspired by a similar (but failed) experiment in Hungary in 1946 (Anderson et.al. 1988, Bomberger & Makinen 1983).

stabilisation programme. These interest rates, the turn of expectations, financial liberalisation, and the favourable international environment attracted strong short-term capital flows, which raised the value of the Real up to US\$1.176. The government cheerfully presented these speculative flows as proof of the confidence of the financial markets on the stabilisation programme. In sum, the Real plan was a resounding success initially, because it brought low inflation, rising dollar wages and because it was supported by low tariff barriers, which made coveted consumer goods affordable to many for the first time.

Two other important problems were addressed in the first weeks of the Real. First, experience had shown that, in the wake of a sudden decline in inflation, money demand rises sharply because the new currency is widely recognised and can fulfil a broader range of functions. This demand must be satisfied in order to avoid a sharp increase in interest rates and a decline in economic activity; however, if the process of remonetisation is too rapid it may lead to extra money inflation. Second, the decline in inflation from over 40% per month to almost zero reduces drastically the nominal interest accruing on savings deposits. If savers suffer from money illusion, or if they anticipate that the stabilisation programme will collapse, they may decide to spend rather than save, which may also create extra money inflation. In order to control the remonetisation of the economy and preserve the stock of savings, high interest rates were accompanied by a barrage of publicity and by administrative measures such as a 100% marginal reserve on bank deposits. The monetary base increased smoothly by 300% between July and September 1994, showing that extra money is not necessarily inflationary.

Early in 1995, after the collapse of the Mexican peso, a flexible exchange rate band was selected, initially between R\$0.86 and R\$0.90 to the dollar (the central bank often intervened to maintain the currency within tighter ‘minibands’). The currency was subsequently devalued regularly by a few percentage points in excess of the inflation differential vis-à-vis the USA. This was achieved primarily through the manipulation of the base rates, which were also used to maintain the target level of international reserves and to control domestic demand. This is obviously a complex exercise and, whenever the targets were incompatible, domestic activity was the adjustment variable. The initial overvaluation of the Real and the poor choice of bands committed the central bank to defending a substantially overvalued exchange rate for a long period of time (Bacha 1997, Fishlow 1997). In spite of the academic consensus, the protests of the exporters, and the sharp reversal of the trade balance, the government never publicly admitted that the Real was overvalued, at least until it collapsed in January 1999 (see below).

III.2 Repression of the Distributive Conflict and Legitimacy of the Real

Certain key aspects of the Real plan were important to maintain social consent for the government’s economic strategy. The plan reduced the distributive conflict, at least initially, and repressed the conflict when consent flagged later, which has prevented the resumption of high inflation. First, the introduction of the URV, and the determination of wages based on their average (in URV) over the previous four months, limited the losses experienced by the wage-earners. In contrast, in previous stabilisation programmes wages were frozen at their average and prices at their peak or not

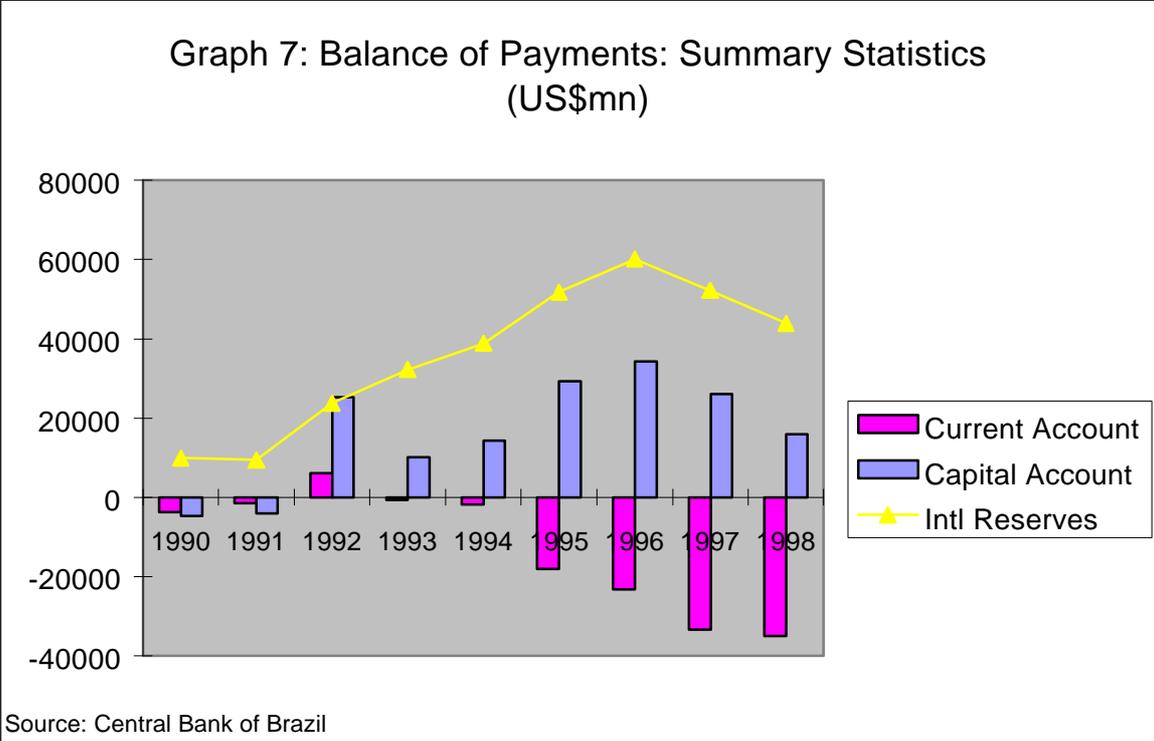
at all, and the wage earners experienced heavy losses with disinflation. For partly unrelated reasons (see below), the wage mass increased until 1995, while unemployment remained stable until 1996, which contributed to the increase in the purchasing power of the wage earners.

Second, the drastic decline in inflation reduced the real income loss of the lowest strata of the population, that had no access to sophisticated financial instruments which might help to defend their real wages. In addition to this, between July 1994 and September 1997 the price of the consumption basket of the highest income brackets tended to increase more rapidly (84.3%) than that of the poor (74.3%; see Dieese 1998). Third, the number of people living under absolute poverty declined by 12.5 million between 1990 and 1996, according to the UN Economic Commission for Latin America (ECLAC). Whereas in 1990 47.9% of the population (41% of households) was considered 'poor', in 1993 the poor were only 45.2% (37% of households) and, in 1996, only 37.8% (29% of households).²⁶ Finally, lower import barriers, the simplification of economic calculation, and the government's publicity barrage also helped to increase the popularity of the Real plan, and to marginalise its critics.

The Real plan inserted the Brazilian economy much more deeply into the international financial and productive circuits. Currency stability required that the central bank should hold large reserves, which was achieved primarily through the liberalisation of the capital account, the sale of state-owned assets

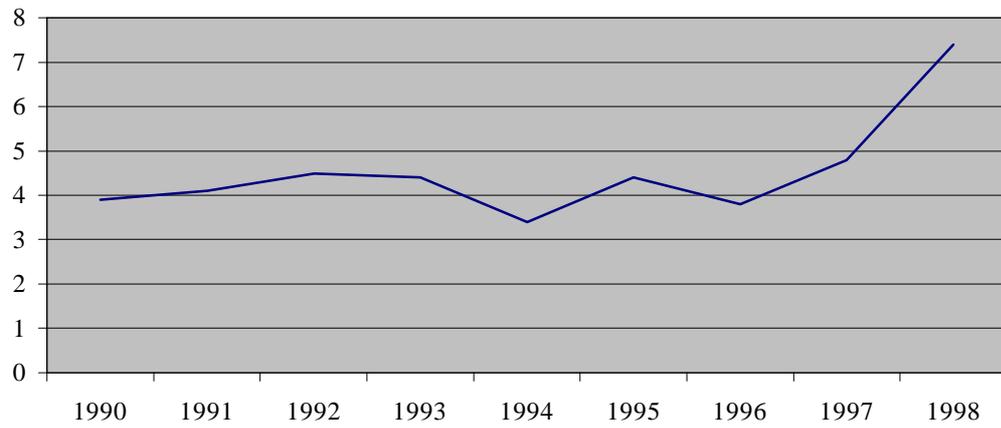
²⁶ For ECLAC (1999), the poverty reduction between 1990-93 is primarily due to structural changes in the economy, especially the increasing share of self-employment in trade and services at the expense of urban industry. In 1993-96, the decline in poverty is due to transfers to the poor households, and the decline in inflation and in food prices.

to foreign investors, and substantial inflows of foreign direct and portfolio investment (see graph 7).



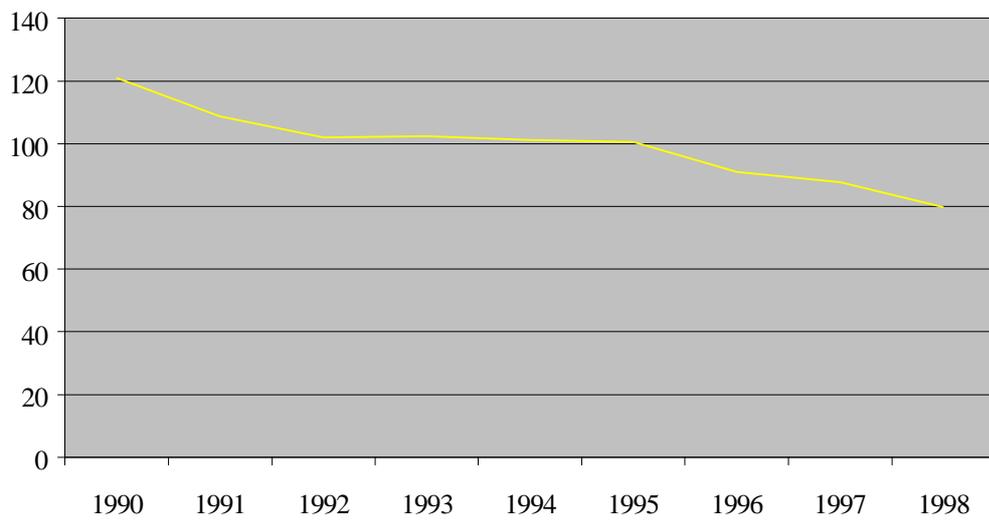
Brazil has also liberalised imports drastically. Foreign competition has helped to contain inflation because the country was flooded by cheap consumer goods, while imported machines helped to foster investment and productivity growth in key industrial sectors, especially car assembly. However, it has also led to a large number of plant closures and a substantial decline in manufacturing employment, affecting especially the food, clothing and toy industries (see graphs 8 and 9).

Graph 8: Unemployment Rate (% of the labour force)



Source: IBGE.

Graph 9: Index of Worked Hours, Sao Paulo Industry (1994 = 100)



Source: Conjuntura Economica.

Finally, rapid trade and financial liberalisation triggered a round of concentration and centralisation of capital, especially through a wave of bankruptcies, mergers and acquisitions, that has been an important cause of unemployment. In this respect, the concentration of the financial system is especially relevant. The number of banking institutions declined from 271 in 1994 to 248 in 1997; 22 of them have fallen under foreign ownership since 1996, and 24 have foreign minority stakes (Barros & Almeida Jr. 1997). The government of President Fernando H. Cardoso supported this process politically and financially, arguing that it would reinforce Brazil's competitiveness.²⁷ Little has been done to alleviate the impact of the attendant unemployment, or the reduction in the wage mass after 1995. Unemployment has increased from 3.9% of the labour force in 1990 to 8.4% in early 1999, while the central bank's index of the wage mass increased from 107.3 in 1993 to 122.3 1995, and subsequently declined to 118.1 in 1998 (1992 = 100).

In sum, the Real plan initially focused on the distributive conflict. However, given the lack of solutions to the causes of the conflict, the plan later merely repressed it directly (through higher unemployment, declining wages, and legislative changes that reduced pensions and benefits, and increased the likelihood of punishment for industrial action) and indirectly (it reduced the ability of industrial capital to transfer higher wages to prices, which made managers increasingly intransigent).

²⁷ In his youth, Cardoso was a well-known dependency school writer. However, as minister of finance (1993-94), he famously asked readers to 'forget everything he had ever written'. He was responsible for the implementation of the Real plan, and was elected president in 1994, and re-elected in 1998, in the wake of the plan's perceived success.

III.3 Limits to the Creation of Extra Money

The ability of the central bank and the commercial banking system to create money was severely limited by the exchange rate regime associated with the Real plan until early 1999. Even though this exchange rate regime was not as rigid as the currency board system of neighbouring Argentina, the need to maintain exchange rate stability and high foreign reserves kept interest rates high, compressed the creation of extra money, and constrained domestic economic activity. In addition to this, the permanent compression of fiscal expenditures reduced domestic demand, which worsened the deflationary aspects of the Real plan.

De-indexation through the URV, repression of the distributive conflict, and the reduction of extra money flows have virtually eliminated inflation. This, the simplification of economic calculation and financial management, and the greater degree of openness of the economy, gave legitimacy to the Real plan, and helped to rebuild the social recognition of the currency. This was essential for the Real to fulfil the functions of the general equivalent, and to reproduce itself (see section 1.3).

IV. Conclusion - The Vulnerability of the Real

The decline in inflation and the creation of a viable currency are important achievements of the Real plan. The poorest strata of the population gained substantially with the much lower inflation transfers, especially in the early

months of the Real. Rising dollar wages, the flourishing of consumer credit (after its demise under high inflation) and import liberalisation made desirable consumer goods affordable to many for the first time. These gains have helped to imprint the positive aspects of economic stability deeply into the minds of millions, and they have been used to justify the continuous use of deflationary policies, which are allegedly necessary to preserve low inflation. We have shown that these policies have helped to repress the distributive conflict, especially legal changes including the elimination of indexation, the 'liberalisation' of the labour market and rising unemployment among militant industrial workers.

However, two aspects of the Real plan have become important obstacles to the translation of lower inflation into sustained welfare gains to the majority: permanently high domestic interest rates (by international standards) and the liberalisation of international trade and capital flows. The level of interest rates, and the cumulative impact of the costs of sterilisation of the international reserves, are the main causes of the explosive growth of the domestic debt after 1994, and of the increasing financial fragility of the state (Morais 1998). High interest rates have a highly heterogeneous impact on industry, depending on such variables as their size, degree of internationalisation, and financial strategy. Large companies heavily involved in international trade can obtain cheap funds from state-owned development banks or the international financial system, which are not generally available to smaller firms producing non-tradables. This has potentially important implications for the country's industrial structure, because it increases its heterogeneity and tightens the balance of payments constraint. It can also worsen the distribution of income and wealth, because heterogeneous growth

and industrial fragmentation tend to concentrate economic and financial power, reduce the real wage of the unskilled workers, and depress the domestic market.

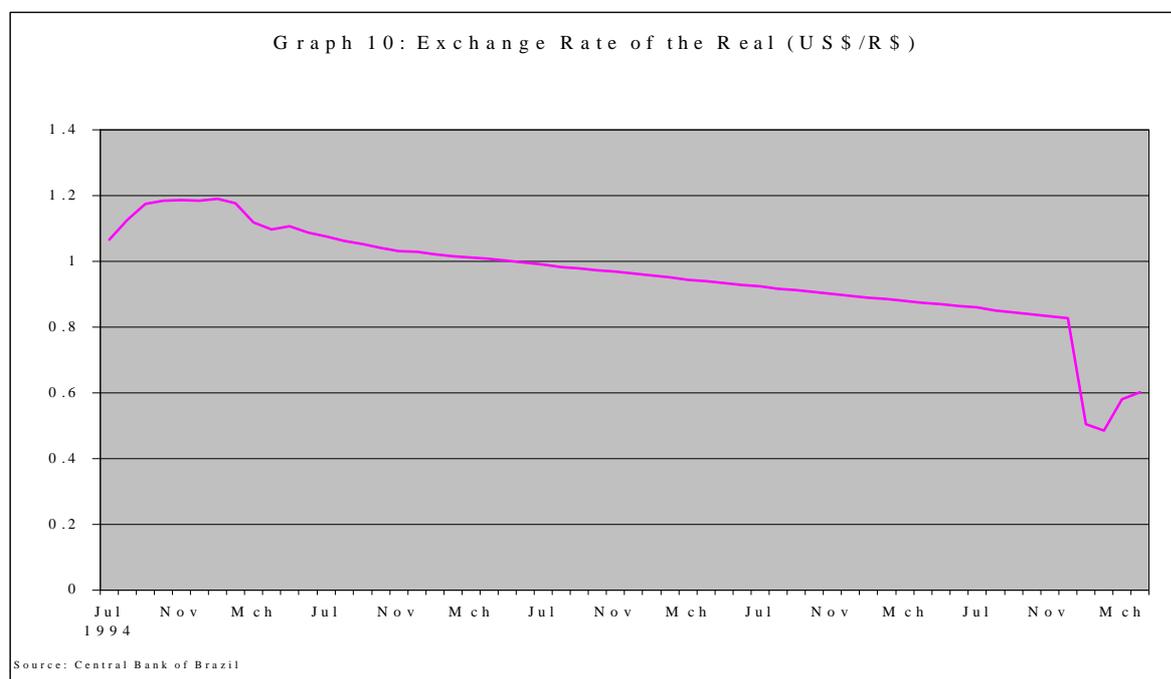
Rising trade and current account deficits, rising unemployment and poverty, the concentration of income after 1996, and the centralisation of economic power, have been eroding popular support for the Real plan²⁸. The erosion of popular support has contributed to the loss of credibility of the government's economic strategy in the eyes of the external investors, in a vicious circle that fatally destabilised the Real after the Russian crisis, in mid-1998. More generally, in spite of the government's best efforts Brazil experienced several sudden reversions of capital flows. Between October 1994 and April 1995 Brazil's currency reserves declines by nearly US\$10 billion because of the uncertainty associated with the Mexican crisis. In November 1997, the central bank had to push interest rates to 43.4%, in an attempt to stem the outflow due to the Asian crisis (in quieter times, in May 1998, rates were 'only' 21.7%). Finally, in the aftermath of the Russian crisis Brazil lost reserves worth US\$40 billion in six months, and interest rates increased to 50%, in a fruitless attempt to stem the outflow of dollars.²⁹

At the same time, the government finances have been seriously destabilised by the heavy burden of interest payments on the domestic debt, which has increased sharply because of the high interest rates and the need to sterilise the

²⁸ ECLAC (1999) shows that the distribution of income has worsened between 1993 and 1996, when the Gini coefficient increased from 0.52 to 0.54.

²⁹ High interest rates have been insufficient to compensate the financial sector for its losses due to the decline in inflation, which reduced its share of GDP from 26.4% in 1989 to 6.9% in 1995. The government has provided assistance worth approximately US\$20 billion to this sector, and the financial system has been consolidated and rapidly internationalised, as shown above.

capital inflows. This source of disequilibrium will tend to become increasingly strong in the medium term, as potential privatisation revenues are rapidly being exhausted. These difficulties have contributed to the speculative attacks suffered by the Real, and to the loss of reserves which led to the currency crash of January 1999 (Saad-Filho, Coelho & Morais 1999; see Graph 10).



The difficulties currently faced by the government, including speculative attacks, currency instability, and mass protests,³⁰ demonstrate the declining legitimacy of the government's economic policies. The persistent memory of high inflation, high interest rates, the balance of payments vulnerability, and the over-riding need to maintain low inflation and exchange rate stability have

³⁰ In August 1999 a coalition of left-wing parties and social movements organised a 'March on Brasília' with 100,000 protesters. The march, and the record levels of dissatisfaction with the government, may produce important political changes in the next few months.

reduced the government's ability to intervene in the economy to foster growth and engage in an effective poverty reduction programme. Unless there are significant policy changes and profound social and economic reforms, high unemployment and labour market, trade and financial liberalisation will continue to be used to repress the distributive conflict, which can lead to the further fragmentation of the economy and society. In sum, there is no reason to expect a substantial improvement in the quality of life of the majority of the population, at least in the medium term (Rocha 1994, Saad-Filho 1998).

This depressing prospect could have been avoided. It was shown above that the Real plan has two main components, the elimination of indexation through the URV (which removed inflation inertia and reduced the pressure to create extra money), and the internationalisation and liberalisation of the economy (which, together with the deflationary policies, have repressed the distributive conflict and reduced the state's ability to tackle the social cost of its economic strategy). In spite of government claims to the contrary, these policies need not follow from one another. It would have been possible to use the political and economic proceeds from an alternative disinflation strategy to support a broad-ranging tax reform and industrial and other policies designed to foster growth and attend the basic needs of the majority. This would have reduced the distributive conflict (rather than merely repressed it), improved the prospects for macroeconomic stability, and helped to build a more inclusive society. The ideological climate in Brazil and elsewhere has prevented this option from being considered seriously. Instead, neo-liberal policies have been imposed by force, then justified by their purported inevitability.

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