

**The Brazilian Crisis: From Inertial Inflation to Fiscal Fragility**

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## INTRODUCTION

In a previous paper<sup>1</sup> I argued that the financial crisis in Asia was radically different from those that have plagued Latin America since 1982. In simple terms, the Asian crisis was not caused by excessively large fiscal and trade imbalances leading to inflation, speculative pressure on overvalued pegged exchange rates and financial sector collapse characteristic of crises in Latin America. Instead, the crises in Asia were closer to a classic Minsky-Fisher debt-deflation process built on the endogenous reductions over time of risk premia on investments in Asia that lead to a buildup of short-term commercial bank lending reinforced by interest rate differentials. The reversal of these flows, initiated by a change in the market perception of international interest rate movements led to pressure on exchange rate bands that caused the majority of both corporate and financial borrowers to experience a net present value reversals and a massive “sale of position to make position” and a downward spiral in asset prices and exchange rates. In short, a capital account reversal rather than a current account imbalance, was the source of the Asian problems. The persistence of the downward pressure on prices was caused by the conversion of virtually every financing unit into a “ponzi” operation, in difference from a traditional current account crisis in which it is only the relative prices of traded and non-traded goods that are affected. The rapid upward reassessment of risk premia then led to a classic Minskyian scenario in which financial institutions cut back sharply on lending as they struggled to strengthen balance sheets and virtually cut off credit to the economy.

Despite these differences, there was one aspect of the crisis in Asia that was reminiscent of the experiences in Latin America in the 1980s and 1990s. That is the rapidity with which the Thai devaluation spread to other economies in the region that had exhibited what appeared to strong macroeconomic fundamentals. Indeed, just as economists were insisting on the fundamental strength of the Indonesian economy at the end of 1997, those with a long memory will remember that similar statements were made about the strength of the Brazilian economy relative to Mexico at the end of 1982. Just as political leaders and economic policy makers in Asia were slow to accept the possibility of contagion from the Thai crisis because they believed (perhaps justifiably on the basis of IMF evaluations of their economic fundamentals) that their economies were fundamentally strong, the same reluctance was present in Brazil’s reaction to the 1980s crisis. Indeed, it is interesting to note that just as Indonesia contributed to the IMF led international rescue package offered to Thailand in July of 1997, Brazil was one of the creditors

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<sup>1</sup> “Yes, ‘It’ Did Happen Again — A Minsky Crisis Happened in Asia,” Jerome Levy Economics Institute Working Paper # 234.

represented in the London Club when Poland declared it was unable to meet its debt service commitments in the Spring of 1982.<sup>2 3</sup>

It was an external interest rate shock that detonated the Minskyian instability in both Mexico (both in 1982 and 1994) and Thailand. The unraveling of the highly integrated levered balance sheets of financial institutions and corporate borrowers in Thailand led to the outbreak of the Minsky crisis in which private agents were forced to liquidate position to make position. A large proportion of this reaction was simply the scramble for foreign exchange cover by domestic producers. The process was contagious because of the interlinkages of financial sector balance sheets and production processes across the region, and indeed across the entire globe.

But, just as the Indonesian crisis was different from the Thai crisis, the Brazilian crisis differs from the standard Latin American crisis. In the next section we look at the recent history of the fight to tame Brazilian inertial inflation to identify those factors that produced a particular strong balance sheet structure in the private sector in Brazil, but caused financial fragility in the public sector capable of generating a classic debt deflation process.

## **FIGHTING INERTIAL INFLATION**

Brazil's reaction to the 1980s debt crisis created substantial differences in its economic and financial structure relative to other Latin American countries. Brazil had little problem with its foreign balance. After the 1980s crisis the trade balance remained in surplus from 1983 until after the introduction of the Real Plan in 1994. This was primarily due to the use of a flexible exchange rate policy designed to preserve export competitiveness. Although Brazil had a large public sector debt of around 50% of GDP in 1986, it had not been created by a buildup of a large stock of private foreign assets (that in many countries was due to capital flight), but rather was used in large part for the funding of the 2nd National Development Plan which started in the 1970s to strengthen the internal productive structure of the economy and provide increased export capacity. Like most other heavily indebted Latin American countries in the 1980s, the size of the public debt was increased by the government assuming responsibility after 1982 for virtually all foreign currency debt contracted by the private sector during the syndicated lending

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<sup>2</sup> It is also germane to the argument made below that Korean banks were large, leveraged holders of Brazilian bonds at the outbreak of the Asian crisis

<sup>3</sup> Thus, although I argued that the Asian crisis was different from Latin American crisis, I would also like to argue that the crises in countries like Indonesia and Brazil were different from those which hit the countries (Thailand and Mexico) that originally sparked their respective regional crises.

boom of the 1970s. The evolution of Brazilian internal debt was strongly influenced by the persistence of hyperinflation. Falling fiscal revenues due to lags between assessment and payment were in part offset by the use of a financial transactions tax, while the lags between budget allocations and expenditures ensured endogenous reductions in real spending. The result was a falling ratio of net public sector debt to GDP to around 30% by the time of the Real Plan.

With inflation causing a rapidly decline in the real value of government debt, it is difficult to convince the private sector to hold it, and the solution was found in the eventual introduction of full inflation indexing of government bills with high liquidity. The logical consequence was that as long as the government had a fiscal imbalance that had to be financed, there could be no money supply policy independent of this objective. Indeed, given the full indexing of financial assets, there was a preference for government debt over currency, and much as occurred in Italy in the same period, the former might be said to have formed the effective money supply. As a result of the rapid inflation fiscal policy was not a viable policy tool, nor was money supply control, leaving the interest rate as the only policy tool. This had a number of consequences that are not in the annals of conventional economics, but are well known to economists from countries that have experienced high and persistent or inertial inflation. First, the interest costs of the outstanding government debt becomes a major component of government expenditure and thus of the government deficit. This means the interest rates becomes both a direct and an indirect source of inflation. Further in Latin America in the 1980s the level of interest rates relative to the rest of the world had virtually no impact on capital inflows, since capital markets were characterised by what is euphemistically called reverse net resource transfers -- i.e. net capital flows were negative so that Brazil was providing resources to the rest of the world and in particular to the US, irrespective of interest rate differentials. There was also no impact of high interest rates on the exchange rate, given the size of the inflation differential and the policy of active intervention to preserve competitiveness through devaluation.

The important point of difference from other Latin American economies was thus that Brazil was not building up an excessively large imbalance on foreign account, nor was the exchange rate becoming overvalued, net public debt as a share of gdp was declining, and while low from historical perspective, its growth rate was on average above other economies in the region. However, to achieve this result in conditions of hyperinflation and full indexing meant abandoning active fiscal policy and the impossibility of controlling monetary aggregates. The only policy tool available to try to stem the hyper inflation was high real interest rates. However, this interest rates policy reinforced the hyperinflation by causing:

- \_ a direct increase in the costs of capital since there was no long-term capital market,

- \_ an increase the government deficit, since the outstanding debt was directly linked to short-term rates.
- \_ an increase in the rate of inflation through the impact on capital costs and on the fiscal imbalance.

High interest rates to control inflation reinforced the inflation that spiraled into indexed inertial hyperinflation, and impeded the full development of private long-term capital markets. Thus when policies of market liberalisation were introduced to replace the system of government directed development financing, there was no private sector market structure available to take its place. The financial system had lived the life of a rentier on the float created by the adjustment lags in the indexing system of financial contracts. Indeed, there was hardly any long-term business financing to be done. Only the State continued to invest in any appreciable magnitude and this peculiarly Brazilian characteristic of efficient State financing of investment was under increasing attack from the rapid deterioration of government finances and the push towards increased liberalisation from the multilateral financial institutions and the Collor government.

The key to breaking out of what was becoming hyperstagflation was thus to find a substitute for high interest rate policies and reduce the level of interest rates. Two factors initiated this process. One was the liberalisation of foreign trade introduced by the Collor regime in 1990, the other was the return of international investment inflows to Latin America at about the same time. Led by Mexico's new economic policy introduced by the Salinas government in 1988, capital flows returned to Latin America after the introduction of the Brady solution to indebtedness. The Brady plan implicitly accepted that Latin America would never be able to repay its debts to commercial banks in the short term by increasing net exports, so that it would have to borrow in private international capital markets to do so. That the return of foreign capital to Brazil was independent of any changes in domestic conditions can be seen in the fact that foreign exchange reserves more than doubled between 1991 and 1992 despite the failure of the Collor plan to reduce hyperinflation to even two digit levels. These inflows formed the counterpart to the deterioration in the trade account that was produced by the increased in imports and reduced exports as foreign competition displaced local producers as the process of tariff reduction and liberalisation of foreign trade was accelerated.<sup>4</sup> Paradoxically, it was this process of trade liberalisation and the return of capital flows that provided the background that allowed for the success of the Real Plan.

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<sup>4</sup> Delfim Netto, 1998, notes that Brazil went from being a net exporter to being a net importer of cotton, with Argentina being the main beneficiary.

The Real Plan was in many respects similar to the earlier reform plans, including the elimination of indexing of wages and prices as a major component, with the nominal exchange rate the anchor for price stability. Nonetheless, interest rates continued to be the major instrument of economic policy. What had changed with respect to the previous plans, was that the Real Plan benefitted from the new post-Brady world of restored capital flows and the developed country portfolio managers' obsession with portfolio diversification and the exploitation of excess returns in emerging markets. In this new context of increasingly free global capital flows, interest rates now had an impact on both capital inflows and on the exchange rate. Indeed, the early period of the Real Plan saw an appreciation by as much as 15% in the Real-US dollar exchange rate, which was originally intended to have been maintained at dollar parity. This real appreciation also contributed to the rapidity of the decline in the inflation rate. The introduction and early success of the Real Plan also reinforced the return of net capital inflows by providing evidence of economic improvements, and reinforced the reversal of the exchange rate policy of the previous period from maintaining competitiveness through devaluation to maintaining competitiveness by creating pressure on domestic producers from foreign imports. Since it was difficult for domestic producers to adjust their costs rapidly; the real appreciation of the Real simply produced a growing payments imbalance in the new context of liberalised foreign trade.

The foreign capital flows that matched the growing trade imbalance also had an impact on fiscal conditions, since the Central Bank adopted a policy of sterilisation of inflows in order to protect its inflation fighting monetary policy. This sterilisation, involving selling domestic currency bonds at high interest rates to acquire foreign exchange that was invested at low foreign interest rates, produced "negative carry" that fed directly into the current budget deficit. This reinforced the deterioration in the fiscal positions created by the rapid decline in the inflation rate. Just as banks had been able to make politically influenced loans in the knowledge that hyperinflation would quickly shrink them from the balance sheet, government had been able to make expenditure commitments that were rapidly reduced in real terms. The absence of inflation meant that the rate of growth of fiscal revenues fell while the already approved indexed expenditures were slower to adjust, producing an increase in real expenditures, some of which was visible in increased household incomes, producing a fall in the saving rate and financing a consumption boom.

The rapid fall in inflation created rising real incomes as prices slowed more rapidly than other asset prices and the prices of more liberalised imports fell with exchange rate appreciation. This led to a rapid increase in consumption, in particular on imports. Finally banks were forced to find real lending business to replace the inflation-float, and started to lend aggressively to consumers in the absence of any quick pick up in business borrowing, adding further fuel to the

consumption boom driving imports.

Thus, while the Real Plan was immensely successful in eliminating inflation, the continued reliance on high interest rates reinforced the imbalances on foreign and domestic account and reversed the economy from one of inertial inflation to tendential deflation. It was this tendency to deflation that led to the exchange rate crisis under the Real plan. The best way to understand it is by referring to Minsky's favourite analytical technique: analyse the impact of a change in interest rates on balance sheets. But, in the present case it is the government balance sheet and the structure of its debt that will be of crucial importance. And, what will be required is an analysis of the impact of changes in interest rates on the net present value of the Brazil and Co.

### **A PUBLIC SECTOR DEBT DEFLATION PROCESS**

First, it is important to note that the success of the Real Plan was on capital inflows buttressing the nominal exchange rate anchor in the face of rising current account imbalances. The success of the Plan thus made necessary domestic interest rates that were sufficiently high to produce a sufficiently large international interest rate differential to sustain capital inflows. Any attempt to reduce rates unilaterally ran the risk of reducing the capital inflows and increasing vulnerability to foreign shocks. Given the size and structure of government debt and expenditures, high interest rates also meant permanent fiscal imbalance through the impact of interest service on the government deficit. The high interest rates that were required to ensure the capital inflows that kept the exchange rate stable, along with trade liberalisation, produced a rising import imbalance. The capital inflows in excess of what was required to finance the current account imbalance was countered by sterilisation of the inflows at negative carry that also increased the government deficit and thus outstanding debt. Any attempt to offset this vicious circle which did not involve interest rate reduction would require lower government expenditures, which along with the high interest rates produced depressed internal demand and lower growth — as well as lower tax yields. The Real Plan could not restore Brazilian growth with price stability because it contributed a distorted internal public debt structure and could not have adopted an expansionary monetary policy, even if the government had desired one.

In addition, the Real Plan was introduced in the same year as the Mexican Tequila crisis broke out in Latin America. This placed the entire strategy in jeopardy and required a policy response of extremely high interest rates to protect Brazil from contagion and preserve capital inflows. The result was to place further pressure on the fiscal deficit as the foreign balance continued to deteriorate as the exchange rate continued to appreciate in real terms. The decision to introduce a controlled nominal depreciation of the currency was finally taken in 1995, but the continued decline in the rate of inflation was sufficiently rapid that the new exchange rate

regime gave little relief to exporters and the real appreciation appears to have continued, although with a declining nominal rate.

Although the return of capital flows to Brazil in the 1990s started as short-term speculative flows, the stabilisation of the economy soon brought the return of foreign direct investors. This reinforced the negative impact of liberalisation on the trade balance. Brazil had been a relatively closed economy, and as such most Brazilian firms produced primarily for the domestic market. Thus, even the liberalisation of the import of capital goods by domestic firms did little to provide an offsetting increase in exports, while the operations of transnational corporations involving the final assembly of semi-finished goods all tended to increase the import content of exports and raise the trade deficit that would be associated with a given growth rate. Or, to put the point differently, the reduction in growth necessary to restore foreign balance was continually increasing over the period after the introduction of the Real Plan. This is a response similar to that of Mexico, but without the benefit of the linkage to the expanding US economy. Indeed, Brazil was enjoying an internal consumption boom.

But there is another, often unnoticed impact of international financial market integration and the use of high domestic interest rates to attract foreign investments. Since increasing global capital flows meant an increasing proportion of Brazilian public debt came to be owned directly or indirectly foreigners. Thus the rate of interest effectively paid to foreign holders became the domestic Brazilian rate. Further, increasing proportions of the debt were dollar indexed, but paid domestic interest rates. The net result was that an increasing proportion of the domestic Brazilian debt was indexed to the overnight domestic interest rate, and thus an increasing proportion of the externally owned debt was also linked to the domestic overnight rate. Just as profits on foreign direct investments, these interest earnings appear as a debit item on the services, or liquid balance of payments. They represent the same threat of instability as the unremitted profits of foreign direct investors.<sup>5</sup> Changes in domestic interest rates thus have an increasing impact on the current account deficit as well as on the fiscal deficit and they may be expected to move in tandem. This is a vicious circle that is similar to that caused by high interest rates under the period of hyperinflation. To attract the capital inflows required to keep the exchange on its target path and balance the fiscal and foreign deficits has required increases in interest rates that simply increase the size of the foreign and fiscal deficits. Fighting inflation through exchange rate stability via increased interest rates has brought price stability, but at the cost of the foreign balance which eventually undermines exchange rate stability. Indeed, this policy has not only immobilised the interest rate as a policy tool, but it has also blunted fiscal policy as a result of the impact of debt service on the deficit. Brazil is widely believed to have a

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<sup>5</sup> I have discussed the impact on financial instability of these flows in "Some Risks and Implications of Financial Globalisation for National Policy Autonomy," *UNCTAD Review 1996*, , March 1997.

fiscal crisis, but its ratio of fiscal pressure (tax take to GDP) is not far different from that of most developed countries and like Italy it has had a primary government budget surplus (although this has been due in some cases to the accounting of revenues from privatisation) — the deficit is entirely composed of debt service. Thus, continuous reduction in fiscal expenditure is required to offset the impact of interest service on the debt, while increasing exports are required to offset the effect of higher interest rates on the services payments of the current account balance.

While the success of the stabilisation policy in reducing inflation depended on large capital inflows, the interest rates that this required produced a deterioration in both the fiscal and foreign balances that eventually created doubts about the long-term success of the policy and a reversal of capital flows. In difference from Asia, virtually all market participants recognised that the policy was not tenable as a long-term development strategy, and the capital outflow occurred slowly, between July and January, rather than all at once. The result, however, was exactly the same. A full scale exchange rate crisis.

### **PRIVATE SECTOR STABILITY AFTER THE REAL PLAN**

Thus, the crisis in Brazil was due to the impact of rising interest rates on the public sector balance sheet. The natural question to ask is why the Minsky crisis did not occur in the private sector as it did in the Asian crisis and why the crisis was so much less severe. While the locus of crisis in Asia was private corporate and bank balance sheets, this was not the case in Brazil, where there were only isolated banking insolvencies<sup>6</sup> and no major corporate failures. As a result of the country's previous history of hyperinflation, the market for long-term capital was not well developed, and firms held little fixed interest debt. Banks, on the other hand, had survived the inflationary period by earning income from inflation arbitrage and treasury operations,<sup>7</sup> and had advanced little in term lending to the private sector. Thus the corporate sector was not highly indebted to the banking system (although many banks held corporate equity as an inflation hedge). In 1997 the average debt of the corporate sector was only 30 per cent of owners' equity. A survey of around 100 quoted Brazilian companies showed internal funds averaged just under 60 percent, and equity around 20 percent of total funding, for the

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<sup>6</sup> The Central Bank provided emergency dollar credits at below-market rates to Banco Fonte Cidam (which was subsequently sold to Banque Nationale de Paris) and to Banco Marka, both of which had taken derivative positions based on maintenance of the exchange-rate regime. Banco Boavista was sold to France's Crédit Agricole, and Grupo Espirito Santo of Portugal made large capital injections into its Brazilian investment banking operations.

<sup>7</sup> Inflationary transfers of income are estimated at some 4 per cent of national income and provided some 40 per cent of bank earnings.

first three years of the Real Plan.<sup>8</sup> Firms thus relied on internal funding or had direct access to rapidly developing equity markets. In addition they did not have large foreign-currency exposures.

Loans represent less than half of bank assets in Brazil, and an increasing proportion of lending was to households to finance consumption expenditures, much of which was in foreign currency and created a threat of bankruptcy among households not seen in either East Asia or the Russian Federation. However, private banks in June 1997 are estimated to have had only 15 billion real in foreign-exchange denominated lending (only 21 per cent of total loans). Only 19 per cent of their liabilities was foreign-currency denominated, although the figure may have been as high as 50 per cent for foreign-owned banks. Thus, banks do not have the kind of currency mismatches that characterized other recent crises.<sup>9</sup>

Furthermore, Brazil had just emerged from a major restructuring of the banking sector following the banking crisis that started in 1994-1995.<sup>10</sup> From July 1994 to December 1997 the central bank intervened in 43 banks, 32 of which were private, and liquidated all but one of the latter<sup>11</sup>. Strict supervisory and regulatory provisions were also introduced, with capital adequacy requirements stricter than those in the Basle Capital Accord.<sup>12</sup> As much as 20% of the Government's outstanding debt was created as part of this process of Bank restructuring. Thus, unlike in East Asia, it was the Government and the central bank which were most exposed in foreign currencies through the issue of dollar-linked debt to both foreigners and residents, in particular to banks which used it to hedge their exposure when providing forward cover to commercial clients.

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<sup>8</sup>Although the share of debt was rising and equity finance falling over the period. That this might be an overstatement of firm indebtedness is suggested by a independent analysis of the total volume of private sector loans to industry which shows a peak in 1993 and falls by over 50 per cent in the year of the introduction of the Real Plan; by 1996 volume had only reached about two-thirds of the 1993 level. See Tables 3 and 5 of Claudia Nessi Zonenschain, "Estrutura de Capital das Empresas no Brasil," *Revista do BNDES* Vol. 5, No 10 dezembro, 1998.

<sup>9</sup> Cf. IMF, Brazil: Recent Economic Developments. IMF Staff Country Report, No. 98/24, Washington, DC, April 1998.

<sup>10</sup> As part of the liberalization of trade and finance in the late 1980s Brazil liberalized the licensing of new banks by domestic (but not foreign) entities. Many of the entities founded since the late 1980s came to grief with the rise in interest rates that took place at the time of the Mexican crisis and during the attempt to calm the boom generated by the introduction of the *Plan Real*. 80 per cent of all interventions took place after the introduction of the Plan.

<sup>11</sup> If the period is extended to December 1998 the number of banks liquidated or absorbed by other banks rises to 76 out of a total of 271 with the cost of the restructuring reaching 11% of 1998 GDP.

<sup>12</sup> Further information on the restructuring of the Brazilian banking system can be found in IMF, Brazil: Recent Economic Developments, op. cit..

While an increasing proportion of capital inflows into Brazil were for direct investment, even when the inflows financed Brazilian imports of capital goods,<sup>13</sup> they were used to increase capacity to serve the large internal market and thus generated little in the way of increased export earnings for the service of external debt. One of the features of rapid development in East Asia had been the ability to insure that the inflows were invested in export capacity that provided foreign exchange for debt service. This reflects the higher share of investment in Asia compared to Brazil. Indeed, the difficulties started in many Asian countries when returns on such investments fell and the continuing capital inflows were invested in financial engineering and real estate.

The Brazilian crisis had other special features. Although it had widely expected been to produce a collapse in the entire region, or even a major global market break, thus far it has produced neither. In difference from Asia, Brazil is a relatively closed economy, its imports accounted for only around 1% of global imports in 1997. Further, regional integration is much more recent than in Asia; while 22% of Brazilian imports are from Latin America, 65 per cent come from developed countries; and about 16 per cent from Mercosur partners.

Whereas the East Asian crisis had been characterized as a private rather than sovereign debt crisis, the greatest foreign exposure in Brazil was that of the public sector. In East Asia the process of economic collapse was one of debt deflation, as the private sector sold domestic currency to repay foreign loans, and sold domestic stocks and even equipment to repay debt because of the extremely high internal interest rates. Brazil, on the other hand, while it also sold assets in an attempt to forestall the crisis, the sales took the form of the privatization of large portions of the public sector which covered a substantial proportion of the current account financing needs and had, if anything, a positive impact on the balance sheets of the entities involved.

In Brazil the major damage to the private productive sector was due to the impact on demand and capital costs of the attempt to avoid crisis by defending the exchange rate. Industry suffered from penal interest rates from the autumn of that year, that peaked at monthly rates of 4.5 per cent on working capital loans at the end of 1997 and never fell below 3.3 per cent during 1998 even though inflation had virtually fallen to zero. On the other hand, the principal focus of government policy was on improving the fiscal balance, through, inter alia, a reduction of expenditure by 3 per cent of GDP. The depreciation of the currency improved competitiveness without producing large losses on the balance sheets of private enterprise, but since the outbreak of the crisis Brazil (like East Asia before it) has been plagued by the disappearance of trade

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<sup>13</sup> Roughly 25 per cent of Brazil's imports are capital goods, while about 55 per cent are raw materials and fuels.

credits, and the improvements that have taken place in the foreign account have been primarily due to import cuts. Moreover, although the stabilization of the currency has allowed the Central Bank to reduce interest rates, to around 22 per cent by the beginning of the summer, these reductions have not yet fed through to private-sector lending rates.<sup>14</sup>

On the other hand, the crisis had also a number of positive aspects for the private sector. Banks had been large holders of dollar-linked government debt in their portfolios, and a number of investment banks reported record profits as the result of futures positions taken in anticipation of the depreciation of the currency. This is another reason for the relatively benign character of the crisis. Since Brazil was one of the first countries to have been hit by contagion from other regions, there was clear advance warning of possible difficulties. Further, it was widely accepted that the currency was overvalued. Thus foreign and domestic investors were given adequate time to make an orderly withdrawal of capital and arrange for necessary hedging, as well as to unravel complicated derivative strategies, well before the country ran out of reserves. Indeed, the devaluation had been so widely anticipated that several investment banks incorporated the impact of a possible devaluation in their growth forecasts for 1999 as early as the last quarter of 1998. Many private banks returned to the international capital markets at the end of the first quarter before the Government launched a Brady swap issue in April.

After the East Asian crisis it became widely recognized that target levels of fiscal surpluses agreed with IMF had contributed to the depth of the recession. Thus they were revised to allow Governments the possibility of running fiscal deficits. However, in Brazil this has not been the case, and even larger primary surpluses to offset the increased costs of debt service caused by the depreciation of the currency have been part of the conditions for the provision of multilateral lending. One reason for this may have been fear that the devaluation would rekindle hyperinflation. But after a one-off rise in prices the inflation rate has come down to levels similar to that before the crisis. Nevertheless, even though the entire fiscal deficit is due to interest payments and the effects of higher obligations on foreign-currency debt brought about by the collapse of the currency, Brazil is aiming for a primary surplus of 3.2 per cent of GDP in 1999.

While the crisis in Brazil has had a relatively limited contagion effect, its domestic implications are rather similar to those for the Russian economy. In the run up to the

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<sup>14</sup> From October 1998 to May 1999 consumer credit rates increased by 21 per cent, while the Central Bank's base rate fell by 46 per cent. Rates on commercial lending fell by only 4 per cent. The spread between bank rate and the consumer lending rate was over 12 times and 5.5 times in May; see Study by the National Association of Financial Executives, reported in *O Globo*, 16 May 1999, p. 38.

devaluation, forecasts of the impact on the real economy of the high interest rates and government austerity necessary to defend the exchange rate were for a contraction of 4-6 per cent in 1999. The implication was that the key to reducing the government deficit and debt was unlikely to lie in raising the primary surplus, since reduced spending or increased taxes needed for such a fiscal adjustment would squeeze the private sector and prove counter-productive. Rather, interest rates would need to be reduced below the growth rate of the economy, failing which there would be a risk of prolonged economic stagnation as restrictive policies were increasingly applied to reduce the debt but simply creased the deficit and outstanding debt. The floating of the currency reduced the need for these restrictive measures to manage the currency and thus growth forecasts were quickly revised upwards. Thus, Brazilian policy faces a dilemma which cannot be resolved by measures that restrict output growth below its potential.

Is this a crisis? Delfim Netto estimates that the current rate of growth of the Brazilian labour force is around 2.7% per annum and that productivity growth is around 3.5%, which means that Brazil requires a growth rate in excess of 6% to keep the level of unemployment from rising. There seems to be no plausible way the economy will be able to generate that rate of growth without drastically reducing interest rates. Just as Italy and the UK in 1992 were judged to have exchange rate targets (and thus interest rate policies) that were incompatible with politically acceptable rate of unemployment, Brazil was also so judged by international markets by the end of 1998. Given the interest rates that prevailed in Brazil before the outbreak of the crisis, the policy was already untenable, since export growth was not sufficient to cover the increasing deficit on the services balance. The Asian crisis forced the issue by pushing up interest rates to levels which produced visible changes in both the foreign and fiscal balance and forced the introduction of fiscal austerity policies which made the impact on employment growth clear and visible. The slow drain of reserves and the slow flight of foreign investors<sup>15</sup> meant that a meltdown of the Asian style was avoided, but no amount of additional reserves in could change the basic fact that the interest rate on most of the outstanding debt obligations was higher than either the rate of growth of the economy or the rate of growth of exports, and thus neither the fiscal nor the foreign balance could improve without a drastic fall in interest rates. The exchange rate thus had to be left to the market.

There are some who suggest that this will be achieved as Brazil produces a large export surplus as a result of the devaluation. But, much like the initial Asian response, and given the Brazilian structure of trade after liberalisation, the trade surplus is being produced through a fall in imports that is more rapid than the fall in exports, as the sharp decline in incomes cuts

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<sup>15</sup> US banks cut their exposure to \$18.6 billion by the end of September, a reduction of 25% between June and end September.

consumption and imports. This suggests that any decline in interest rates that leads to a resumption in growth high enough to reduce unemployment is likely to recreate the foreign imbalance, requiring a return to high interest rates and more fiscal austerity leading to another reduction in growth.

## **POLICY ALTERNATIVE**

The real question facing Brazil in identifying an alternative strategy is what the aim of policy is to be. Is it to borrow more from abroad by restoring confidence in the currency and attracting foreign lenders or is it to earn more by attracting foreign buyers for Brazilian output? Is the aim of fiscal policy to reduce the deficit by cutting expenditures or by increasing the rate of growth of gdp. If it is to be the latter, then the recent return to capital markets is not a sign of health, but of weakness. The failure of exports to expand is not a sign of health, but of weakness, as is the recovery of the exchange rate. If improvement is an increase in capital inflows, an appreciation of the currency, but interest rates above 20%, then the Brazilian crisis, following the path of Mexico, will not be the last.

In domestic capital markets, lenders are supposed to exercise diligence and governance in order to insure that no borrower becomes excessively leveraged so as to present a threat to the stability of the financing system. The example of LCTM in the US suggests that even in the most advanced form of governance, supervision and control, the market is not capable of imposing discipline in time to limit exposures to safe levels. This has now been admitted even by those who champion the minimum amount of regulation and maximum amount of freedom in capital markets (cf President's Working Group on Financial Markets, 1999, p. viii). Global market mechanisms are even less well developed, which suggests that the responsibility for limiting leverage to that which is compatible with domestic economic stability must lie with national governments. This implies some form of rationing of capital inflows when they exceed that which an economy can safely absorb in the context of its domestic stability policies. Given the strong qualifications required for the validity of the Modigliani-Miller theorem (which says that capital structure has no impact on a firm's performance) finance economists have investigated the optimal degree of leverage for an individual firm. Perhaps it would be more appropriate if instead of discussing the control of capital flows the question were posed in terms of the optimal degree of leverage for a developing country.

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