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Was there an alternative to the Brazilian crisis?

Houve uma alternativa para a crise brasileira?

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RESUMO: Diferentemente da Ásia, altas taxas de juros e taxas de câmbio estáveis associadas ao Plano Real não produziram deflação da dívida corporativa devido ao baixo endividamento corporativo no Brasil. Em vez disso, altas taxas de juros fizeram com que os saldos externo e fiscal se deteriorassem, reduzindo a confiança. Qualquer tentativa de reduzir as taxas de juros trazia a ameaça de fraqueza da moeda e o risco de inflação. A crise deveu-se à dependência de altas taxas de juros para atrair fluxos de capital insuficientes para produzir investimentos que proporcionavam uma taxa de crescimento satisfatória.
PALAVRAS-CHAVE: Crises financeiras; fluxos de capitais; Plano Real; globalização.

ABSTRACT: In difference from Asia, high interest rates and stable exchange rates associated with the Real Plan did not produce a corporate debt deflation because of the low corporate indebtedness in Brazil. Instead high interest rates caused both the foreign and fiscal balances to deteriorate, reducing confidence. Any attempt to reduce interest rates brought the threat of currency weakness and the risk of inflation. The crisis was due to the reliance on high interest rates to attract capital flows which were insufficient to produce investment which gave a satisfactory rate of growth.
KEYWORDS: Financial crises; capital flows; Plano Real; globalization.
JEL Classification: F41; F65.

I. INTRODUCTION

There are two basic approaches that can be taken to providing alternative views about how the global trade, production and financial system can be made more stable. One is based on the presumption, frequently advanced by the US Treasury, that the global allocation of capital is both efficient and stable when capital is free to seek the highest available returns without impediment or administrative restriction. If the system is unstable, it is because countries are insuffi-

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ciently prepared, their economic institutions are not sufficiently robust, or because their domestic policy choices are incoherent and contradictory. The solution that is proposed is to strengthen the economic institutions and to ensure sustainable and coherent macroeconomic policies.[1]

The second approach is that there are systemic, endogenously generated instabilities in an economic system based on free goods and capital markets which cannot be remedied by means of micro solutions, such as writing better debt contracts or providing better regulation and supervision of financial institutions. This is the position adopted in this paper. It argues that the financial crises that have taken place since the late 1970s are systemic, and as such can be expected to continue. Making the system more stable means changing its basis in free, unhindered flows of capital across countries.

II. THE LESSONS OF STABILIZATION IN THE 1990'S

One of the most remarkable aspects of the recent Asian crisis was the good macroeconomic fundamentals of those countries involved in the crisis as compared with the Latin American countries that had previously been the victim of repeated financial crises. This led analysts to concentrate on the differences in the characteristics of the Asian crises and the Latin American crises and to criticism of IMF policies as inappropriate to countries facing rapid reversals of capital flows. It has become common to characterize this difference as one between "current" account and "capital" account crises. The ideals that countries with weak macroeconomic fundamentals, viz. fiscal laxity backed by central bank monetization of government debt, leads to high inflation and excessive current account deficits that eventually erode the credibility of the exchange rate and produce speculative attacks leading to an exchange rate crisis. Countries with fiscal rectitude and independent central banks will have low inflation experience and this good performance attracts large capital inflows that eventually produce current account deficits that erode the credibility of the exchange rate and leads to a reversal of capital flows that produces an exchange rate crisis.[2]

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[1] The case for capital account liberalization is a case for capital seeking the highest productivity investments. We have seen in recent months in Asia – as at many points in the past in other countries – the danger of opening up the capital account when incentives are distorted and domestic regulation and supervision is inadequate. Inflows in search of fairly valued economic opportunities are one thing. Inflows in search of government guarantees or undertaken in the belief that they are immune from the standard risks are quite another. The right response to these experiences is much less to slow the pace of capital account liberalization than to accelerate the pace of creating an environment in which capital will flow to its highest return use. And one of the best ways to accelerate the process of developing such a system is to open up to foreign financial service providers, and all the competition, capital and expertise which they bring with them. The recently concluded global financial services agreement demonstrates that countries recognize these beneficial effects of external liberalization"(Summers, 1998).

[2] It is now common to identify this difference as between current account and capital account crises. I

Certainly, there were substantial differences in the economic fundamentals of the Asian countries that experienced crisis in 1997 and the conditions of the countries that experienced crisis in Latin America in the 1980s and 1990s, yet there were some remarkable similarities in their domestic policies and the behavior of the exchange rate.[3] Further, it is unclear whether the IMF policies were any more appropriate to Latin American current account crises caused by inappropriate domestic policy than they were to the case of the Asian crises that were based on excessively volatile capital flows. Indeed, the Latin American economies that have been victim of financial crises in the 1990s have been those who have been most active in their adoption of IMF style stabilization policies. Against this background I want to argue that it is the domestic stabilization policies, whether introduced autonomously or under pressure of the need to borrow from the IMF, that are inherently destabilizing in a world of globally mobile financial or productive capital investments. It is for this reason that it is imperative to find an alternative approach to domestic stabilization policy for the emerging economies if free capital flows are to become part of the new global order.

The dependence on capital flows as an integral part of such stabilization programmes means that monetary policy is called upon to play a role for which it is not designed. The result is excessively high real interest rates that change the structure of government expenditures away from current account expenditures toward capital account expenditures, and nullify the operation of some standard economic stabilizers. These come in two forms, one is the operation of the standard Keynesian multiplier and the other is the role of monetary policy itself. First, when interest payments become a substantial proportion of government expenditures[4] (and compose the entire government deficit) the operation of the so-called Keynesian automatic stabilizers is disrupted (see Kregel, 1994-95). This is aggravated if there is an

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draw a rather different distinction in "East Asia is not Mexico: The Difference between Balance of Payments Crises and Debt Deflation", in Tigers in Trouble, Jomo, K.S. (ed.), London, Zed Books, 1998; the difference between a capital account crisis and a debt deflation process is drawn in "Yes, 'It ' Did Happen Again – A Minsky Crisis Happened in Asia," Jerome Levy Economics Institute Working Paper # 234.

[3] There is one aspect of the crisis in Asia reminiscent of the experiences in Latin America in the 1980s and 1990s. That is the rapidity with which the Thai devaluation spread to other seemingly fundamentally strong economies in the region. Just as economists insisted on the fundamental strength of Indonesia as Thailand collapsed, those with a long memory will remember similar statements made about Brazil as Mexico defaulted in 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 article 4 consultations) 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 Thai rescue in July of 1997, Brazil was one of the creditors represented in the London Club when Poland declared it was unable to meet its debt service commitments in the Spring of 1982. It is also mundane to the argument made below that Korean banks were large, leveraged holders of Brazilian bonds at the outbreak of the Asian crisis.

[4] Brazil's Federal government is currently spending more on interest payments on the public debt than on government wages and salaries.

implicit money supply rule since this means that interest has to be automatically rolled over into increasing amounts of debt, virtually eliminating the impact of government expenditure on aggregate demand (cf. UNCTAD, 1995, part II, chapter IV). This reinforces the corollary proposition that the ratio of debt to income cannot be stabilized when the real rate of interest on the debt is higher than the real rate of growth of income since it moves these two variables in the opposite (and destabilizing) direction. Finally, there is the point that was first raised by Sargent and Wallace that in such conditions, it becomes impossible to impose a money supply rule since the payment of interest will be causing deposits to grow at a rate that exceeds the desired money target growth rate. All of these propositions are applicable to stabilization policy in any developed country. Yet, they seem to have avoided them, while developing countries have not.

III. THE ANATOMY OF THE ENDOGENOUS INSTABILITY OF STABILIZATION POLICIES

The main similarity of recent financial crises is that they appear to have been initiated by a sharp reversal in capital inflows that seems to be generated by an endogenous process of deterioration of economic conditions caused by the capital that has flowed into the country in response to successful application of internal stabilization policies. This produces sharp divergences in either interest rates or growth rates relative to the rest of the world. In a word, successful stabilization policy carries the seeds of its own destruction in the form of excessive capital inflows to take advantage of the return differentials. This is a rather different approach than that which is now commonly adopted by mainstream economists critical of the traditional explanation of the crises, i.e. self fulfilling expectations. It also differs from the explanation that suggests that the liberalization of markets that is part of most stabilization programmes raises the expected returns to investment in the country because of the anticipated improvement in economic efficiency and thus on the return to capital invested in the country. Rather, the increased flows appear to be more closely linked to the removal of controls on capital account and the introduction of restrictive monetary policy, privatization, movements in foreign interest rates and diversification by international institutional investors. In the 1980s, when banks earnings were suffering from domestic competition, they looked to international investments to increase return on equity and market share. Again, as yields in developed countries fell in the 1990s, competition between institutional money managers increased investments in emerging markets in order to offer their clients attractive yields. In both cases, it was more a fall in domestic returns in conditions of increasing domestic competition than the

increased returns in developing countries that has provided the motor behind the capital flows that have been attracted by these policy changes.[5]

There are a number of factors which could be outlined, but the most important is the introduction of tight monetary policies and increased freedom for foreign investors that created interest rate differentials that were exploited by investors. The existence of large arbitrage flows taking advantage of large international interest rate differentials has been an integral part of each experience of rapidly rising capital inflows that has preceded financial crises.

It is a characteristic of arbitrage that it should not be permanent; that it is eliminated in its pursuit. Yet the interest rate differentials that attract foreign capital inflows are interest rates of corporate debt determined by the market-determined rates, they are usually the result of economic policy decisions that influence rate structures. It is now common to say that the flow of capital in free international markets punishes unsustainable policies. However, the interest rate divergences that produce these flows in the case of financial crises have usually been associated monetary policies designed to eliminate domestic inflation, or are linked to "structural adjustment" policies that are designed to prepare a country for participation in the international trading system by reducing inflation rates and balancing government budgets.

Unlike traditional arbitrage, there is little reason to believe that capital flows based on the arbitrage of policy created interest rate differentials will be self-eliminating; indeed they may be self-reinforcing.[6] When this is the case such arbitrage flows make the pursuit of domestic stabilization more difficult. For example, interest rate differentials caused by the introduction of tight fiscal and monetary policies designed to combat domestic inflation that attract foreign arbitrage flows increase domestic credit and liquidity and thus offset the restrictive monetary policy unless they are sterilized. If the inflows go to the private sector, sterilization requires issuing more domestic debt, if the foreign inflow is a direct purchase of government debt it represents borrowing foreign exchange reserves. In either case, it means borrowing at the domestic interest rate to acquire foreign funds that can only be invested at the lower foreign rate. This is "negative carry", i.e. a loss, for the central

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[5] I have elaborated this theme in "Flujos de capital, Banco Mundial y crisis financiera depués de Bretton Woods," *Comercio Exterior,* vol. 49, nº. 1, enero 1999, pp. 7-15.

[6] According the basic foreign exchange market theory, interest rate differentials should be offset by risk adjustments comprised mainly of expected changes in future exchange rates. According to the interest rate parity theorem, interest differentials should be offset by forward discounts or premia – or expected depreciation or appreciation – that offset the differential. Persistent capital flows suggest that this process is not operative. Many have suggested that it is the pegging of the exchange rate that makes this so, and that the negative carry is the opposite side of the profit earned on the interest arbitrage. However, it occurs even in the absence of formal pegging of the exchange rate. This way of looking at things highlights the inconsistency of stabilization policies and free capital inflows, for the high interest rate differentials that are required to keep domestic monetary conditions tight produce capital inflows that create stability in the exchange rate that precludes elimination of the arbitrage profit and any expectation of the depreciation of the currency large enough to offset the interest arbitrage.

bank or the Treasury, and it is important to note that it represents the other side of the positive carry that comprises the arbitrage profits for the foreign investors.[7]

Although this is investment at a loss, the inicial impact of such a policy will be a form of window dressing in which domestic reserves increase and reinforce the impression that the currency is strong which is the result of the capital inflows. However, the losses from the negative carry will eventually emerge as an increase in the budget deficit, leading to an increase in outstanding public debt. If there are direct sales of debt to foreign holders, the interest payments represent an accumulating claim by foreigners that will emerge in a deteríoration of the services accounts of the balance of payments. If the process of sterilization puts additional pressure on interest rates the interest rate differential is increased rather than reduced and leads to more arbitrage inflows.

Unless the inflation rate is brought down very rapidly the upward pressure on the exchange rate will mean a real appreciation that damages domestic competitiveness and causes a deterioration in the trade balance that will reinforce the deterioration in the services account caused by direct holdings by foreigners of domestic debt. The strength of the exchange rate also makes restructuring of domestic industry towards exports more difficult just as high interest rates make it more costly and low internal demand growth makes internal funds less abundant, countering the required shift in domestic production towards tradables and higher technology internationally oriented production. This also makes foreign domestic investors a more necessary part of the restructuring of the economy since they do not face domestic capital costs nor rely only on domestic markets and have no vested production facilities.

The anticipation of successful stabilization of the domestic economy created by the introduction of an active restrictive domestic policy in the presence of increased openness of goods and capital markets thus produces capital inflows that lead to a deterioration in the current account and fiscal position and an appreciation of the real exchange rate. Despite the increasing reserve position of the central bank, this is clearly an unsustainable policy combination. A change in international interest rate differentials, an external shock, some weakness in the exchange rate, or a butterfly flapping its wings in the Galapagos, may cause changes in foreign investors' assessment of the success of the stabilization policy that leads to a decline and then a sharp reversal of capital flows. As long as individual economies require different adjustment policies because of different internal conditions or because of asymmetry in the international business cycle, global capital flows will

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[7] In the simplest case, ignoring spreads, the foreign arbitrager borrows at the dollar interest rate and buys government securities making a profit on the difference. The Central Bank can invest its increased dollar reserves at the dollar rate, taking a loss on the difference. In the case of sterilization the foreign arbitrager buys foreign currency and uses it to buy assets from domestic residents. The Central Bank then has to recover the domestic currency by selling bonds to domestic residents. The arbitrager's profit is then the difference between the dollar rate and the domestic asset return, while the Central Bank's loss is the difference between the domestic bond rate and the dollar Treasury bill rate.

arbitrage across the interest rate differentials created by these policy differences. The arbitrage will eventually render the policies unsustainable, rather than eliminating the arbitrage because the success of the policies allows interest rates to be reduced and the interest differentials to be eliminated. It is often stated that the outflow of funds causes the unsustainability of domestic policies to be exposed. But, it is important to recognize that this unsustainability has often been induced in large part by the impact of the flows themselves on the operation of the domestic stabilization policies.

One component that usually accompanies the reversal of flows is the discovery of structural weakness in the governance and regulation of the banking system. Large capital inflows usually create over extension in bank lending that creates difficulties when the flows are rapidly reversed; the result is instability or a collapse of the banking system. This instability in the banking system is usually blamed on inappropriate domestic regulation of the financial sector or lax supervision of the implementation of regulations. While it is certainly true that regulators and supervisors are notoriously slow to adjust to changes in the structure and activity in financial markets, there is no known case in any country, developed or developing, of a large increase in flows into the banking sector not leading to an over extension of lending, a decline in the quality of assets and increased laxity in risk assessment. This was as true of the Florida banks in the 1927 property lending crisis as it was of US banks and thrift institutions in the late 1980s.

Lending excesses are in general caused by sudden large increases in inflows of funds or from recent liberalization of controls on acceptable areas of lending activity. Thus in a number of crises the increase in bank lending was the result of financial liberalization that allowed banks to enter areas of activity that had been forbidden; the increased lending serving primarily to finance a rapid increase in asset prices and producing a so-called asset bubble that made returns appear higher than in other areas of the globe and further increased the attractiveness of the country to foreign money managers. But over-lending, extension of lending to property and finance companies and the associated bubbles in asset prices was not the only factor leading to collapse of banking sectors in most crises. An equally important factor was the existence of substantial currency mismatches on corporate and financial balance sheets. This is also linked to the existence of interest rate differentials and is just another aspect of the destabilizing nature of large capital inflows.

In most crises the capital inflows were not only directed to government debt, but also served to fund domestic lending, either intermediated through the banking system or directly by domestic firms borrowing in foreign currency terms. It was motivated by the size and persistence of existing interest rate differentials. It is important to note that this mismatching not only existed on corporate balance sheets, but also in the household sector, as the liberalization of the financial sector and the goods sector led to financial institutions offering consumer credits that had not previously available to households.

The existence of foreign currency exposure represents two risks to stability. One is interest rate risk, for the duration of the foreign lending is usually of short

duration and will be governed by international interest rates. It may then require that corporates or households are able to make rapid repayment and for there to be substitution with domestic credit, which conflicts with the restrictive stabilization policy.

The second is exchange rate risk. Large changes in exchange rates can produce rapid changes in the domestic currency value of liabilities, without any offsetting change taking place in asset values for banks or companies or households without sources of foreign earnings. A depreciation of the exchange rate thus leads to an instant capital loss for banks, firms and households and a concomitant decrease in capital and wealth. A sufficiently large exchange rate change may not only produce illiquidity – the inability to realize the value of assets to meet liabilities, but also insolvency – the shortfall of the value of assets to cover liabilities at existing realization prices. Since a rapid capital outflow will usually lead to a depreciation of the exchange rate, there will be an automatic increase in the fragility of banks', firms' and households' balance sheets.

The only way to stem these losses will be to repay the debt, or to hedge the remaining risk. This requires purchase of foreign currency and places further pressure on the exchange rate. Thus in those cases where there is substantial foreign currency lending by banks and borrowing by firms and households, capital outflows are usually accompanied by sharp movements in exchange rates that produce bank failures and corporate bankruptcies.

This brings up the question of the exchange rate regime, and the adjustment of that regime between stable and floating rates. Indeed, a number of economists place their interpretation of financial crises on the inappropriate maintenance of fixed exchange rates. However, for most countries the experience of stabilization has been that the stability of the exchange rate is often the result of nothing more than the strength of the flows themselves and the build up in the size of the borrowed reserves that is created through the sterilization that is required to preserve domestic stabilization policy. They may also be conditioned by the position of the dollar; for example in the Latin American crisis the dollar was chronically weak throughout the inflow period. This creates another self-reinforcing process in which the inflows create the exchange stability that makes foreign lending appear less risky, as does the build up of foreign currency lending by banks and borrowing by firms. It is this second aspect that is important in converting capital outflows into a full scale crisis since a collapse of the exchange rate regime, ora sharp change in the value of a foreign currency as in the case of the appreciation of the US dollar in the early 1980s, not only produces a withdrawal of capital, it has a direct effect on the financial stability of banks and firms and leads to additional speculative pressure on the currency. Thus, the decision to sell the local currency is driven by the impact of devaluation on the balance sheets of economic agents, rather than on their expenditure decisions. With mismatched balance sheets additional losses can only be avoided by either hedging or repaying, both of which means selling the currency in the amount of the original borrowing. This will obviously produce unbalanced market conditions and produce exchange rate adjustments that are far

in excess of what might have been considered sufficient to produce an adjustment in the foreign balance and speculation of further falls dominate the market.

Thus, the similarities of the recent experience of financial crises appear to initiate from the introduction of a domestic stabilization policy in which money growth is restricted, fiscal budget deficits are cut, and privatization of state enterprises is introduced along with reduction of barriers to foreign competition in goods markets, liberalization of capital flows and deregulation of the financial system along with the use some sort of foreign exchange rate anchor via an adjustable peg exchange rate. The tight monetary policy creates an interest rate differential sufficiently large to attract arbitrage capital inflows that turns the adjustable peg currency regime into a quasi-fixed exchange rate. The deregulated banks are free to lend internally in areas such as real estate and consumer finance that had previously been closed to them, and banks and domestic firms are free to borrow abroad, thereby reducing the capital costs created by the high domestic interest rates, but some of this advantage is offset by a usually underestimated exchange rate risk exposure. The ensuing real appreciation of the exchange rate weakens the foreign balance, while the attempt to sterilize the inflows leads to even higher interest rates and weaker internal conditions, as well as higher deficits as high interest rate domestic bonds are issued to sterilize the inflows that are invested at low foreign rates. Increasing foreign ownership of domestic debt increases the deficit on services account and eventually either the foreign balance or the fiscal balance no longer responds to the government policy, or the domestic conditions deteriorate substantially as demand is compressed, creating conditions in which a rise in foreign rates or a fall in domestic rates leads to an outflow of capital, a collapse of the exchange rate and a massive capital loss on the balance sheets of banks and firms carrying unhedged foreign currency exposure. In an attempt to cover these losses the demand for foreign exchange creates massive imbalance and a free fall in the currency, producing widespread corporate bankruptcy and bank failures. The crisis is not due to unsustainable policies, but with an attempt to introduce sustainable policies in conditions of completely free capital markets. It ends with the impossibility of the success of those policies due to the impact of capital flows. Such crises have occurred when stabilization has been introduced as a response to domestic instability via an IMF structural adjustment programme, or as an endogenous response to conditions of hyperinflation, as in Brazil, but they have also occurred when such policies have been practiced with success over substantial periods, as in Asia. The problem is not with the policies involved, or whether the crisis is a current account or a capital account crisis, the problem is systemic, and involves something like a winner's curse. A country that manages to introduce a stabilization policy that looks as if it will be successful will win the prize of large capital inflows which make the continued pursuit of the stabilization policy destabilizing and eventually produce a reversal of the flows and a financial, banking and exchange rate crisis.

IV. WAS BRAZIL'S REAL PLAN FOR STABILIZATION ENDOGENOUSLY UNSTABLE?

To what extent does this explanation apply to Brazil? And why has Brazil managed to avoid a full-scale financial crisis? Brazil offers a good example of the difficulties caused by an excessive reliance on interest rates in the introduction of stabilization policies. Indeed, Brazil attempted a series of such policies, starting with the Cruzado Plan through to the Real Plan, to bring inflation under control. Unlike many developed countries, Brazil did not take these steps because inflation was impeding growth, indeed the real growth rate was over 7% in 1986 when these plans were first started, and has never returned to that level since. Further, there was little problem with the 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 (in many countries this was primarily through 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 provided increased export capacity. Like most other heavily indebted Latin American countries in the 1980s, the size of the public debt was increased through the nationalization of virtually all external debt after 1982. However, 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 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 a rapidly declining real value of debt, it is difficult to convince the private sector to hold it, and the solution was found in the eventual introduction of fully indexed bills with high liquidity. The logical consequence was that as long as the government required financing, there could be no money supply policy independent of this objective. Indeed, given the full indexing, 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 real money supply. As a result 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, interest rates themselves become a major component of governmem expenditure and thus of the government deficit. This means they become 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 characterized 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. There was also no impact of high interest rates on the exchange rate, given the size of the inflation differential and the policy of preserving competitivity through devaluation.

The important point of difference from other Latin American economies is that Brazil was not building up an excessively large imbalance on foreign account, nor was the exchange rate becoming overvalued, net public debt was 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 this implied the impossibility of controlling monetary aggregates. The only policy tool available to try to stem the hyperinflation was interest rate policy. However, this only 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.

It would be an inappropriate simplification to say that all of Brazil's difficulties in breaking out of its hyperinflation were caused by the excessive dependence on the interest rate as a policy tool. However, the reliance on high interest rates not only reinforced the inflation that spiraled into indexed inertial hyperinflation, but as in many other similar cases, it impeded the full development of private long-term capital markets found in developed countries. Thus when liberalization called the system of government directed development financing into question, there was no structure available to take its place. The financial system 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 liberalization from the multilateral financial institutions and the Collor government.

The key to breaking out of what was becoming hyperstagflation was thus to reduce the reliance on interest rates as a policy tool and to reduce the level of interest rates. Two factors would initiate this process. One was the liberalization of foreign trade introduced the Collor regime in 1990, the other was the return of capital flows 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. This solution was basically built on the idea that Latin America would never be able to repay its debts to commercial banks, so that it would have to borrow in private international capital markets to do so. In Brazil international foreign exchange

reserves more than doubled between 1991 and 1992 despite the fact that the Collor Plan had not succeeded in reducing the 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 liberalization of foreign trade was accelerated.[8] Paradoxically, it was this process of liberalization that provided the background that allowed for the success of the Real Plan.

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. And interest rates continued to be the major instrument of economic policy. What had changed was that the Real Plan was introduced in the new post-Brady world of restored capital flows and the developed country obsession with portfolio diversification and 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 of as much of 15% in the Real-dollar rate, which was intended to have been maintained at dollar parity, and contributed to the fall in prices. The introduction and early success of the Real Plan thus reinforced the return of net capital inflows, and caused a dramatic reversal of the exchange rate policy of the previous period; the real appreciation of the Real produced a growing payments imbalance in the new context of liberalized foreign trade.

The foreign capital flows that matched the growing foreign imbalance also had an impact on fiscal conditions, since the Central Bank adopted a policy of sterilization of inflows in order to protect its inflation fighting monetary policy, thereby creating "negative carry" on its foreign exchange reserves that fed directly into the current budget deficit. This deterioration in the fiscal positions was reinforced by the impact of the rapid decline in the inflation rate. Just as banks had been able to make politically influenced loans in the knowledge that inflation 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 programmed 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 thus created rising real incomes as prices slowed more rapidly than other asset prices and the prices of more liberalized imports fell with exchange rate appreciation. This led to a rapid increase in imports. Finally banks were forced to find real lending business to replace inflation-float, and start-

[8] Delfim Netto (1998) notes that Brazil went from being a net exporter to being a net importer of cotton, with Arge tina being the main beneficiary.

ed 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, it had not solved the basic imbalance of the economy represented by the reliance on high interest rates as the single policy tool. Just as high interest rates had reinforced the hyperinflationary tendencies in a fully indexed economy, high interest rates reinforced the imbalances on foreign and domestic account and produced an endogenous movement towards deflation in the economy.

First, it is important to note that the success of the Real Plan was buttressed on the exchange rate stability that was produced by the steady inflow of foreign capital; the plan thus virtually instituted a permanent policy of high relative interest rates and a large interest rate differential with the rest of the world since any attempt to reduce rates ran the risk of increasing vulnerability to foreign shocks. Given the size and structure of government debt and expenditures, this meant permanent fiscal imbalance. The high interest rates that were required to ensure the capital inflows that kept the exchange rate stable, along with trade liberalization, produced a rising import imbalance that was countered by sterilization of the inflows which increased the negative carry on foreign reserves and thus increased the government deficit and thus outstanding debt. Any attempt to offset this vicious circle would require lower government expenditures, which along with the high interest rates would led to depressed internai 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 stabilization of the economy soon brought the return of foreign direct investors. This reinforced the negative impact of liberalization 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 liberalization 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 benefít 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.[9]. 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 these 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 immobilized 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 fiscal crisis, but its fiscal ratio is not far different from that of most developed countries and like Italy it has had a primary surplus (although this has been due in some cases to the realization of revenues from privatization) – the deficit is entirely composed of debt service. Cuts in fiscal expenditures are required to offset the impact of interest payments just as increasing exports are required to offset the effect of higher interest rates on the services payments of the current account balance.

This scenario looks very much like that sketched out in the introduction. It was the success of the policy that attracted the capital inflows, but this required interest rate policies that produced 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 recognized that the policy was not tenable, and the capital outflow occurred slow-

[9] I have discussed the impact on financial instability of these flows in "Some Risks and Implications of Financial Globalization for National Policy Autonomy", *UNCTAD Review 1996,* March 1997.

ly, between July and January, rather than all at once. The result, however, was exactly the same. A full scale exchange rate crisis.

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. 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[10] 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 liberalization, 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 consumption and imports. This suggests that a decline in interest rates that lead 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.

V. POLICY ALTERNATIVES

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.

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[10] US banks cut their exposure to $18.6 billion by the end of September, a reduction of 25% between June and end September.

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 intime 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: 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 for 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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