Working paper No.70

Capital Flows, Crisis and Adjustment：
The Case of Brazil

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November 1998

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1. Introduction

In July 1994 Brazil launched a stabilization program aiming at reducing inflation. The latter had, for over 20 years, plagued the Brazilian economy and shown extreme resilience to all policies implemented to bring it down. The Real Plan — as the 1994 program is known — differed in several ways from the previous attempts at reducing inflation: on the one hand, it did not resort to "extra-market" mechanisms, like price and wage freezes or breaching of contracts, to obtain a sudden fall of inflation; on the other, it emphasized the need to promote structural reforms in the economy with the goal of reducing State intervention, liberalizing trade and enhancing the scope for foreign investments. Central to the macroeconomic strategy was a reduction in fiscal deficits — the basic factor underlying the very high levels of inflation then prevailing — and a change in the exchange rate policy — which would be crucial to the economy's de-indexation process.

In order to be successful, de-indexaton of the exchange rate would have to rely on increased capital flows, as an expected, and to some extent desired effect of stabilization would be a reduction of trade surpluses, and thus a worsening of the country's currrent account position. Those flows had already been on the rise since around 1992, attracted by a perceived change in policies towards foreign capital, as well as by large interest rate differentials. After the Real Plan they would take on a new character, as privatization and trade liberalization would stimulate increased flows of foreign direct investment, and stability prospects along with a tight domestic monetary policy would lead Brazilian firms and banks to borrrow abroad on a medium- and long-term basis.

The first challenge faced by this strategy was the Mexican crisis around the end of 1994 and beginning of 1995. Capital flows suddenly dried, forcing a change in the exchange rate policy, which under the impact of large capital inflows and free of government's market intervention had appreciated considerably right after the reduction in inflation. The new policy — a sliding narrow band of fluctuation — would set the exchange rate to gradually recover its level in real terms, a process that continues until now, three and a half years after its inception, with the exchange rate being nominally devalued around 7.5% a year.

A successful first round of voting on structural reforms in the Congress, along with very high interest rates, set the stage for a rapid return of external capital flows, allowing foreign reserves to recover rather quickly, in spite of relatively large current account deficits. Privatization was also decisive in this process of attracting foreign investors into the country. However, even if improving gradually over time, fiscal deficits remained high, constituting Brazil's main source of vulnerability.

Another source of concern was the situation of Brazil's financial system. One of the consequences of reducing inflation to very low levels has been that banks lost their major source of revenues — namely, floating with zero interest rate demand deposits or with savings and time deposits indexed at below-inflation rates. Since part of Brazil's inflationary process included the government providing indexed bonds as a means of preventing flight from domestic currency, such was a zero-risk highly profitable activity. As noted in section 4.1, below, the financial sector was oversized by any international standard, and in a low inflation environment it would have to go through deep restructuring. In the immediate aftermath of inflation reduction, the banks' strategy was to switch from floating short term funds to enhancing their loans. The expansion however was so fast, and in many senses so careless that, in spite of a tight monetary policy and credit controls, it eventually led to increased financial fragility as risk management considerations gave way to aggressive strategies aiming at restoring the very high, inflation-driven returns of the past.

By mid-1995, with early signs that a market driven reaccomodation of the financial system to a low inflation environment might not run as smooth as would be desirable, the government launched a program aiming at promoting that transition under the leadership — and, obviously, some financial incentives — of the Central Bank. By promoting early intervention in several problematic institutions and arranging for their incorporation by healthier ones, including foreign banks entering or expanding their presence in the Brazilian market, this program made it possible to move, at a comparatively low cost, from a very vulnerable situation to a relatively strong one. Moreover, with such a decisive move the government increased its room of manoeuver, as a financial system on fragile position may inhibit the monetary authorities' actions in defending the currency in the event of a speculative attack.

That is the main point of this paper — one which brings up a crucial difference between Brazil and countries in East Asia that faced similar currency crises, but where the end result has been the switch to a float regime, whereas in Brazil the exchange rate regime has remained the same even in the face of harsh speculative attacks. In Asia, a highly exposed financial system had engaged in risky financing, counting on implicit guarantees of support by the government — a process that eventually led to "bubbles" in asset prices, and to excess investment leveraged by bank loans. Faced with this situation, governments would hesitate in resorting to high interest rates fearing to trigger a financial crisis, in what would then be a hopeless effort to maintain their currency pegs. In fact, as investors realized that the financial burden from private banks would eventually lead to a future monetization, currently sound fiscal positions notwithstanding, there would be renewed vigor in the attack, thus making the defeat of the whole strategy a self-fulfilling prophecy.

The paper proceeds by briefly reviewing the capital flows trends in Brazil over this decade in order to pin down the importance that these flows had in allowing for a relatively smooth transition from high to low inflation. In the following section, an analysis of the economy's performance and of the policies implemented is carried out, up to the point where the asian crises hits Brazil. The fourth section looks more closely at Brazil's policy response to the crises and, more specifically, to the role of financial factors in determining the alternatives. The fifth section concludes.

2. Capital flows in the 1990s: a brief overview

In the early eighties, there was a reasonable consensus as to the desirability of financial deregulation and liberalization of external capital flows in developing countries as a means of promoting financial deepening, and therefore an additional stimulus to growth through more efficient resource allocation. However, except for some short-lived and not very successful experiences with capital flows' liberalization in Latin America's Southern Cone, aborted by the debt crisis that began in 1982, most financial systems in the developing countries remained subject to heavy controls that included interest rates caps, selectivity and credit subsidies, barriers to entry of foreign competitiors and a strong presence of official financial institutions. In the exchange rate markets, the norm was a government exchange centralization at the Central Bank and severe constraints on capital flows, which usually led to the development of large and very active black markets for foreign exchange.

The immediate strategy to overcome the 1982 debt crisis reinforced those trends, as most countries were almost completely cut off from voluntary private capital flows, and thus forced to promote sharp and often painful adjustments in their balance of payments, reducing growth for almost a whole decade. In the second half of the eighties, however, the emphasis began to shift to the need of structural adjustment. By that it was meant the need to implement changes in the institutional and regulatory framework, aiming at correcting some of the main distortions inherited from the preceding import-substitution strategy: excessive dependence of the economy with respect to State intervention in the process of capital accumulation — both as a direct producer through state enterprises and as a financing agent, by chanelling institutional and forced savings through official banks; excess protection from foreign competiton, strong anti-export bias and the absence of mechanisms to promote domestic savings growth. On yet a further stage, there should be a process of financial liberalization which would reduce several restrictions on the functioning of domestic capital and exchange rate markets. These reforms, once implemented, would give rise to an increase in external capital inflows in those economies that could combine, as most did, the process of domestic restructuring with a renegotiation of their former external debts in the context of the "Brady strategy", envolving debt securitization along with partial write-offs.

Thus, begining in the early 90s, there was a rapid increase in international capital flows to developing countries in comparison with the situation observed in previous decade. IMF data[1] show that average annual net private flows went up from US$ 17.8 billion in 1984—89 to US$ 129.4 billion in 1990—96 (more than 450% in real US$ terms), having reached close to US$ 190 billion in 1996. At the same time, the importance of official capital flows was reduced, with their volume coming down from an annual average of US$ 27.2 billion in the 1984—89 period to US$ 16.8 billion between 1990—96. Besides the "pulling" factors associated with the structural reforms above mentioned, a strong impulse also came from a more favorable international environment, especially in the form of extremely low interest

[1] World Economic Outlook, October 1998.

rates in the United States,[2] as well as from a sharp reduction in transactions costs derived from the astonishing progresses in information technology.

The resumption of capital flows to developing countries was high enough to surpass the financing needs derived from current account deficits. In fact, on a radical contrast to the situation in the 1980s, when reserves fell on average US$ 5.1 billion per year between 1984－89, over the 1990－96 period there was an average annual increase in reserves of US$ 54.8 billion. Another striking feature of this change in capital flows to developing countries has been the dramatic rise in net foreign direct investment flows: taking advantage of potential hosts' greater openness and friendlier environments stemming from deregulation, OECD－based multinationals stepped up their investments in developing countries from na annual average US$ 12.2 billion between 1984－89 to US$ 57.9 billion in 1990－96.

In Brazil, the impact of those renewed flows was not felt in a significant way until later in the decade, but even that did not prevent the capital account from moving from an average annual deficit of 1.6% of GDP between 1983－89 to a surplus of 2.5% of GDP over 1990－95.[3] Among the reasons why Brazil lagged behind most other emerging economies are the facts that, first, the country was probably the last one to achieve external debt rescheduling in the context of the Brady agreements,[4] and second that the reform process didn't start in earnest until the middle of the decade － especially on what concerns privatization and deregulation. But the main reason behind the slow resumption of capital flows to Brazil was probably the fact that attempts at stabilizing inflation stubbornly failed several times,[5] thus causing its level to remain very high, unstable and accelerating until 1994.

In spite of the short run nature of the capital flows in the first years, with the dominance of bonds and notes issued by financial institutions, begining in 1992 they allowed for a build up of a cushion of foreign reserves that would prove essential to support the exchange rate policy in the initial moments of the stabilization program that would be implemented in 1994. After a real devaluation of the exchange rate in September 1991, followed by a sharp increase in domestic interest rates, and in response to the government initiatives to liberalize capital flows, short term capital began to flow in: initially in search of arbitrage opportunities arising from the extremely high real interest rates, and later in the form of portfolio investments in the stock markets (where, however, certain operations with stock

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[2] Calvo *et alii* (1996) argue that low interest rates in the United States in the early 1990s was the crucial factor determining the resumption of capital flows to developing countries.

[3] See Carneiro (1997) for a detailed account and analysis of capital flows in the first two years of the Real Plan in Brazil.

[4] In 1987, following the failure of the first heterodox plan to control inflation － the Cruzado Plan － Brazil declared a moratory on its external debt. Although later, in 1988, payments on external debt were resumed, interest arrears and payments on previously renegotiated debt were the subject of further negotiations which were concluded only in 1994.

[5] After the already mentioned Cruzado Plan, two other attempts to eliminate inflation through price and wage freezes were carried out in the 1980s: the Bresser Plan (1987) and the Summer Plan (1989). In 1990 a new attempt, this time relying on a freeze of financial assets, also failed to bring inflation down on a sustainable fashion. This plan was followed by yet another attempt at reducing inflation through a price and wage freeze, and, as mentioned, also showed poor results. As a rule, after each of these failed attempts, inflation would resume faster and with more strength.

market index derivatives would make these financial investments equivalent to a fixed income operation). The government would eventually curb some of these flows through regulatory legislation that would forbid foreigners entering the country through Annex IV (the legal mechanism giving them access to Brazil's stock exchange market) to engage in operations with derivatives which had other purposes than hedging long positions in **real**. Additionally, as capital flows gained momentum, tax instruments started to be used to regulate capital inflows, eventually reducing the scope for short-term, arbitrage operations.

The table below shows a clear trend of growth in net capital inflows over the period up to 1997, with a brief reversion in 1994 — when the uncertainties surrouding the new stabilization program certainly led investors to a more cautios stance in their decisions with respect to Brazil —, and then in 1997, already reflecting the conditions that prevailed in international markets after the eruption of the crisis in Asia.

Table 1

Net Private Capital Flows — Brazil — 1990—97 (US$ million)

	1990	1991	1992	1993	1994	1995	1996	1997
Net Debt Inflows	−3926	2095	10511	12761	6297	11200	16886	5119
Net M&LT flows	−10307	−3382	5130	2014	4024	7746	18798	25653
Net Short-Term	6381	5477	5381	10747	2273	3454	−1912	−20534
Net Equity Inflows	273	535	3147	4062	5333	8169	15928	22348
Net Portfolio	−716	−568	1086	2770	2261	3310	6039	5300
Net Direct	989	1103	2061	1292	3072	4859	9889	17048
NET CAPITAL INFLOWS	−3653	2630	13658	16823	11630	19369	32814	27467

Source: JPMorgan

It is also important to stress the change in capital flows' composition after 1994, with a close to 5—fold increase in foreign direct investment and a somewhat reduced weight of short-term capital, which eventually became strongly negative in 1997. This substitution of longer term flows for shorter term ones was boosted by stabilization and by the progressive accomplishments in the effort to promote structural reforms, and reached its peak in 1997, when it is observed, on the one hand, negative short term debt inflows and a decline in net portfolio investment, whereas both medium and long term debt inflows and foreign direct investment depict a very sharp increase.[6]

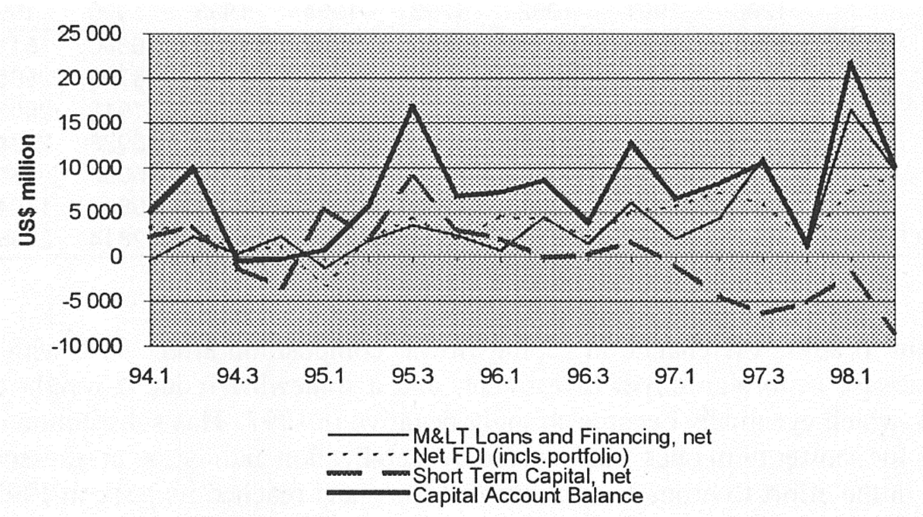
The change in composition of capital flows reflects the drastic changes in the economic environment that characterized the Brazilian economy in the nineties, especially after the stabilization program. On the one hand, the increase in foreign direct investment stems from the process of structural reform in the economy, responding to both trade liberalization and to the privatization program. On the other, it is clear that, in spite of their diminishing importance, short term flows have become more volatile, especially after the Mexican crisis. This situation obviously poses serious problems for the monetary policy, as they lead to sharp fluctuations in interest rates and eventually in economic activity.

[6] Although, as mentioned before, the figures for the whole year are influenced by the events that took place after the Asian crisis of October. Also, short term capital outflows are reflecting the prohibition of imports' financing for periods of less than one year.

In fact, right after the implementation of the Real Plan, in July 1994, the government pursued a tight monetary policy as a means of preventing too rapid money expansion following the decline in expected inflation. Primary real interest rates were kept at a high level, and high reserve requirements were imposed on bank deposits (in the first year and a half of the Real Plan, reserve requirements were of 100% on the margin). In spite of these measures the economy experienced strong growth in demand, in part explained by the expansion of consumer credit. By the end of the third quarter of 1994 several restrictions were imposed on foreign capital inflows: the tax on financial operations applying to currency loans was raised from 3 to 7%; the minimum maturity of foreign loans was raised; and a 1% tax on portfolio capital flows was introduced for the first time. Additionaly, a reserve requirement of 15% was imposed on credit to exporters, whereas the reserves rate for credit to importers was set at 30%.

Figure 1

Brazil — Capital Flows — 1994.I — 1998.II

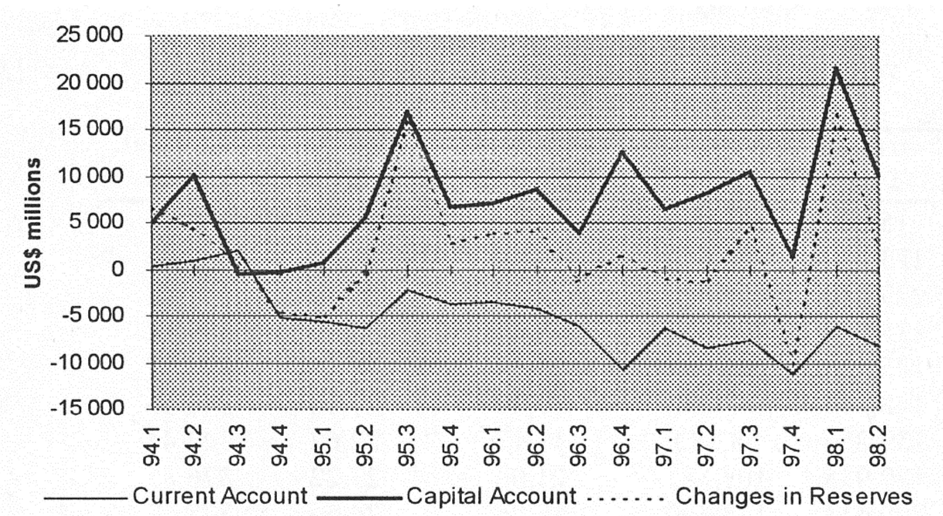


Following the Mexican crisis in December 1994, however, there was a sharp reversion in capital flows, eventually leading to a large loss in reserves. The inflows of the previous period had led to a significant overvaluation of the currency, but this appreciation was not fought back by the government as it proved instrumental in accelerating the de-indexation process of the economy. After the crisis in Mexico, however, and with the current account turning into negative position, a correction was required. In order to lessen the expected loss in reserves, several of the restrictions on foreign capital that had been imposed were removed over the first quarter of 1995. The tax on portfolio capital was eliminated and the financial tax on foreign currency loans was reduced to zero. Minimum maturities applying to loans were reduced back to 36 months for new loans and to 6 months for renewals. The change in the exchange rate regime, however, was far from smoooth, and in the process of implementing a new policy, based on a sliding narrow band of fluctuation for the exchange rate, there was heavy loss in reserves.

Along with the implementation of another round of restrictive measures on domestic credit creation, based on raising even further the reserve requirements on time deposits and even on the introduction of reserve requirements on loans, the more flexible regulation on capital inflows led to a recovery of reserves around US$ 15 billion in the third quarter of the year, in spite of the by then already high current account deficits. Again, taxes on fixed income investments were raised to 7% and loans were taxed on 5% for the short maturities, with the rate sliding down as maturities increased, turning zero for loans of 6 years or more. Figure 2 below shows the behavior of current account and capital account balances, and of reserve changes in the period after 1994.

Figure 2

Brazil — Balance of Payments —1994.I —1998.II



This post-Mexican crisis picture — reserve changes being positive or, at the worse, only slightly negative, and following closely the net capital flows, even in the face of (sometimes large) current account deficits — remained roughly unchanged until the third quarter of 1997, when a crisis erupted in South East Asia, bringing about a high degree of volatility to international capital markets. Even though there had been an episode of instability before — namely, the just mentioned crisis in Mexico in the end of 1994 — that might be seen (in hindsight) as a localized phenomena,[7] without a global impact (although Latin America was particularly affected by the events in Mexico). The crisis in South East Asia, on the other hand, produced an unusually high degree of instability in financial markets, this time affecting — at least for a brief moment — even markets in developed countries. Somewhat surprisingly, however, the impacts of the crisis in South East Asia in terms of international capital flows were short-lived, at least with respect to the flows to the countries outside that region. Prompt action by international organizations, headed by the IMF, was again key to prevent the crisis from spreading further, and after an initial slowdown, flows resumed at levels close to the previous situation, as can be seen by net capital account performance in the first two quarters of 1998.

[7] The strategic position of Mexico with respect to the United States entailed a decisive action by the North-American government with the goal of containing the spread of the crisis. A large emergency assistance package, including IMF funds, was raised in order to prevent Mexico from defaulting on its external obligations.

Capital inflows obviously resulted in an increase in Brazil's external debt, which went, in gross terms, from US$ 148.3 billion in 1994 to US$ 226.4 in June 1998. If foreign reserves are netted out, however, growth in external debt was slightly less: from US$ 94.5 billion to US$ 155.5 billion over the same period. As compared to GDP, however, these are not specially concerning levels: they actually came down after the stabilization of the economy — but only because GDP in US dollars increased due to the exchange rate appreciation — just to reach by June 1998 a level just about 1 percentage point higher than the one observed in 1994. More concerning are the ratios of debt to exports, which did not increase very much up to 1997, but eventually took a sharp turn upwards in the first half of 1998, reflecting weak exports' performance. These high ratios reflect the fact that exports in Brazil still account for a small fraction of GDP — around 7% by mid—1998, and they are one of the sources of external vulnerability in Brazil.

Table 2: Brazil — External Debt ——1989/98

	Gross External Debt	Net External Debt	Short-term Debt/ Total (gross) — %	Gross Debt/ GDP	Gross Debt/ Exports
1989	115.506	103.472	14.04	26.57	335.94
1990	123.439	110.660	21.79	26.55	392.94
1991	123.910	113.466	24.95	30.39	391.87
1992	135.949	106.359	18.47	34.80	379.82
1993	145.726	105.091	21.59	33.25	377.97
1994	148.295	94.454	19.30	27.14	340.56
1995	159.256	98.582	19.17	22.62	342.44
1996	179.935	107.581	21.00	23.22	376.85
1997	200.613	148.440	18.04	24.66	378.62
1998*	226.395	155.497	16.41	28.30	417.95

* until June

Source: Banco Central

It is important to emphasize that the accumulation of external debt in the 90s takes on a different character than the process that happened in the 70s: now, the debt is being accumulated by the private sector, in an environment much less influenced by government regulation and (distorted) incentives. In other words, external debt now responds much more closely to market signals: in 1989, less than 10% of the (medium- and long-term external debt was responsability of the private sector; in 1994, that figure had already increased to 20%, reaching close to 60% by June 1998. Also, as already pointed out, there has been a reduction in the share of short term debt on total external debt: from over 21% in 1994/96 to 16.4% in 1998. Before moving into a more detailed analysis of the recent crises, and of the policy responses to them, it would be interesting to look briefly at the fundamentals and performance of the Brazilian economy since the inception of the stabilization program.

3. The Stabilization Strategy and Economic Performance[8]

As seen above, capital flows to Brazil recovered later than in most other emerging economies, but eventually found their way into the economy following regulatory changes that opened the way for a closer integration between domestic and external financial markets. After the stabilization program was implemented, these flows picked up momentum, and were crucial to determine a different fate (until now) of the Real Plan when compared to the previous and unsuccessful attempts made at reducing inflation permanently. Obviously there was more to these foreign capital flows than a simple exploitation of arbitrage opportunities arising from low interest rates abroad and high interest rates in the Brazilian market. Privatization, concession of public services (until 1995, a monopoly of the State) to the private sector and closer integration with the world economy through trade and finance meant that investment opportunities would flourish.

Domestic policies, in the form of sound monetary policy, definition of operatin rules less liable to discritionary changes, and the constant search for actions leading to structural reforms — in the end, the true anchor of the stabilization program to the extent that they would ensure a sustainable fiscal equilibrium — were also key to promote an adequate financing of external imbalances. For almost four years, Brazil was able to finance without much difficulty relatively large current account deficits. Therefore, by relaxing the external constraint, foreign capital flows allowed the economy to move to a low inflation regime without the pressure — in terms of tensions in the balance of payments and the need of a tight control on demand — that usually follows efforts to stabilize very high inflation.

The stabilization strategy in Brazil was based on the idea that international financing would be available throughout the transition period to a new "development model", less dependent on State intervention on economic activities and more open to international trade. This policy stance relied on the perception that inflation was not simply the result of short term macroeconomic imbalances, but actually reflected deep economic distortions arising from the import substitution, State-led development model of the post-war period. In that sense, achieving long lasting stability couldn't be done on a short time span, but would rather envolve a long period of reforms, standing tall among the latter those related to the need to produce a permanent adjustment in the public sector accounts. Therefore, at least for a while it would be necessary to inccur into current account deficits, perhaps sizable ones. On the other hand, it was reckoned that a country with so many investment opportunities like Brazil could not be in the position, as it had been since the debt crisis of the 1980s, of a savings' exporter. The combination of structural reform and sound macroeconomic policies would certainly lead to a more competitive domestic production and to higher exports in the future, thus making a temporary strategy of accumulating external liabilities (either in the form of debt or of foreign direct investment) feasible and sustainable.

Part of the effort would certainly depend on exposing the domestic industry to unprecedent levels of competition from abroad. The debt crisis of the early 80s had led to policies — like pegging the real exchange rate and implementing severe imports controls, using both tariffs

[8] For a more detailed analysis of the Brazilian economy after the Real Plan, see Considera (1998).

and non-tariffs barriers—, which resulted in an ever accelerating inflation[9] and stagnation of productivity growth. In order to sustain a new growth pattern consistent with price stability it would be necessary to open up the economy with the purpose of both increasing competition and giving domestic firms access to "state of the art" imported capital goods at competitive prices. In the first year of the **real**, total imports grew 65%, and those of capital goods close to 57%, over the previous 12 months. Although exports also showed an expressive growth of more than 10%, that was clearly not enough to match growth in imports, and a trade surplus of some US$ 13 billion recorded in the 12 months up to June 1994 (when the **real** was introduced) turned into a deficit (for the first time since the early eighties) of US$ 0.2 billion by June 1995.

Three factors account for this deterioration of the trade balance in the first year of the stabilization program: a currency appreciation which, by February 1995, was of the order of 20% in real terms (when deflated by the PPI, an corrected for inflation in the U.S.); an acceleration of the process of trade liberalization, including an anticipation of reductions in tariffs expected to take place only in 1995 as part of the implementation of the Mercosul agreements; and, finally, the extraordinary boost in demand following the sharp reduction in inflation rates — from close to 50% in June to less than 1%, on average, in the last quarter of the year in the case of the General Price Index.

As noted in Considera (1998), a by-product of rapid disinflation achieved through exchange rate pegging is a significant increase in demand that results from the effects of declining inflation on households' real incomes, as well as from expectational factors associated with the credibility of the policies being pursued. In Brazil it was no different, with both consumption and investment growing really fast in the first nine months of the Real Plan. Consumption in particular was also strongly influenced by a renewed supply of consumer credit, after a long period of severe rationing, as well as of weak demand, due to the uncertainty associated with high inflation. In the second half of 1994, industrial production increased 10.4% over a year before, and retail turnover in Sao Paulo went up by 20% in the same comparison. As mentioned in the previous section, in the light of such performance the government, already by the end of September, adopted some measures to curb at least partially demand growth: interest rates were increased and reserve requirements, along with quantitative controls on credit (for instance, by setting maximum maturities for loans), were also implemented. GDP growth in 1994 was 5.6%, and by the first quarter of 1995 the economy was growing at something close to a 10% annual rate. By March 1995, sales in Sao Paulo were (on a seasonally adjusted basis) 34% higher than in June 1994[10], with the corresponding figure for consumer durables reaching almost 60%!

Investment responded swiftly to the new environment created by the reduction in inflation rates. According to IPEA's estimates, the ratio of investiment to GDP — measured at constant 1980 prices — went up from 14.4% in the second quarter of 1994 to 17.4% in the first quarter of 1995. In terms of its components, such an increase of almost 34% in investment activity reflects a 17.5% expansion in construction, a 35.6% growth in the

[9] Which, due to specific characteristics of the Brazilian monetary system related to indexation mechanisms of the public debt, did not result on an explosive path.

[10] Excludes auto sales.

domestic production of capital goods and an expansion of 96.5% in capital goods imports![11] It is important to stress that such a recovery of investment took place in spite of very high interest rates in real terms — close to 30% at the end of 1994—, as well as of measures introduced by the Central Bank which aimed at slowing down the growth of credit, and whose effect was to introduce a wedge between borrowing and lending rates in bank credits that added to normal spreads.

The first external shock came from the Mexican crisis, and, as already mentioned, required a radical change in policy, including the introduction of a new exchange rate regime in order to face a loss of close of US$ 10 billion in the height of the difficulties by mid-March. In the course of change of exchange rate regimes the exchange rate depreciated close to 5% in real terms, leading towards the end of 1995 to an accumulated devaluation of 12.8% of the real effective exchange rate— thus reverting, at least partially, some of the appreciation observed in the first nine months of the **real**. In order to reverse the course of the economy, an "overdose" of monetary policy was also required, including an increase in interest rates to extremely high levels (the basic rate was set at close to 80% per year, when inflation was already close to a 20% annual rate) and the introduction of quantitative controls on credit. GDP experienced a cumulative 4.6% fall in the second and third quarters of that year, with industrial production falling even more steeply, close to 9%. Given that credit, both from the banks and direct consumer credit, were on the rise, the impact of this growth reduction was strong in the balance sheets of firms and households. Delinquency shot up — non-performing loans as a percentage of total loans to the private sector increased from 8.6 to 13.5% between March and September —, eventually leading to liquidity problems in the banking sector and to a decisive intervention by the Central Bank in the market in order to prevent the development of a systemic problem. We return to this issue in the next section, but it is important to have in mind that as result of this experience credit would resume only at a very gradual pace, thus reducing the speed of recovery of economic activity even when the government adopted a more expansionary monetary policy.

Monetary policy was eased only gradually over the following two years: real interest rates reached 26% in 1995 and 16.4% in 1996, level where they remained up to October 1997, before a new round of interest rate increases had to be implemented. The same was true for the credit restricitons imposed early in 1995, which, by the way, helped to increase even further the spreads between borrowing and lending rates. Notice that such a high level of real interest rates was observed in spite of a sharp decline in nominal rates, reflecting the fact that inflation fell much more rapidly than anticipated: consumer prices' changes declined from over 20% in 1995 to below 10% in 1996 and reached 4.5% in 1997.[12] In any case, such a gradual easing of monetary policy meant that the recovery of economic activity took place slowly: only by the third quarter of 1996 GDP had returned to the level reached in the first quarter of 1995. However, growth seemed to be getting into a sustainable path until the economy was again hit by an external financial shock.

Parallel to these developments in the real side of the economy, strong movements were taking place in the reforms' arena. In the first half of 1995, five constitutional

[11] Quarter over quarter seasonally adjusted growth rates. Capital goods imports are quantum estimates.

[12] They are expected to be close to 1% in 1998, and even negative in the case of consumer prices in Sao Paulo.

ammendments abolished provisions that made economic activities in the oil, telecommunications and power generation sectors a State monopoly, and that discriminated against foreign capital. Privatization got a strong impulse in the begining of 1996 with the sale of the federal railway system and of a large electricity company (Light). Total privatization revenues, including the transfer of debts to the private sector, at the federal level went up from US$ 1.6 billion in 1995 to US$ 4.7 billion in 1996 and US$ 7.8 billion in 1997. More important however is the impact of this process, together with the concession of public services to private business, on the investment aiming at recovering and expanding the physical infrastructure — like roads, ports, energy and telecommunications. For the following years this would be the main factor driving investment, which fell during the slow growth period of 1995—96, keeping an average of 16.5% of GDP, but then resumed at strong pace to reach 18.7% of GDP in the third quarter of 1997.

Privatization was also important in reducing the negative impact of the fiscal deficit on public debt growth. The fiscal deterioration observed during 1995 may be seen as the main disequilibrium faced by the economy over the stabilization period. The shift in fiscal primary deficit was of close to 5 percentage points of GDP, with the impact on total deficit being further increased by the high real interest rates. It happened notwithstanding a strong 8.6% growth in tax revenues, and may be attributed mainly to the importance that inflation had as a controlling device over the real value of expenditures in the previous inflationary regime. The fiscal position would improve a little over the following two years, but only because of the reduction in nominal interest rates. Even then, nominal deficits remained very high: 7.1% of GDP in 1995, 5 .9% in 1996 and 6.2% in 1997. In terms of the primary deficit, figures got considerably worse, going from a 0.35% of GDP surplus in 1995 to deficits of 0.1 and 1% of GDP in 1996 and 1997, respectively. The consolidated public sector[13] net debt reached 30% of GDP in 1995, and continued to climb, to 33.3% of GDP in 1996 and 34.5% in 1997.

On the external side, the deceleration of output growth reduced the pressure on the trade balance, which moved, in seasonally adjusted terms, from average monthly deficits of US$ 680 million in the first half of 1995 to a surplus (in average monthly terms) of US$ 100 million before it began to deteriorate again, recording an average monthly deficit of US$ 19 million in the first half of 1996 and then shooting up to average monthly deficits of US$ 863 million in the second half of that year. Movements in the trade balance results, up to the first half of 1997, were dominated by trends in imports, as exports behavior remained erratic most of the time, with the good performance in basic and semi-manufactured products (reflecting good prices in international markets) being offset by very low growth rates in manufacture exports. However, it is noticeable that even when growth resumed at a faster pace over 1996, imports did not grow as fast as they had in the first year of the Real Plan, hinting at the possibility that, besides some commercial policy measures aiming at reducing what was thought of as unfair commercial practices, import

[13] As the fiscal deficit figures just mentioned, net debt figures correspon to the consolidation of positions of the federal government (including the Central Bank and the Social Security system), states and local governments and state enterprises (both federal and states' owned).

penetration had slowed down as result of internalizing the production of some of those products formerly acquired abroad.

External imbalances begin to gain a life of their own as external liabilities accumulate over time. That is clear when it is realized that in spite of relative improvements in the trade balance, the current account deficits reacted much more slowly. In fact, over this period and up to the first quarter of 1997, there is an almost continuous trend of deterioration in the current account, only episodically broken by reductions in the quarterly deficits (see Figure 2, on page 7). In 1997, the current account deficit was US$ 9 billion higher than in 1996, although the worsening of the trade balance accounted for only about one third of that change, while factor services' payments were responsible for 45% of that total.

By the end of the third quarter of 1997 a picture of the Brazilian economy would reveal contradictory signs about the sustainability of the stabilization program. On the one hand, the economy seemed to be again on a (moderate) growth track, with October's industrial output 5.6% higher over a year before and GDP's growth at 2.6% on the same type of comparison. Moreover, there seemed to be a qualitatively superior characteristic to this growth process with respect, for instance, to the trends right after the implementation of the Real Plan, in that the underlying factors of such growth were basically stemming from investment and manufactures' exports, rather than from consumption.

In fact, as already mentioned, investment activity was strong in 1997.3, having then reached its highest quarterly ratio with respect to GDP in the nineties (18.6%); in terms of seasonally adjusted quarterly growth rates, investment at constant prices recorded an average of 3.4% from the first quarter of 1996 up to the third quarter of 1997. Capital goods imports in the same period grew at a quarterly average rate of 6.8% (albeit with wide fluctuations in these rates from one quarter to another), and domestic production of capital goods recorded average rates of 2.2%. Construction activities — reflecting the already alluded to positive impact of privatization and concession of public services to private business on investment, which determined an intense process of recovery and expansion of physical infrastructure — posted average quarterly growth rates of 3.3%.

Manufactures' exports began to react around June 1997, after a long period of very low growth rates. Between June 1997 and June 1998, the average growth rate comparing the same months on two consecutive years was 17.4%. Behind such a change are probably the effects of a reversal in the trend of unit labor costs — taken here as a proxy for the returns on the export sector.[14] That is an important element of the analysis to the extent that it reflects the workings of the structural adjustment process which underlies the whole stabilization strategy. Specifically, it can be shown that productivity increases in the manufacturing sector averaged 8.8% per year between 1990 and 1997, with an average annual rate of 9.8% since 1994. Even if, due to data problems and cyclical factors, the statistics tend to overestimate productivity gains, attempts at correcting this bias have not reduced substantially those estimates. More importantly, however, is the fact that the decomposition of unit labor cost changes in the manufacturing sector show that, betweeen 1991 and 1995, especially in the latter year, productivity gains were more than offset by increases in

[14] See Bonelli and Fonseca, 1998.

industrial wages measured in US$, which caused unit labor costs to increase. In 1996 there was an apparent stability of the index, with productivity and average wage in US$ growing at approximately the same rate (strong 14%). In 1997, however, it is already possible to observe some indication that the change introduced in the exchange rate policy was starting to produce its first results, for while productivitty continued to grow at a high rate, real wages (in US$ terms) increased much less, and unit labor costs declined 8%.

The export performance notwithstanding, current account deficits continued to grow in 1997, reaching by the end of last year 4.2% of GDP. Again, this is by no means an excessive level by international standards, but became worrisome after a series of events in Southesast Asia led to a dramatic change in the behavior of international capital markets. Besides, contrary to the trajectory expected for a stabilization program, the public deficit showed only moderate decline with respect to the levels reached in 1995 — especially on its primary definition, where the trend was actually the opposite, namely of increasing deficits. Therefore, doubts as to the macroeconomic consistency of the strategy being followed started to grow, increasing the country's vulnerability to external shocks.

4. International Crisis and Adjustment in Brazil: the role of financial factors.

The wave of instability that hit financial markets around the world after October 1997 has been characterized as the first big crisis in the globalization era . The tight integration of financial markets made the initial shock in Asia to spread with a speed and virulence not seen before, with every new round adding to its "destructive power". The pattern, however, seems to be a classical one: a cleavage between the economies' real conditions and asset prices determined in financial markets gave rise to speculative bubbles. Given the extremely high degree of leverage of financial institutions — especially those operating in derivatives' markets -, when these bubbles burst they end up producing disproportionally strong effects. Apparently, the immediate cause for the events that took place in Asia was a combination of sluggish growth in Japan, with a negative impact on the exports of other countries in the region, and the emergence of China in recent years as a serious contender in those countries' export markets.

In any case, the wave of currency depreciations in the crisis Asian countries seems to have largely exceeded the required corrections from the stand point of the long term fundamentals. In the first moment, right after the attack on the *baht* in July 1997, expectations regarding the ability of governments to sustain the link between their currencies and the US$ were the dominant factor. On a second moment, pressures mounted "as both foreign and domestic investors sought to unwind the extensive "carry" trade that had been based on the stability of the exchange rates vis-à-vis the US dollar, and efforts were made to cover or reduce unhedged foreign currency exposures and to liquidate off-balance-sheet currency positions. The resulting further downward movements in regional currencies created significant problems of counterparty risk as the balance sheets of inadequately hedged domestic financial institutions and corporations weakened sharply. As a result of the increases in credit risk, derivative and other markets for covering increasing exchange rate risk began to dry up and spot markets for the crisis-affected currencies became very thin. In these circumstances, small transactions began to move foreign exchange markets by large amounts, further adding to currency weakness and creating a vicious circle."[15]

Early warnings of serious financial problems had already been seen around May 1997, when Thailand's currency was under attack for the first time. Although the Thai government was successful in turning the pressures away at that moment, its defences became greatly weakened, and eventually the *baht* became an easy prey to international investors, being forced on a floating regime in July. Problems in Thailand spread rapidly to other countries in South East Asia, affecting Indonesia, Malaysia and the Phillipines. By October — after serious pressure upon Hong Kong's currency — it reached Korea. Although high current account deficits as a proportion of GDP have been initially thought of as one of the main causes determining international investors' uneasyness towards those countries' currencies, other explanations were also brought up in order to explain the violence of the crisis, as well as why some countries were able to weather it out more rapidly than others. Among these explanations are those that place a heavier weight on the strength of domestic financial systems as a crucial determinant of a country's ability to face external shocks.

In fact, in 1996 a study by Kaminsky and Reinhart showed that banking crises were an important element of balance of payments crises — at least to the extent that they tend to happen around the same time. The rationale for such a finding was that banking crises would pose a demand on the governments' budgets to the extent that it would be necessary to bail out institutions facing financial problems, and that would represent a pressure on money supply in the future, thus making it increasingly difficult to sustain the exchange rate commitment. As an additional "transmission mechanism" there is the fact that, with the financial system under strain, the ability of the Central Bank to resort to high interest rates to face a speculative attack becomes smaller, given the risk of increasing even more financial fragility. Whether or not the econometric evidence is sound enough is a matter for academic discussion, especially when it comes to isolate the direction of causality. However, there seems to be a close correlation between financial strains and balance of payments problems. Krugman (1998), in a provocative article, has raised the hypothesis that the crisis in Asia stemmed fundamentally from a situation of financial fragility that placed a heavy burden upon the region's governments in the form of implicit guarantees representing contingent liabilities upon otherwise well behaved fiscal positions. Additionally, these implicit guarantees would lead to moral hazard problems, eventually reducing the scope for improved resource allocation and to poor risk management.

As the crisis spread, eventually reaching even the developed countries, pressures mounted on other emerging markets, reaching Brazil with particular intensity at the end of October. Reflecting the events taking place elsewhere, in a few days there was a sizable amount of capital flight — amounting to a loss of reserves of close to US$ 10 billion in a few days (of a total of US$ 62 billion in reserves at the end of September). The government reacted by relaxing some of the restrictions then in force over short term capital inflows and by pulling interest rates from around 20% to 42% annual, while at the same time announcing a tough fiscal programm — consisting of tax increases and expenditure cuts — in order to make the

[15] IMF, *International Capital Markets — Developments, Prospects, and Key Policy Issues*, Washington, DC, September 1998.

interest rate move credible. The result was a reversal of capital outflows in the first moment, followed by a resumption of inflows that made reserves recover their previous level already by mid-March 1998, continuing to grow in the following months.

Interest rates were reduced only gradually over the year, so in the first moment arbitrage opportunities were the main driving force of the resumption in capital flows. According to Central Bank data, however, short term capital flows continued to be negative in the begining of 1998, and reserves therefore grew by a combination of reduced current account deficits, reflecting lower levels of economic activity, foreign direct investment, attracted by large privatizations that took place in the first 7 months of the year, and borrowing on medium- and long-term maturities. Reserves were more than replenished, reaching a high of US$ 74.7 billion in April, before starting again to decline slowly as a consequence of a new round of restrictions imposed by the Central Bank in the form of lengthening the minimum maturities for borrowing abroad and reducing the scope of using borrowed resources to buy government dollar-indexed securities. Notice also that given the already high level of reserves, as well as an expected large volume of foreign direct investment attracted by the privatization of the telecommunications system, that was a reasonable strategy to follow.

A much faster than expected recovery of capital inflows obviously reduced the incentives to pursue the fiscal adjustment announced right after the begining of the contagion of the Asian crisis. In fact, after obtaining an important victory in a Congress voting of the Administrative Reform (which had been up for voting since early 1996), the other measures that the government was seeking to approve in order to implement the fiscal tightening — mainly, the social security reform — stalled again in the face of political difficulties with voting unpopular measures as elections approached. In fact, a loose fiscal policy resulted in 1998, with the primary deficit improving only slightly with respect to 1997, and even then basically reflecting higher revenues stemming from higher taxes and "once and for all" revenues obtained with the concession of public services. Actually, as the trade deficit was reduced to about two thirds of the previous year level, the fiscal imbalance remained as the major vulnerability of the Brazilian economy.

4.1. Financial Variables and Policy Reaction

As stated before, in many senses the crisis in Asia was foremost a financial crisis, with developments in terms of balance of payments disequilibria following as a consequence. In spite of many positive characterisitics of the development process in the region in terms of open trade orientation and reduced scope for State intervention in directly productive activities, it seems that an excessive reliance on banking credit also contributed to accelerate growth at the expense of prudent credit management. The result was a financial sector that carried the seeds of vulnerability to changing conditions in the economy, in particular an increasing fragility to a reversal of growth trends.

In Brazil, by contrast, the financial system, and in particular the banking system, was shaped by the high inflation regime that prevailed for most of the 20—year period begining in 1973. The banking system gradually developed forms of taking advantage of inflationary gains obtained from zero-cost deposits in the first moment, and later from money market funds that usually paid below inflation yields. Progressively, banks' assets would concentrate on indexed government securities, supplied by the Central Bank as a means of preventing the usual flight from the domestic currency that accompanies rising inflation. As a consequence, the banking system became "oversized", with an excess number of branches (in order to better capture deposits from the public) and overstaffed. According to Brazil's National Accounts, the financial sector's share in GDP would reach 15.6% in 1993, the year before the implementation of the stabilization program that introduced the new currency, the **real**. This was, by any standard of international comparison, an excessive share of financial sector in GDP, especially when it is taken into account that, in a high inflation environment — where relative price uncertainty tends to increase with the rate of inflation, in spite of sophisticated indexation mechanisms that are introduced in pricing and contracting —, credit demand also tends to decline as firms and households seek to keep their assets as liquid as possible, which in Brazil's case meant government indexed securities.

After the Real Plan was implemented, there were signs of a resumption of loan activites by the banking sector as a means of creating alternative sources of revenues to substitute for declining receipts derived from inflation gains — which, by 1993, amounted to 4.2% of GDP and 35% of the banking sector output. That growth in loans, however, was restricted considerably by the tight monetary policy followed by the government in the form of credit controls and very high reserve requirements. In fact, that was a necessary precautionary policy given the expected increase in money demand: in the first six months of the **real** demand deposits increased 165%, and time deposits 40%. Reserve requirements were raised from 48 (average) to 100% (for the new deposits) in the case of demand deposits, from 10 to 30% in the case of savings deposits; and from zero to 30% in time deposits. Even then, loans from the finacial system to the private sector (corporates and households) increased 60% over the first year of the stabilization program!

It was absolutely clear from the begining of the stabilization program that the sector would have to go through a significant downsizing, reducing the number of institutions and, within each of them, the number of branches and staff — as price stabilization represented a loss of revenues for the banking sector of over US$ 25 billion per year. Such a fast growth in bank loans after the **real** was introduced, while allowing to partially offset the loss of float, inflation-related revenues, also helped to postpone adjustments in the banking sector Growth in credit, however, came at the cost of increased vulnerability, as most banks lacked any expertise in credit and risk analysis. When in the first quarter of 1995 policy took a sharp contractionary turn, non-performing loans increased significantly, eventually raising doubts as to the stability of the financial system as a whole.[16]

Even though the increase in non-performing loans was not the main cause behind the problems faced by some financial institutions in the second half of 1995, it also contributed, by lowering the quality of their assets, to a further deterioration of institutions that were already vulnerable. Changes in the financial system became then a necessity, and the object of a government sponsored program (PROER — Program for Strengthening and Restructuring the National Financial System) put in place in mid-1995. Its goals were to

[16] For an account of the changes in the Brazilian financial system refer to Barros and Almeida Jr.(1997).

reduce the number of financial institutions by either closing some of them or by promoting mergings with or control transfers to healthier partners. A second stage of this process of revamping the domestic financial system, which in fact began in mid−1996, would be to allow foreign banks to increase their participation in the domestic market, and to promote a deep adjustment in the public financial institutions.

The adjustment of the banking sector started by the introduction of a deposits' insurance mechanism in November 1995,[17] at a time when rumors of difficulties being faced by several banks created a fertile ground for instability. In fact, in August the Central Bank had already intervened in the then seventh largest Brazilian bank, and expectations had it that new interventions would be required. The PROER responded to that situation by creating tax and other incentives − mainly, a credit line at slightly below-market interest rates − so that healthier institutions could incorporate those with problems, eventually leaving some of the riskier assets and non -collectable credits in the hands of the Central Bank. In order to avoid moral hazard implications, the existing law was changed to ensure that the rescue operations would effectively imply loss of control by the existing shareholders, who would also be made responsible, along with the executive boards, for all the legal actions following from poor and/or criminal

Among the incentives to stimulate the acquisition of weak banks the Central Bank set up a special credit line with somewhat favored conditions with respect to market rates. These loans would be guaranteed by colaterals in the form of government debts in the market, thus effectively amounting to a securitization of those debts. Additionally, changes in the legislation enhanced the Central Bank's ability to intervene in a <u>preventive way</u> in banks facing liquidity problems, and to require major shareholders to increase the bank's capital or to give up control by either sale or merger with another institution. Finally, among the major innovations introduced by the Central Bank over this very active period of financial restructuring is the establishment of Central of Credit Risk − to be kept at Central Bank and which will allow the banks to have access (upon permission of borrowers) to the total exposure of a borrower in the financial system as a whole, thus permitting a more solid analysis of risks.

The results of the financial restructuring process in Brazil after stabilization was reached - - and even before the PROER was established − have been very positive in preventing localized problems from developing into a systemic crises. Central Bank intervened in 43 banks since the begining of the **real**, 8 of them public and the rest private. Intervention usually followed insolvency problems or lack of compliance with the legislation. Of this total, 32 were either closed or are in the process of being liquidated, 7 went bankrupt, 1 is still under intervention and 3 are still under a special administration program by the Central Bank. In many cases,[18] before closing the institution, the Central Bank took advantage of its large depositors' base and regional importance to find a buyer by extending credits through the PROER program. Total credits extended under the PROER amounted to R$ 21 billion.

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[17] To be managed by the banking system itself, and made up of monthly contributions of 0.025% of the deposits' balances. Coverage amounts to up to R$ 20 thousand per person against all institutions belonging to the same group.

[18] Five institutions (among them the third, the fifth and the seventh largest Brazilian banks) benefited from the PROER.

One of the implications of this restructuring program has been the reduction in the share of financial markets in GDP, from 12.7% on average between 1990/94 to 6.9% already in 1995. Expectations are that this share should fall even more, to the 3 to 5% range — the same one observed in economies characterized by long term stability. Most of this reduction has taken place in the private sector, as public financial institutions had already been under a slimming process following the fiscal crisis of the early 90s in most states' governments, as well as difficulties faced by the two main federal financial institutions — namely, Banco do Brasil and Caixa Economica Federal.

In fact, adjustment in official financial institutions, especially on the states' banks has been the object of a specific Central Bank program — the PROES, which, through Central Bank assistence, would allow this banks to be either privatized, transformed into developing agencies, or recapitalized by their ownig governments. Such a special program aiming at official banks is warranted in the view of the fact that they were the most dependent ones on inflationary revenues — receiving around 60% of the 4% of GDP estimated as inflation revenues accruing to the banking sector. Besides, operational standards in states' banks used to be lower than in private banks — for instance, payrolls have exceeded their output in 1992 and 1993, whereas in private banks this ratio has remained around 30%, on average, over 1990/94. Additionally, and contrary to what was observed in private banks, official banks, due to their poor capital base and management, did not benefit from the credit expansion that took place after stabilization, as most of their resources were already tied in to the financing of their respective state government owners. Thus, the solution to the official banking system (at least on what concerns states' banks) is closely tied to a framework that allows state governments to renegotiate their debts — something also implemented through a series of agreements between the federal and states governments.

The final component of the restructuring process of Brazil's financial system has been the opening up of the market to foreign financial institutions. That would serve several purposes, among them making the system more competitive, as well as financially stronger. An important channel through which new foreign banks are entering the Brazilian market is by absorbing ailing institutions (especially those where Central Bank intervention was necessary, in which case they might qualify for credits under the PROER) or by participating in the privatization process of states' banks. The interest of foreign banks in Brazil arises from the immmense opportunities still to be exploited — including the fact that the ratio of bank deposits to GDP in Brazil is among the lowest, as well as a very low bank loans to GDP ratio.

Actually, in connection with the main point of this note, it is interesting to compare the ratio between bank loans and GDP to in order to assess the degree of vulnerability of financial systems in Asia and in Brazil.

	Indonesia	*South Korea*	*Malaysia*	*Thailand*	***Brazil****
Domestic Credit (%GDP)	75	165	165	155	29
NPL (% of total)	60	30	25	35	11

Source: JPMorgan and Banco Central do Brasil; * bank loans to the public and private sectors

As the data above reveal, not only are loans a small fraction of GDP, but delinquency ratios seem to be also lower in Brazil, in spite of the fact that they have increased slightly recently as result of high interest rates coupled with slower growth. Even if different accounting practices might explain part of the differences in these ratios, it seems clear that — either because of a long period of extremely high inflation rates, or because of a tight monetary policy, along with quantitative credit controls after stabilization, which prevented loans from growing too fast — the banking system in Brazil apparently stands on a stronger position than its equivalents in Asian countries.

Actually, the picture would be even more favorable if the official institutions were excluded from the aggregates in Brazil. As noted before, the financial situation of the public banks is somewhat distorted by their loans to the states' to whom they belong to. That problem is being addressed more in the context of a fiscal adjustment, although many of those banks also present typical liquidity and/or solvency disequilibria beyond those generated by their "incestuous" relationship with states' governments. However, delinquency ratios in the private banks tends to be about one half of those in the public sector — which, in any case, is heavily influenced by non-performing loans in Banco do Brasil — Brazil's largest bank, owned by the federal government, which is known to have been widely used until recently for political and policy purposes — with a close to 27% delinquency ratio as a proportion of total loans.

The degree of leverage of Brazilian banks also seems to be lower than in other emerging countries. This is in part due to the early enforcement by the Brazilian Central Bank of the Basel reccomendations of capital requirements. In fact, prudential regulation has gone beyond those standards defined by the Basel Agreements, and implied raising minimum capital requirements to 11% of risk-weighted assets. For most private banks, their loans would be between 2.7 and 3.2 times their capital plus reserves. As mentioned before, however, official banks tend to present higher ratios (around 6).

Finally, provisions to face possible losses arising from bad loans have also been high among Brazilian banks, amounting to close to 1.4 times the total of non-performing loans — thus making banks' exposure to credit risk much less serious. The exposure of Brazilian banks to foreign exchange-denominated liabilities is not very high either, as they are backed up by assets in the also denominated in foreign exchange that amount to over 80% of the total, with the situation being even more favorable in terms of short run assets and liabilities. This is in part due to the legislation that requires foreign-exchange liabilities to be closely linked to assets in the same denomination — such is the case of export and import financing and of longer term loans under the "Resolution n° 63" of the Central Bank. More importantly however — especially for the purposes of understanding the limited scope for Brazilian banks to engage in speculative operations with foreign exchange — are the limits set up by the Central Bank as to the size of *short* positions that banks can have in foreign exchange, whereas their *long* positions are subject to low yield deposits at the Central Bank Finally, although building *swap* positions would allow Brazilian banks to increase their exposure in foreign exchange markets, for practical purposes this would be of limited use given the very high capital margins required (around 20%, way above the standards set by the Basel Agreement), as well the thin nature of these markets.

5. Conclusion

By raisisng interest rates to extremely high levels the Brazilian government was able to ward off an attack against the **real** in October 1997, in spite of heavy reserves' losses. That instrument was only credible in so far as: (i) the domestic financial sector was in a sound enough position to absorb the impact of higher interest rates without threatenig the economy with a financial crisis; and (ii) the government announced a fiscal program to offset the impact of higher interest rates on its own budget.

Actually, that was probably the decisive move, as it was widely perceived at that time that the fiscal deficits represented the main economy's weakness — even more so than a supposed currency overvaluation, which was already in the process of being corrected by the exchange rate policy being followed. It was also noted that the public sector's debt sustainability was becoming gradually more elusive as privatization revenues seemed to be drawing closer to their end, and most reforms that would lead to a more balanced fiscal outcome in the long run — namely, the administrative, social security and tax reforms — were stalled in the Congress due to political deadlocks.

On the basis of these policies' actions and announcements it was possible to recover reserves even more rapidly than the most optimistic expectations would have anticipated. By April 1998 reserves were already standing at a level some US$ 14 billion higher than their pre-Asian crisis position. That obviously reduced the impetus to move vigorously with the fiscal adjustment — and the deficit eventually resumed its growth trajectory, whereas of the three reforms awaiting to be voted in the Congress, only the administrative one went through — and even that was of little use, given that voting of additional infra-constitutional legislation that would allow its application was postponed to until after the 1998 elections.

As a new crisis, this time coming from Russia, hit the economy, its vulnerability was higher than in the previous episode, and reserve losses were as high as US$ 30 billion. This time the government decided for a frontloaded, forceful attack on the fiscal deficit, while at the same time negotiating an agreement with the IMF. Both moves were crucial in preventing expectations from deteriorating even further, on a process that would have certainly led to the need to let the exchange rate float.

The fiscal adjustment program — backed up by extensive changes in the legislation to ensure that a new <u>fiscal regime</u> will be in place from now on — has as its main goal to stabilize the debt to GDP ratio by the year 2000 around the 45% level. In order to do that, a fiscal adjustment of up to 3% of GDP will be implemented in 1999 in order to create a primary surplus of 2.6% of GDP. In the following two years, the fiscal effort will be deepened, and the primary surpluses should increase to 2.8 and 3% of GDP, respectively. In fact, spending cuts already falling upon 1998's budget will imply a contraction in the previously expected primary deficit of close to 1% of GDP.

This fiscal effort will result from both revenue increases and expenditure cuts. Moreover, as a sign of the governments's commitment to this new fiscal stance, a round of votings in the Congress in the past month has been able to break with the deadlock that prevented constitutional changes, and the first stage of the Social Security reform, as well as some tax changes, were finally approved. There is an almost unanimous perception that this time the change in the government's fiscal stance, as opposed to what happened after the Asian crisis of October 1997, is for real. However, given the radical changes in the international financial scenario, with a liquidity squeeze following asset prices' plunges after the Russian crisis, and the consequent increase in investors' risk aversion, it's become clear that if and when capital flows to emerging markets resume, they should do so on a very different basis than in the former period.

This means that it is not going to be feasible to sustain for very long periods of time current account deficits as large as those observed in the past two years in Brazil — i.e., around 4% of GDP. That perception was also key to determine capital outflows at the height of the Russian crisis — even if it is clear that Brazil still has great potential to attract foreign direct investment. That is why it was so important to obtain a formal agreement with the IMF, backed by resources from other sources, including other multilateral institutions (like the World Bank and the IDB) and developed countries' governments, co-ordinated by the IBS.

In fact, the recent financial support package for Brazil probably hints at the directions that a new architecture for the international financial system could take. Among the distinctive characteristics of the Brazilian package are its preventive nature, i.e., the fact that it has been agreed on while Brazil still could count on a sizable level of reserves, plus the fact that most of the resources will be made available shortly after the agreements are approved. By that, it becomes possible to avoid any attempts at exploiting the country's momentary external fragility though attacks on its currency — something that took place extensively during the Asian crisis, as the above made quote on the IMF's *International Capital Markets* 1998 issue made clear.

In fact, such co-ordination among developed countries is a fundamental aspect of a new international financial system, as it allows small corrections in any economy's fundamentals to take place without necesarily incurring into traumatic outcomes in the form of a currency crisis. For part of the problem right now in Brazil is the (warranted) fear that even a small realignment of the exchange rate would trigger such a large capital outflow — as it happened in Asia — that the cost might be way too high in comparison with the prospective benefits.

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