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LONG RUN ADJUSTMENT, DEBT CRISIS AND THE  
CHANGING ROLE OF STABILIZATION POLICIES  
IN THE BRAZILIAN RECENT EXPERIENCE\*

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## Introduction

International shocks aren't exactly exceptional events in the economic history of Latin America. Whether they ultimately will constitute a hindrance or a help when we evaluate their long run consequences for economic development turns out to depend on the interplay of the conflicting forces of stabilization policies enacted to correct the Balance of Payments or control inflationary pressures and the structural policies adopted to adjust the long run path of economic development. The Brazilian experience in the past ten years with international indebtedness, three digit inflation and long run adjustment of its productive capacity after the two oil shocks, the general rise in interest rates and the 1982 sudden cutoff of voluntary international lending is illustrative of this general view.

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The aim of this paper is to describe and evaluate the recent experience of the Brazilian economy of the past five years (1979-84) in the context of the painful adjustment policies it has been subjected to since the end of the last decade.

Without the abundance of oil behind today's problems of Mexico and Venezuela, or the severe financial entanglements stemming from monetarist experiences that plagues Argentina and Chile, or still the political stalemates of Chile and Nicaragua, the Brazilian story of international indebtedness post-1974 has nevertheless elements that seem to be present somehow or another in every Latin American country. A mixture of excessive confidence in the country's potentialities, political obstacles to operate radical changes in expenditures and financial fragility of its incipient albeit swollen financial sector are the necessary ingredients to have in mind when we set ourselves the task of drawing a relatively realistic sketch of the factors behind the accumulation of the largest foreign debt among developing countries up to the first half of the eighties.

The second section of the paper briefly sketches the major issues involved in the design of development and stabilization policies of the late seventies. The third section describes the conflicts of such policies in the first two years of the Figueiredo government (1979-85). The fourth section analyzes the policy reactions following the first signs of binding financial constraints and the fifth section covers the internal developments after the interest rate shock and the immediate consequences of the failure of international capital markets up to the economic recovery of 1984. The last section

presents final remarks and conclusions as to the perspectives of the Brazilian economy.

The picture that emerges from an analytical effort of moderate intensity is blurred in a blend of success in import substitution strategies cum export promotion, side by side with economic blunders in the domain of short-run macroeconomic policy; of a relatively peaceful democratic transition together with a dangerously high rate of inflation, in the 200% range; of maintenance of a growth-prone economy which has its investment potential reined by a need to transfer annually around 4% of its GDP to international creditors.

The main conclusions of the paper are: a) there has been an important structural adjustment in the Brazilian economy in the past ten years reflected in improved exploitation of its natural resources, lower dependence on imported oil and on imported industrial inputs, higher export coefficient and a viable current account in spite of the high interest payments it has to face in the next years; b) the long-run adjustment to the post 1973 international conditions was not accomplished without deep policy conflicts, whose solution has not always obeyed the canons of economic rationality but were within the narrow limits of political feasibility; c) that the particular political bounds which defined the contours of feasible short-run policies ended up favouring long-run structural adjustment; and finally, d) that since most of the foreign debt accumulated in the process is held the public sector, future servicing of the debt will require that real resources be transferred from the private to the public sector. The particular way this transfer is promoted has an important bearing on future distributive outcomes of the present policy dilemmas.

2. The starting situation: the Brazilian economy facing the eighties

Brazilian economic growth between the second half of the sixties and the first years of the seventies exhibits distinctive features when compared with previous experiences. Average growth rate of industrial output was 13.7% between 1967 and 1973. The composition of industrial growth evidenced an imbalance in favour of durable consumption goods, which had grown at 22% per year whereas capital and intermediate inputs had more moderate rates (respectively 15% and 13.4% per year) and non-durable consumption goods which encompasses the traditional industries grew at the relatively modest average rate of 8.6%. Tables 1 and 2 exhibits the structure of production and employment of manufacturing industry by the end the so-called "miracle" years when it tended to be a closer to that of modern industrialized countries than that of underdeveloped economies.

The structural fragility of the pattern of growth followed by the Brazilian economy up to mid-seventies has been abundantly analysed in the literature<sup>2</sup>. It then seemed to be necessary to maintain a highly unequal income distribution in order to generate the structure of consumption demand in line with the continuous expansion of the durable goods sector as well as to provide savings compatible with the increasing share of investment in income. The role of the state, which had surpassed

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<sup>2</sup> See, for example, Bacha (1977), Malan and Bonelli (1976), Fishlow (1972) and Wells (1977, 1979) and Bacha and Taylor (1978).

any expectations that could be justified by the dominant ideological content of public discourse, was to keep and increasing share of the state in the process of investment/savings intermediation so that it could channel the necessary savings into infra-structure investments and in the provision of basic inputs, as well as mobilize cheap capital toward the private projects. The control of the process of financial intermediation was thus crucial to harness private initiative to long run priorities. The option for an outward looking strategy had a double role: avoid the worst distortions of import-substitution industrialization and maintain a steadily rising import capacity to prevent foreign exchange scarcity from checking the continuity of a pattern of industrial growth increasingly dependent on imports of intermediate and capital goods<sup>3</sup>.

At least two of these three factors of fragility were under strain when the new government took over in 1974. First, the US\$6.5 billion increase in import outlays in 1974 brought by the quadrupling in the price of imported oil and the rising costs of machinery and other intermediate goods accompanied by a fall of about 20% in the import capacity provoked a four - fold increase in the current account gap to an expressive 6%

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<sup>3</sup> A brief discussion of the basic characteristics of the Brazilian growth model and a view of the main issues of macroeconomic policy following the first oil shock is provided in Carneiro (1977, 1978). In the 1978 paper, a more detailed account of the role of stabilization policies after 1974 is given.

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of GDP. In spite of the abundance of international finance which in the previous years had led the government to impose restrictions on foreign borrowing, a loss of reserves of almost one billion dollars occurred for the first time since 1967. The impact of the change in external environment was crucial for the design of the economic policy of the new government and had important implications for the strategy of growth for the next ten years.

Second, the income-concentrating nature of the previous past experience was severe criticism that found echo within the military establishment and narrowed the scope of policy actions required to deal with both the loss of wealth implicit in the change in relative prices and the inflationary pressures from abroad and from a clearly overheated economy<sup>4</sup>. Wage policy that resulted in real wage compression seemed to be a course of action no longer available, if a period of gradual transition towards democracy was to be believed. Claims for correction in the wage formula could no longer be postponed and resulted in slight but meaningful increases in government imposed wage adjustment indices above past rises in the cost of

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<sup>4</sup> The average price of gasoline increased 111% above the general price index in 1974. Modiano (1982) rightly observes that this was far below what was needed in order to correct the internal price, in view of the rise in the dollar price of oil. It illustrates, nevertheless, the relevance of imported inflation, especially when one notes that import prices as a whole increased by 54% in 1974.

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living<sup>5</sup>. On the other hand, political pressures for more relaxed social policies implied higher claims over the fiscal budget for social expenditures. Reduction of government consumption or subsidies found no political support especially if the political strength of the government were to be tested in the polls as a means to countervail the loss of confidence from the part of that portion of the military establishment whom President Geisel referred to as "sincere but radical revolutionaries".

The above remarks help us in the task of trying to understand why the availability of international finance was so important in the determination of the long run strategy adopted by the Geisel government following the first oil shock. If higher domestic savings were virtually impossible to be obtained either from the public or from the private sector due by and large to income distribution constraints and other political considerations, resort to external funding was the last resistance way to finance an investment program designed to redirect economic structure in the line with the new prospects for the import capacity. The new investment program announced in 1975 as part of the third Development Plan (III PND) was directed to remove the constraints imposed by the fall in import capacity, through

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<sup>5</sup> Data on the official wage adjustment indices for the period are given in Carneiro (1977). In fact, wage increases above past increases in the cost of living resulted from the wage formula adopted in 1974. Much of the pre-1974 discussion about wage repression in the mid-sixties stabilization efforts centred around the fact that in the old formula, part of the adjustment was determined by officially defined expected inflation. Whenever this expected inflation was underestimated, a new wage squeeze occurred. Mario Simonsen, the author of the post-1964 wage formula, and now Minister of Finance, proposed in 1974 a compensation for previously underestimated inflation and this element was adopted in the new wage rule. For detailed discussion of wage policy after 1964, see Carvalho (1981).

the creation of new incentives to the domestic production of intermediate inputs and capital goods, by trying to stimulate a new wave of import-substitution enhancing market opportunities created by the prospects of foreign exchange shortage and by resorting to an increase in protection through tariff increases and direct import controls, after 1975. In parallel, a new wave of incentives to manufactures exports was designed.

Finally, another element of fragility was added to the picture, and was generated essentially by the interplay of anti-inflationary policies in 1974 and stagnationist expectations that followed the slump in world trade in mid-1975. The sudden deceleration of export revenues in the last four months of 1975 brought its rate of growth

from 28.8% until August to 9% at the end the year, making export growth insufficient to compensate for the increase in service expenditures. The perspective of a permanent current account deficit between US\$ 6 and 7 billion and the pressures of a growing debt/export ratio led economic authorities to adopt a policy of rigid import rationing whereby priority projects were granted special privileges based upon either their contribution to the reduction of the import coefficient or to the growth of export capacity. In 1976, investments in the production of capital goods and basic inputs (especially metallurgic and chemical) absorbed around 98% of fixed capital outlays approved by the Industrial Development Council (CDI)<sup>6</sup>.

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<sup>6</sup> For a detailed description of industrial policy in the period, see Baumgarten and Cunha (1977).

The so called Programme of Basic Inputs aimed at reducing external dependence represented by items like paper and pulp, non-ferrous minerals, fertilizers, petrochemicals and steel. By 1979, four years before most projects were scheduled to reach full maturity, such investments allowed a reduction of imports of around US\$ 1.2 billion<sup>7</sup>.

Between 1974 and 1977, the trade deficit had been reduced to practically zero, and nominal imports were kept virtually constant in current dollars, while exports revenues were growing at an average of 13.9% per year. In 1978, due to bad crops that led to a fall of 1.7% in agricultural output, the exports of soybeans, sugar and corn were reduced and the need to import grains resulted in a trade deficit of US\$ 1 billion. Net imports of goods and services went down from US\$ 6.1 billion in 1974 to US\$ 1.5 in 1977, and up again to US\$2.8 billion in 1978. The story of external indebtedness in the same period can be completed by saying that in spite of the described fall in the need of real transfer of resources from abroad, the combined effect of rising nominal interest rates and of the accumulation of debt led the current account deficit from US\$ 7.1 billion in 1974 to US\$ 6.0 billion in 1978.

With the increase in the inflation rate plateau from around 20% per annum in the first half of the decade to 40% in the second half, one may say that the conflict between short-run

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<sup>7</sup>Velloso (1982) evaluates the import-substitution programme for basic inputs, and presents estimates of the effects of the programme upon Brazilian imports up to 1981.

stabilization efforts and the need to provide an appropriate environment for long-run structural adjustments and thus guarantee that economic performance could not be a hindrance to political opening, was solved essentially in favour of the latter.

Following the attempt at monetary control in 1974, and with the help of price controls, inflation rates lowered between mid-1974 and mid-1975, from 33% to 24% in 12-month rates. However, signs of recession were detected as the rate of growth of industrial output decreased from above 10% to -6%. The gains obtained by the opposition party in the November 1974 elections for Congress were then partly attributed to the recessive measures. They turned to be an important element to strengthen the role of those in government who favoured long-run adjustment through higher investments and more expansionary fiscal policies.

At the end of President Geisel's term however, long-run adjustment was still half way, since the list of on-going large projects that had to be finished under the next government required an estimated investment expenditures above US\$ 100 billion<sup>8</sup>.

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<sup>8</sup>The figure of US\$ 101.0 billion is obtained by adding official estimates of investment expenditures necessary to finish the largest projects in the period 1980-84, namely, the Alcohol Programme, oil-drilling by Petrobrás, Coal production facilities, the steel and non-ferrous programme, the Carajás mining complex, the so-called Polonoroeste projects to extend the agricultural frontier and the hydro-electricity projects inclusive of Tucuruí and Itaipú and dams and their respective transmission lines.

3. 1979-80: The Figueiredo Government defines its economic strategy. Or does it?

In march 1979, President Figueiredo took office with a well-defined political project: promoting the transition from military rule to a democratic civilian government. As the last year of his predecessor's government had evidenced, the feasibility of such project hinged on his ability to manage civilian and military forces at work within the after too narrow path defined by the need to keep the military establishment bound together by legalism.

In the economic front, several obstacles would have to be faced by the new economic team under the command of Mario Simonsen. In his new capacity as Minister of Planning, Simonsen would have under his control not only the fiscal budget, but the investment spending of state enterprises and the so-called "monetary budget". Contrary to what had been the rule thus far, he would retain the presidency of the all-powerful National Monetary Council (CMN), where most decisions over monetary policy were taken, including the concession of subsidized credit and the financial capability of the National Development Bank.

The prospects of implemen a stabilization program of orthodox inspiration designed to bring inflation back to pre-1974 figures and control external indebtedness were made less and less credible at the very beginning of the new government's term, by external as well as domestic developments.

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The second oil shock was already under way, accompanied this time by a risk of supply shortage due the

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deteriorating situation in the Middle East. Interest rates were rising in the US and prices of Brazilian exports did not show any significant recovery. The prospects of crop failures in several export products, especially soybeans, added to a dim outlook for the current account.

In the domestic scene, inflationary expectations were rising following a two percentual point hike in the inflation rate of March to 5.8% if compared to 3.7% in the first two months of the year, and of three points if compared with the average monthly rate of the previous year. In annual figures, the monthly rate of March represented more than doubling the rate of inflation relatively to that of the previous year. The building up of union strikes in the State of São Paulo for higher wage adjustments, the announced exchange-rate devaluation of 4.5% above the current inflation, and finally the intention to promote a bumper crop in the following year by rising minimum guaranteed prices for agricultural products by an average of 70%, did the job of eroding any public confidence that could remain in the orthodox control of demand intended by the new government. In fact, following a diagnosis of excessive monetary expansion in the previous year due to a Balance of Payments surplus of US\$ 3.9 billion, the new government had promoted an emergency plan according to which a fiscal surplus of Cr\$ 40 billion (around 1% of expected GDP) was to be pursued in 1979, by cutting public enterprises permissions to borrow, while tried to manage private spending via credit controls and restrictions in short term lending by commercial banks<sup>9</sup>.

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<sup>9</sup>According to preliminary estimates [1985], PSBR went up in 1979 as a proportion of GDP both in nominal terms and adjusted for the effect of inflation on the outstanding federal government's debt.

By the end of the first semester, facing increasing difficulties in finding political support from the part of the President himself and under pressure of harsh criticism from the Government supporting party in Congress, Mario Simonsen resigned and was replaced by the Minister of Agriculture. Delfin Netto took office following a wave of protest, of politicians and industrialists as well, against the menace that soaring interest rates represented to the level of economic activity. In his inaugural address as now the all-powerful Minister of Planning, Delfin was hailed by entrepreneurs as his optimistic views were seen as a sign of return to the bonanza of the times of the so-called "economic miracle". He promoted an immediate cut of 10% in nominal interest rates, ruled out recession as a solution to the problems of the Brazilian economy and placed his chips on the role of a vigorous stimulus to agriculture as a means to control inflation. A draft of the six-year development plan that had been prepared under Simonsen was purged from any reference to smaller growth rates and was used to express the faith of the new economic team in economic growth as a means to deal with inflation and solve Balance of Payments deficits. Since the new plan presented no figures concerning quantitative targets or assumptions about the external constraints, nothing could be said about the official evaluation of the additional pressure the new priorities for public investment would exert over domestic savings or the need for more international borrowing.

At this point total investment as a proportion of GDP had declined from a record high of almost 30% in 1975 to the level of 24.4% in 1978, comparable to its level of the first years of the seventies. Total domestic sources to

investment (defined as personal plus entrepreneurial plus government current account surpluses) had declined from 26.7% of GDP in 1975 to 21.7% of GDP in 1978<sup>10</sup>. This reduction in domestic sources for capital accumulation reflected not only the slight increase observed in private consumption, of three percent points if compared with the first years of the decade and of five percent points when compared with 1975, but also a progressive decline in government disposable income (Table 3). Roughly, tax revenues minus transfers and subsidies from narrowly defined government decreased by one third as a proportion of GDP from the first half of the seventies to 1978. Since the new plan contained no quantitative estimates of the effects of the new strategy on the pattern of transfers of income between the private and the public sector, its announcement could be welcomed by the private sector as positive in the sense that no additional pressure would be forthcoming. Perhaps in no other instance of Brazilian discussions of policy making in recent times wishful thinking has so clearly predominated over a realistic appraisal of the constraints then limitative to the continuation of economic growth without more inflation or higher external deficits. The peculiarity of the political situation at the moment, it is hard to overemphasise, set definite limits to the possibilities of finding support for a program of fiscal reforms to provide funding for new or on-going projects, but there are no records of a realistic diagnosis either, and there is some evidence of systematic underestimation of the strain that the financial requirements of on-going projects would impose on the government accounts in the following years. The pragmatic style of the new team proved to be a good way to unite Brazilian

<sup>10</sup> See Table 3 in the Appendix.

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capitalists and the military establishment around the new government, but, of course stopped short of providing a way out of the crucial policy dilemmas.

The accomodating stance of the new economic team had further consequences for the behaviour of the economy in the next years. It became clear, for example, that inflationary pressures would not be a sufficient reason for the adoption of contractionary domestic policies, and that the government would tolerate increasing deficits in the current account of the Balance of Payments as long as international finance could be made available. In practical terms, it meant it was believed that private financial markets would provide funds for Balance of Payments imbalances, as the country could exhibit a reasonable growth performance and signs of structural adjustment compatible with long run adaption to the relative prices configuration prevailing in international markets. This meant, of course, accelerating investment in the activities that led to substitution of imported oil and to more export capacity. Apparently, the belief in the role of agricultural prices in bringing inflation back to tolerable levels implied setting incentives to agriculture high in the priority list. Finally, the need to put a stop in the labour strikes them seen as a menace to peaceful transition to civil rule, led the Congress to approve a government-sponsored law modifying wage adjustments. This law, voted at the end of October, and signed by the President at the beginning of November 1979, reduced the interval between wage adjustments from a year to six months, thereby increasing the degree of wage indexation when the economy was being exposed to sucessive inflationary shocks stemming from

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the prices of agricultural products, gasoline, fuel oil and other oil derivatives, public tariffs as well as wage increases above past inflation following the strikes of the first ten months of the year.

In the second semester of 1979 prices were rising at an annualized rate of 101.3% on against 56% per year in the first semester. The increase in wage indexation implied by the new wage law played an important role in defining this 100%-odd rate as the new plateau around which inflation rates would fluctuate for the next three years<sup>11</sup>. At the time, a curious type of argument that related inflation to calendar years led the government, at the end of the year, to promote a sharp devaluation of 22%<sup>12</sup>. In order to prevent speculation concerning another maxi-devaluation and control financial indexation, exchange rate correction and indexation were pre-announced at target levels of 40% and 45% respectively for the next year, in an effort to "bring down expected inflation" and promote a real devaluation without further raising the inflation plateau. Needless to say, the effects of corrective inflation and of the new rhythm of cost increases defined in the wage formula led the pre-fixation of monetary and exchange rate correction to be abandoned in the middle of the next year, at least three months after it was totally discredited.

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<sup>11</sup>For an analysis of the effects of the role of indexation in the multiplication of such shocks, see Modiano (1984), where a detailed system of price equations for the Brazilian economy is analysed and estimated.

<sup>12</sup>Government officials tried to convince economic agents that inflationary effects of the price corrections of 1979 would be confined to that year, minimizing the linkages between past and future inflation brought about by indexation rules.

Attempts at dealing with expectational variables during 1980 consumed most of the new team's efforts as it became progressively clear to economic agents at home and abroad, that the whole macroeconomic policy program had turned into a tragic blunder<sup>13</sup>. By the end of the year, the effects of devaluation had disappeared, and the average exchange rate of 1980 turned out to appreciate by about 3% in relation to the previous year, when deflated by the general price index. Discredit at home about the soundness of economic policy had relatively little effect if compared with the consequences of discredit of international lenders. In the domestic scene, it meant cheap credit for consumption expenditures and to working capital, negative real rates on personal savings, a windfall subsidy granted to mortgages and the Development Bank's debtors and so forth. The net result, was sharp increase in the sales of durable consumption goods, a fall in financial assets (in real terms) by 13.2% following a drop by the same amount in non-monetary assets, a fall in Government's disposable income of about 1% of GDP, and, of course, and increase in non-oil imports by over US\$2 billions (Table 4) Added to the increase of almost US\$ 3 billions in expenditures with imported oil, this figure leads to a total rise in import outlays of almost US\$ 5 billions, going from 7.6% to 9.2% of GDP between 1979 and 1980. In spite of a gain of 6% in export prices and an increase in the quantum of exports by 22.6% in the same year, the trade deficit remained practically the same (Tables 5 and 6).

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<sup>13</sup> Tragic because it contributed to strengthen the position of those who favoured a recession as a means to curb inflation and stop snowballing external indebtedness.

By this time, rates of interest in the US economy had already risen by more than 6 percent points above 1978 levels and Brazilian net interest payments had climbed from US\$ 2.7 billion in 1978 to over US\$ 6.3 billion in 1980, absorbing more than 30% of export revenues. As a result, the current account deficit was US\$ 12.8 billion in 1980 (Table 5). Mounting disbelief of international bankers with respect to macroeconomic policy led to increasing difficulties in raising finance to meet Balance of Payments needs with the benefit of hindsight, we may say that Delfim Netto tried to play a stronger hand than he could with foreign bankers and before and at the end of the year, he had to announce a complete turnaround of short run policies. An increase in domestic interest rates was promoted so as to induce voluntary borrowing abroad from the part of the private sector, as well as to display political will to control external finance needs in the following years. The lack of confidence from the part of international banks, however, made it impossible to raise sufficient foreign exchange for Balance of Payments equilibrium, and by the end of 1980 foreign reserves had dropped by about US\$ 3 billion.

The observed GDP growth of 7.2% in real terms in 1980 could not, alas, be hailed as the sign of successful performance of the strategy announced by Delfim Netto one year and a half before. Instead, it was foreseen by economic agents at home and abroad that a painful and perhaps long adjustment could no longer be postponed. Inevitably, orthodox discipline would be called forth to deal with inflation and to bring ~~current account deficit down to a more acceptable course.~~

Needless to say, inflation acceleration from 40% to 100% between

1978 and 1980 had little to do with monetary policy as the experience of the following years would witness<sup>14</sup>.

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<sup>14</sup>On this issue see the exchange of views between Resende and Lopes (1981, 1982) and Contador (1981) as well as the interesting findings of Camargo and Landau (1983).

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#### 4. 1981-82: Restrictive demand policies without IMF surveillance

The first serious sign of shortage of international finance to the Brazilian economy, as seen in the previous section, came when the lenders' willingness to comply with adjustment without heavy short run internal costs was submitted to a test in 1980. From the end of 1980 on, one may say that the main lines of macroeconomic policy were dictated by the availability of foreign finance.

Economic space for manoeuvre provided by the availability of finance in 1979 and 1980 was partly wasted with the policies of 1980, but nevertheless, time was an important factor for the structural adjustment to proceed, and the most important elements of the long run strategy of the late seventies were still under way. Investments in oil-drilling facilities, energy-substitution in industry and transportation, import-substitution in basic inputs and exports-oriented activities proceeded in spite of repeated announcements of budget cuts, and were privileged by the long-run list of priorities of the Third Development Plan.

Perhaps the most important consequences of 1979/80 failures in dealing with inflation and current account deficits was a state of impending lack of confidence in the short-run management of the economy. As a result, the following years were plagued by the need of a continuous display, in the official discourse, of orthodox faith in demand controls as a means to deal with inflation. Old-fashioned monetary policy aided by ceilings on credit growth was privileged as an effective instrument to control inflationary pressures, and in spite of

the known resistance of indexed economies to respond the desired way to monetary controls, a continuous preoccupation with the size of the monetary base side by side a belief that maintaining a high level of interest rates was crucial to keep the private sector borrowing abroad led to a disastrous policy of financing government needs by selling more and more government bonds to private sector<sup>15</sup>.

The new prescription that inspired macroeconomic management had the following ingredients: a) capital expenditures of state enterprises were to be cut in order to control the broadly defined government deficit as well as to adjust public sector imports to a predetermined budget<sup>16</sup>; b) loans to the

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<sup>15</sup>In fact, in spite of monetary contraction partly evidence by the fall in all (monetary and non-monetary) financial aggregates in real terms, the estimated public deficit went up both in nominal terms (from 5.1 to 9.1% of GDP) and when adjusted for inflation (from 0.9 to 5.2% of GDP). One can see in Table 8 that the monetary base dopped by 22.9%, conventional M1 by 21%, total financial assets by 2.2% and total loans to the private sector went down by 11.3%. As already pointed out in another paper (Carneiro [1985]) it was one of the rare instances in the Brazilian recent history when all indicators of monetary policy exhibited an unequivocal sign of contraction.

<sup>16</sup>Maintenance of investment capacity of state enterprises after 1980 required substantial transfers from the fiscal budget in order to make up for the weight services on previously accumulated foreign debt exerted on state companies' financial statements. Such companies had been used as absorbers of foreign finance needed for Balance of Payments reasons in the previous period and were induced to borrow for beyond their individual needs. Attempts at controlling their "deficits" or borrowing requirements in the following years constituted a repeated menace upon the continuation of investment programmes that were badly needed for the adjustment of Brazilian productive capacity. On this issue see the evidence presented by Werneck (1982 and 1984).

private sector were subjected to a ceiling of 50% over the nominal values of December 1980; c) lending interest rates were free from previous years' controls except for loans to the agriculture sector and special credit lines to exporters; d) the nominal growth of means of payments and monetary base would be limited to 50%; e) tax incentives to manufactures exports that had been removed since the exchange devaluation of December 1979 were reinstated.

The macroeconomic strategy that would prevail in 1981 and 1982 was basically directed towards reducing foreign exchange needs by controlling domestic absorption. The fall in capacity utilization for domestic needs would render export activities more attractive at the same time it would contribute to reduce intermediate imports. The degree of success of such strategy in effectively reducing the real resource gap depends of course on the effects of the resulting recession. The smaller the fall in GDP for a given reduction in domestic absorption, the less the need of real transfer or resources from abroad. Expenditure switching policies may lead to more efficient short run adjustments, that is to say, smaller output losses. In the Brazilian case, raising the domestic price of oil derivatives was valuable for enhancing direct substitution efforts, but the bulk of the expenditure switching effect in favour of tradeables depended on government investment and on the availability of finance intermediated by governmental agencies such as the National Development Bank (BNDE). On the other hand, substantial real devaluations were ruled out not only because of fresh memories of the frustrated attempt in December 1979, but also due to the prevailing belief at that time that exports were

not being limited by capacity but by demand conditions due to world recession.

The effect of the years of restrictive policies over the rate of inflation was practically null. Both general and industrial prices accelerated steadily up to mid-1981 reaching a local peak of about 120% when we consider 12-month rates and declining back to the 100% plateau by the end of the year due to desacceleration of agricultural prices (see graphs 1 and 2). Following a larger crop for foodstuffs and a decline in international prices of export agriculture products, 12-month rates of change of agricultural prices in mid-1982 went down by almost one half of the record high of 138% attained in March 1981. Its effect over the general price index in 1982, however was damped not only by the downward resistance of industrial inflation, but also by the countervailing pressure exerted by the corrections of relative prices in favour of oil derivatives and other public prices.

In spite of further deterioration in the terms of trade (Table 6), a significant reversal in the trade balance was obtained, resulting in a total improvement of about US\$ 4 billion in the real resource balance in 1981 in comparison with 1980 (Table 7). Exports over GDP were up by 0.5% and a gain of 1% was made on the import coefficient. The increase of international lending rates by almost four percent points in 1981, however, led to an addition of US\$ 3 billion in interest payments which now absorbed almost 40% of export revenues (Table 9).

At this point, the Brazilian economy suffered a deep recession as industrial output fell by 5.4% in 1981 and a

decline (of 1.6%) in real GDP (Table 10) was observed by the first time in post-war years. The usefulness of the recession raised doubts even in most conservative minds, as capital inflows became scarcer and only a modest increase in foreign reserves (Table 11) was obtained at the end the year thanks to a sharp increase in short-term financing that foreshadowed the deterioration of debt maturities in the following years.

The deepening of world recession in 1982 enhanced by defensive behaviour of policy-makers in central economies and by declining import capacity of more recent customers of Brazilian manufactures led to a loss of almost US\$ 3 billions in export revenues that year, the result of a 6% fall in export prices and of almost 9% in quantum (Table 6). Continuity of substitution in intermediate goods (both oil and non-oil) and a recession-induced decline in capital goods allowed a fall in total import expenditures of over US\$ 2.6 billion, and therefore a relatively small loss in the trade balance (Tables 4 and 7). The increase of over US\$ 3 billion in interest payments (Table 5), however, turned the current account deficit virtually independent of domestic absorption. The stage was set for a new round of foreign exchange restrictions to economic growth starting with the Mexican moratorium of August 1982.

In October 25, 1982 the government formally announced that the macroeconomic performance of the Brazilian economy in the following year would be further restricted. International bankers and official lenders, now acting as a uniform entity since August, had put a ceiling of US\$ 10.6 billion to Brazilian borrowing in the next year. The rules of the game of external finance had been suspended since the Mexican

moratorium, and for the foreseeable future the country would have its creditworthiness formally evaluated by a committee of bankers.

Although it should be evidence by then, that IMF supervision would be a necessary condition for the new scheme to work out and that a thorough rescheduling of payments would have to be forthcoming, the proximity of general elections (scheduled for the 15<sup>th</sup> of November) made government officials dismiss any intention of going to the Fund for help until late November. Needless to say, the deterioration of economic conditions and the mounting signs of uncertainty of future prospects played an important role in the severe loss inflicted to the government party in the November elections in spite of the relative success the government had in keeping the hot issue of IMF supervision out of the campaign. Re-negotiation of the external debt was a favourite campaign issue for the opposition parties and remained a pending question for the coming presidential election two years ahead.

##### 5. 1983-84: Muddling-through to recovery

Since the first half of 1982, when export revenues became to decline the road was open for a political rescheduling of financial commitments related to external debt. As several authors observed (for ex. Simonsen (1984), Díaz (1984)) there is simply no way out of the debt crisis without a growing demand for exports. As time became too short for a market solution, it became clear that any solution would have to come through negotiation. The episode of the Mexican moratorium and the failure of the Toronto meeting of September 1982 to provide more financial resources to international lending agencies signalled that the deadlock would require a painstaking effort in order to avoid concerted behaviour from the part of debtors and prevent aggravation of the position of both borrowers and lenders by the withdrawal of marginal lenders.

The participation of Brazil, the largest debtor among developing countries, in the so-called muddling-through strategy to prevent general repudiation required the supervision of macroeconomic management by the IMF. An agreement between the Brazilian government and international banks was reached by December. At the same time, after three months of formal denials, for already mentioned political reasons, the Minister of Finance announced that a letter of intention was being presented to the IMF. In the next twenty-four months the Brazilian government would have seven letters of intention

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examined by the IMF Board<sup>17</sup>.

This painful exchange between Brazilian government officials and the IMF illustrates the difficulties involved in adapting the IMF orthodox recipes to a highly indexed developing economy in which the public sector not only has been directly responsible for something between one third and one half of total investment, but it intermediates a high proportion of private investment through the administration of important compulsory savings funds.

The story of IMF supervision of macroeconomic policies of Brazilian economy in the past two years begins with the targets of the first letter of intention concerning the performance criteria for 1983. A ceiling for the current-account deficit of US\$ 6.9 billions was defined and required the generation of a trade surplus of US\$ 6 billion and a target for net exports of goods and services about US\$ 4 billions in comparison with the negative figure of US\$ 2.8 billions of the previous year. The trade surplus would be obtained through an expected increase of 12% in exports and a cut of imports expenditures by US\$ 2.4 billions over the previous year. With respect to domestic targets, a projected rate of inflation of 78% was to be pursued thanks to cuts in domestic spending brought about by a contraction in government expenditures in order to reduce nominal public sector borrowing requirements as a proportion

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<sup>17</sup> The story of the details of the Brazilian negotiation with the IMF and the international banks is told by Fritsch (1985), Marques (1985) and Carneiro (1985).

of GDP and net domestic credit of the Monetary Authorities by one half its estimated value in the previous year. In order to induce expenditure switching, the monthly devaluation of the exchange rate would exceed monthly inflation by one percent point, and drastic cuts in state enterprises outlays were programmed so that import restrictions would affect the public sector more intensively than the private sector.

In February 18, following a speculative wave in the black market, the exchange rate was devalued by 30% and new policies were announced which required that Brazilian authorities sent a second letter of intentions before the IMF Board had a chance to approve the first one. The new package of policies included new credit allocation programs to incentive exports and to facilitate import substitution as well as the announcement that for the next twelve months monetary correction applying to government indexed bonds would be equal exchange rate correction and both would be defined by the monthly behaviour of the General Price Index.

The combination of domestic recession, price incentives provided by the exchange rate devaluation and favourable developments in exogenous variables like the international price of oil and interest rates as well as the signs of recovery in the U.S. economy, especially strong during the second semester, helped the fulfillment of practically all commitments concerning the external accounts. At the years's end, a trade surplus of US\$ 6.47 billion was made public. A current account deficit of US\$ 6.2 billion (Table 5), or 2.7% of GDP was the most important sign of successful adjustment towards the control of snowballing indebtedness.

The figures behind these results, however, were an increase of only 7.3% in exports (instead of projected 12% but a significant figure when we consider that export prices fell by 6.4% by the third consecutive year!) and a drop of imports expenditures by 21.5% relatively to 1982 figures (Tables 4 and 12). This reduction in imports to 6.8% of GDP was obtained due to the combined effect of a 4.7% reduction in the international price of oil, direct import controls, a recession-induced fall in import demand as well as of long-run import substitution due the operation of several of the new projects that had been developed in the post-1975 investment programme. The latter would contribute to a possible permanent reduction in the import coefficient (Table 4). Lower prices, higher domestic production of oil and substitution of gasoline and fuel oil contributed to a decrease in expenditures with imported oil by 9.7%. Income effects and higher domestic production were the dominant factors behind the 20% decrease in imports of consumer goods (especially wheat) and the 32% fall in the remaining items. (See Table 4).

This success story of external adjustment, however, was accompanied by very complicated negotiations concerning the domestic targets that occupied the best part of Brazilian authorities and IMF officials' time and efforts all the year long. The dominant fact behind the difficulties lay in the behaviour of inflation rates, illustrated by graphs 1 to 3. By the end of the first quarter, it was clear to most economists who understand the effects of indexation, that the promised reduction in the rate of inflation would not be fulfilled. Two ~~causes conspired against monetarists' faith in budget cuts and~~ recessive monetary policies to reduce inflation in 1983: the ~~induced effects of the maxi-devaluation through indexation~~

and the upward trend of agriculture prices which added downward rigidity to inflation rates. The former contributed to render the reduction of nominal borrowing requirements of the public sector virtually impossible, due to the effect of indexation over the service of the public debt. The latter represented an additional supply shock over the rate of inflation with an intensity comparable to the one provoked by the maxi-devaluation. Econometric evidence available for the Brazilian economy today indicates that from a starting situation of a relatively stabilized inflation around 100%, a real devaluation of 30% plus a 30% increase in real agricultural prices are sufficient to explain the resulting rate of about 230% observed at the end of 1983<sup>18</sup> (Table 13).

The progressive acceleration of inflation since the beginning of the year was sufficient to discredit the projected annual rate upon which nominal values for the public sector and for monetary targets were based. In fact, three months after formal approval of the stabilization programme, the IMF suspended the liberation of US\$ 2 billion because of failure of Brazilian government to accomplish the projected reduction in nominal deficits. A mixture of causes led to a postponement of discussion of the fundamental issues that lay behind the difficulties. First, the IMF money was essential to make other parts of the programme accorded with the private banks in December. Second, political support to an economic

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<sup>18</sup> Modiano (1984) presents an econometric evaluation of reduced forms multipliers for the different supply shocks which affected Brazilian inflation in 1983.

team who showed at least moderate goodwill with the IMF could be impaired by an excessive delay in finding a new way out of the impasse. At the point it looked like none of the parts involved in the agreement, Brazilian authorities, bankers and the IMF, would take the risk of a potentially dangerous change in the economic team. Third, informal pledges were made to change the indexation rules, in a way to make the new targets more plausible for the following months. Some of these measures could be taken by the Executive alone like the ones pertaining to financial indexation<sup>19</sup>. Others, like the modification of wage laws in order to act directly upon wage costs affecting private prices and public expenditures as well, required Congress approval. Since the Constitution allowed the President to sign decrees with immediate effects concerning loosely defined "economic matters" and submit it to Congress for exam within 45 days, a total of four decrees were signed in a effort to change indexation rules as a whole and wage adjustments in particular between March and October<sup>20</sup>. Uncertainty around the net effects of the prolonged negotiation with the IMF over the appropriate measurement of budget deficits and the resulting

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<sup>19</sup>For an analytical evaluation of the effects of indexation on the feasible fiscal policies when PSBR are limited as a proportion of GDP, see Carneiro and Modiano (1983), where a simulation model was used in order to evaluate the effects of partial desindexation of government bonds for the Brazilian economy.

<sup>20</sup>For a quantitative evaluation of the effects of different indexation schemes implied by the several wage formula , see Lopes (1983).

substantive macroeconomic impact of fiscal restraint on on-going projects, side by side with the general understanding that the economy was being run with negative reserves (Table 11) of foreign exchanges, played an important role in the strong demand for dollar denominated assets during the year.

Thanks to strict exchange controls effective capital flight was prevented or at least reduced to insignificant levels if compared with other Latin American countries<sup>21</sup>. Another important element that contributed to offer a hedge against exchange risk without putting pressure on the country's capital account was the existence of exchange rate indexed government bonds. Thus excess demand for dollars due to expected devaluation spilled over to domestic assets driving up the prices of government bonds with exchange rate correction clauses and contributed to control the premium of black market rates over official rates during the period of worst uncertainty. At the peak of speculation that occurred in the middle of 1983 the difference between black market rates and official rates was around 40%, when the risk of another maxi-devaluation was thought to be at its maximum.

At least three factors contributed to reduce the margin between black and official exchange rates between the second semester of 1983 and the first quarter of 1984. First, gradual improvement of the trade balance on a monthly basis helped spreading the hopes that the commitments concerning the

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<sup>21</sup> Available estimates of total capital flight tend to be very low when ~~Brazil is compared with other IA countries.~~ Sachs (1984) presents a figure of US\$ 1 billion. Informal estimates indicate figures below US\$ 2.5 billion.

trade surplus and the current account would be fulfilled at the end of the year. In August the accumulated trade surplus during the year was already above US\$ 4 billion and in October it surpassed US\$ 5 billion and proceeded at a monthly rate of over US\$ 500 million. Second, as successive rounds of negotiations between the government and IMF officials went by, the real rules of the game were seen to be less strict than anticipated, as two providential "waivers" were approved by the IMF board. Finally, domestic financial intermediaries carried substantial losses in their accounts as their position in dollar denominated assets were financed at a level of interest rates above the monthly rate of exchange corrections. Their progressive fragility increased as signs of new disasters in Brazilian external accounts waned away during the latter part of the year, but then the level of confidence in maintenance of exchange rate policy correspondingly diminished the demand for dollar-denominated assets. In the first quarter of 1984 as massive speculation against the cruzeiro virtually came to a stop, Monetary Authorities rescued the financial system by purchasing the greater part of dollar-indexed bonds in exchange for cruzeiro-indexed bonds, not without absorbing some of the losses deriving from unsuccessful speculation.

Recession during 1983 hit the industrial sector in its most traditionally dynamic segments (machinery, durable consumer goods and metallurgy) although the less dynamic ones like textile food and beverages were also particularly affected by falling real wages and employment. The heaviest losses seem to have been suffered in the third quarter and a moderate but steady recovery could be felt in some sectors benefited by the

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vigorous picking-up of export demand, especially in the U.S. market. Increases in oil production and the first effects of changes in relative prices in favour of agriculture upon the demand for industrialized intermediate and capital goods helped avoiding a still worse loss of output. Total loss in per capita income between the local peak of 1980 and the observed trough in 1983 was almost 12% in constant cruzeiros. Between 1981 and 1983 manufacturing industry declined by a 6% annual rate, in comparison with a 7.2% average rate between 1976 and 1980. The behaviour of particular segments of manufacturing industry can be read in Table 1 . Employment in manufacturing decreased by an estimated 7.25% per year in the period in the worst recession experienced in Brazilian industrial sector in its recorded history (Table 2). Talks about the need to scrap part of the industrial equipment became usual among conservative economists who then, based on some crude estimates of effective protection, offered a curious argument that industrialization during the late seventies had been artificially promoted by the Brazilian governmental technocracy with no regard for relative prices or international comparative advantages. Therefore, the Brazilian economy would not in fact be facing a depression but a healthy purge of its industrial inefficiency bought by market forces once the IMF-sponsored policies prevented the government to pump demand into the system. Needless to say the argument lost credibility when, under the continuous pull export demand, the most "artificial" segments of Brazilian industry showed a vigorous recovery in the first two quarters of the following year.

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The firmness of U.S. recovery in the first two quarters of 1984 was of fundamental importance for the performance of the Brazilian economy in 1984. In the first quarter alone steel exports were up by 40% taking advantage of the import outburst that led U.S. imports from Latin American to increase at a rate above 50% in the first five months of 1984 in comparison to the same period in the previous year. On the other hand the violent rise in agricultural prices (Graph 3) had provided a significant stimulus to higher purchases of intermediate inputs and machinery from industry. The import substitution strategy implemented after 1975 was being put to a test as the progressive coming to maturity a whole vintage of projects (such as the steel, the non-ferrous metallurgy, the replacement of imported oil by electricity in the production of industrial heat and by alcohol for fuel to transportation, the petrochemical to name a few) were called to play an important role in allowing macroeconomic recovery with a sustained high export coefficient and an all-time low import-coefficient in spite of the unfavourable behaviour of terms of trade since the late seventies (Table 6). In 1984, the improvement occurred in non-oil terms of trade was barely sufficient to recover the levels observed for 1981, around 30% below its level of 1977<sup>22</sup>. In the first quarter of 1984 the signs of recovery in the industrial sector were unequivocal as the level of output raised by 4% relatively to the first quarter of 1983 (Table 11).

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<sup>22</sup>See Table 6 .

As the positive signs coming from the monthly behaviour of the trade balance indicated that industrial recovery would neither interfere with the external balance of the economy during 1984 nor necessarily mean a further increase in inflation rates, it became progressively clear to economic agents that the domestic recession as experienced in the previous years was not necessary for the improvement of the external accounts. These signs were important to restore confidence in the economic prospects of the country and reduce the role that the precarious three-month lived agreements with the IMF had played in de-stabilizing expectations in the exchange market and its disturbing effects on the economic plans both of investors and consumers.

Industrial recovery that had started under the leadership of Metallurgy (+13.3%), Chemical (+8.7%) and Engineering (+14.2%) (Table 1) segments of manufacturing industry turned into a steady growth path as consumers' expenditures picked up in the second semester induced by improvement in real wages. The latter improvement was brought about by the recovery of rural income thanks to the performance of the agriculture exports and to wage adjustments granted by S. Paulo industry above the level prescribed by the wage laws, especially in those sectors which were favourably affected by strong export demand. Finally, from the third quarter onwards, an upsurge of inflationary expectations provoked by higher wage claims, local monetarists' hysteria over an alledged loose monetary policy and an increase in the frequency of adjustments of public tariffs led to an anticipation of purchases of durable goods and helped spreading the recovery to other segments of the manufacturing industry.

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With the exception of Food (-0.9%), Perfumery (-0.7%) and Textiles (-8.8%) (Table 1) the remaining segments exhibited positive growth in 1984. At the years' end, GDP had increased by 4.5%, with Agriculture growing by 4.3% and Industry, 5.8%.

Thanks to the growth of 23.3% in total exports and a fall of 9.3% in total imports (Tables 4 and 12), the trade surplus in 1984 was US\$ 3.5 billions above the target of US\$ 9.5 billions accorded with the IMF, and larger (by almost US\$ 2 billions) than the net interest bill for the first time since the first oil shock. A positive resource balance above US\$ 11 billions (Table 5) was achieved and the current account was virtually brought to equilibrium. The resulting figures for the Brazilian Balance of Payments in 1984 illustrated first of all the importance of the behaviour of demand for exports to nonrecessive adjustment in the external debt situation. Secondly, where costs involved in curbing the explosive indebtedness under normal conditions of international trade will be located, namely in adjusting existent productive capacity and at the same time transferring abroad 4% of domestic product. The results also helped showing that the long-run strategy followed after the first oil shock was basically sound: a substantial growth of GDP was finally achieved with a drop in import coefficient from 7,3 to 6.3% of GDP and a raise in the export coefficient from 10.4 to 12.3% of GDP (Table 9), once most of the projects associated with the long-run structural adjustment began to work.

A thorough evaluation as to the possibilities of continuity of improvement in debt related ratios in medium and long term requires a deeper understanding of the contradictory effects or orthodox attempts at stabilization and the requirements

imposed by the need of promoting a continuous change in the structure of productive capacity.

The highest costs associated with the 1981-83 recession, besides the losses in percapita income and industrial employment may be located at the high rate of inflation in the 200% neighborhood that resulted from relative price changes during the period (in favour of tradeables in general, of agricultural and oil derivatives in particular), and the resulting disorder in government's finance, both of narrowly defined central government and of broadly defined government inclusive of state-owned enterprises. These two consequences have important implications for the design of future policies as both have a perfect fit in continuous orthodox claims for more austerity meaning higher interest rates, reduction of public investment and more liberal market oriented trade policies. The most visible benefits were quite obvious: the continuity of structural change was maintained as investment projects managed to hobble along through the repeated attempts at paralyzing the public sector and the private sector capital accumulation activities in name of short run stabilization efforts with or without the supervision of the IMF.

## 6. Final Remarks and Conclusions

In this final section we face the hard question of the prospects for a lasting recovery following 1984. Our answer to this question will require an appraisal of two issues that will be addressed to below under the headings of external and domestic constraints, for lack of better labels.

### External Constraints

As discussed in the previous section, one remarkable aspect of the 1984 recovery was that it was achieved without interrupting either the rise in the exports coefficient or the decline in the import coefficient that were important signs of the long run structural adjustments that are being carried out in the Brazilian economy in the past ten years. An evaluation of the prospects for external constraints to economic growth has to start by asking how permanent are these favourable change in coefficients likely to be.

One crucial point has to do with imports. Oil imports have been reduced both due to decrease in consumption per unit of GDP- thanks to conservation and to substitution of electricity, alcohol and natural gas for oil in the past ten years, with the help of credit and price incentives — as well as to an increase in domestic production. Brazil is able to produce today around 60% of its consumption, compared with only 20% ten years ago. If investment in drilling and incentive policies are not suspended, a situation close to self sufficiency before the end of the next decade cannot be ruled out. As to

non-oil imports, there is sufficient econometric evidence that the cyclical behaviour of the import-coefficient may be prolonged by the appropriate policy measures both price-related and through a careful government standing over incentives for import-substitution<sup>23</sup>.

Adopting rather conservative, albeit non-tragic, assumptions about the behaviour of international economy, such as constant terms of trade, rates of growth of real world imports around 2 to 3%, and, of course, international lending rates compatible with resulting growth of export revenues (in the 10% to 12% range) I and my colleagues Eduardo Modiano and Francisco Lopes have obtained simulations with an econometric model for the Brazilian economy according to which an average growth rate close to historical trends (around 7%) for the second half of the eighties is consistent with declining debt/export ratios and capital inflow requirements compatible with a moderate trend of voluntary risk capital<sup>24</sup>.

With respect to balance of payments constraints, the foreign remarks are, unfortunately, too similar to what John

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<sup>23</sup> See the interesting analysis by Pombal-Dib (1984) of the behaviour of imports and the effects of different industrial policies in the period 1947/52.

<sup>24</sup> See Carneiro, Modiano and Lopes (1984), for further explanation on assumptions. The formal structure of the model is essentially described in Modiano (1983c).

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Wells described as the official Brazilian view in 1977<sup>25</sup>. Fortunately, they are not far from what Carlos Díaz (1983) called the 'prudent planner's' forecasts in his counterfactual analysis of the Brazilian balance of payments crisis of 1982-83. Today's prudent planners, however, are not entitled to be optimistic making the necessary provisions for financial disarray.

We are thus led to qualify any favourable prospect for external equilibrium based upon assumption of tranquility in external financial markets. Even avoiding an unduly lengthy discussion, one cannot help attributing a significant probability that the current muddling-through of debt rescheduling will not survive the present sluggishness of world trade. Moderately recessive policies in the U.S. economy could do the job of destabilizing world financial markets, since the remainder of OECD imports are unlikely to compensate for the negative impact of a significant slowdown in U.S. imports from Latin America over foreign debt indicators of Mexico and Brazil.

#### Domestic Constraints

Suppose that neither the demand for exports nor international interest rates will obstruct the recovery path of external indicators for the next few years. Existing unused capacity may allow for some demand-pulled growth with rather

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<sup>25</sup>Wells (1978) described the official view in 1977 as: "following a period of adjustment similar to the mid-1960's domestic capacity will grow and the balance of payments strengthen so that, by 1980, the economy will be able to resume rapid growth, based on a high elasticity of supply and the absence of foreign exchange constraints".

small accrual to capacity in selected segments of industry, but as growth resumes, the need to transfer 4 to 5% of GDP abroad to service the debt means that domestic policies will have to face the need to revert the falling trend of domestically financial investment to GDP observed in the past years. As shown in Table 3 this fall has two important components up to 1982, the last for which National Accounts Statistics are available in Brazil. The first component is the decrease in the rate of investment (I/Y) from the peak of 29.6% in 1975 to 21.2% in 1982. The second is the decrease in domestic sources (defined roughly as private plus public sector current account surpluses) as a proportion of total capital expenditures from 93.3% in 1975 to 72.6% in 1982. Behind these figures lies an important phenomenon, namely the fall in government disposable income (Table 3) as a proportion of GDP, mainly caused by the increase in government transfers to the private sector. Transfers increased from 32.3% of total revenue to 48.1% between 1975 and 1982, while subsidies declined from 11% of government receipts in 1975 to 6.2% in 1976 and 1977 and increased again to 15% in 1980, and were 10% in 1982.

The nature of domestic constraints to GDP growth may be classified in these categories as follows:

The first one, of course, is the fact that resort to current account deficits will be no longer possible as a permanent source of savings. Therefore, domestic savings will have to be mobilized not only to finance investment but to transfer abroad around 4% of GDP in the second half of the decade. This means that from the 72.6% figure for 1982 domestic savings will have to be raised to 104% of total

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investment. This will require a reversal of the flows between the public and the private sector, since most of the external debts is of public responsibility.

The second one is related to investment requirements once the existent productive capacity is used up. Investment lags will require an increase in investment expenditures well before actual signs of capacity constraints show up and a careful anticipation of bottlenecks is needed in order to prevent shortages or increases in the import-coefficients. If the increase in capital/output ratios observed by Díaz-Alejandro (1984) proves to be a long lasting phenomenon and not just the effect of the unusually long maturity of most projects associated with the 1975 programme, an additional difficulty will have to be faced, namely that of investment productivity in the next stage.

Finally, the question of the appropriate demand policies in order to maintain a high level of investment will require a fiscal reform to prevent the government budget to be an obstacle to continued growth. Fiscal reform here means an increase in net public receipts which had been falling at least up to 1983, according to available estimates. This will probably require both an increase in gross tax rates, which are rather low in Brazil when compared to most industrialized countries, as well as a reduction in subsidy and transfers<sup>26</sup>.

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<sup>26</sup>See Longo (1984) and Costa (1984) for an analysis of the behaviour of governmental revenues in the past years. As both authors observe, there has been an important decrease in net taxation due to obsolete taxation schemes as well as due to an increase in government transfers and subsidies.

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Since an important portion of governmental transfers to the public sector is determined by the services of the public debt, domestic interest policy will have to be totally reversed.

As noted before, increase in government intermediation of the savings/investment process together with an old-fashioned monetarist belief faith in the perils of monetary financing of public deficits led to an increase in public sector domestic borrowing<sup>27</sup>. From the passive monetary policy directed towards "the needs of trade" of the late sixties and early seventies to post-1974 concern with the size of the money supply and to direct controls of credit aggregates of the early eighties, an important difference occurred in the factors determining domestic interest rates. From 1977 onwards the cost of the public debt becomes more of a burden since domestic interest rates have been kept highly positive in order to induce private sector external borrowing. An increasing cost of domestic credit was required to countervail the effects of increasing foreign exchange risk on desired private borrowing. This was particularly true in 1981, when ceilings were imposed on the supply of domestic credit (Table 8 ) and as a consequence, rationed banks were willing to purchase public bonds, making monetary authority happy that they could control the money supply. Since 1981, domestic interest rates have been intolerably high to the private and to the public sector as well, reaching incredible levels of 30% above inflation. Such rates are of course not compatible with any economic calculations of prospective yield of investment. The role of state in financial intermediation was thus crucial to prevent capital expenditures to collapse.

<sup>27</sup> For new monetarists, of course, it should make no difference whether fiscal deficits are financed by issue of money or debt, since rational behaviour of consumers should lead to appropriate discounting of future taxes.

Finishing the 1975 vintage of investment projects required a massive transfer of real resources to the private sector, both through borrowing at high cost and lending at low costs.

The resulting situation is of course that a relevant portion of the public debt, both foreign and domestic, has a its counterpart, private assets, as it happened in other Latin American indebted countries. One fortunate aspect of the Brazilian experience is that most private assets are inside the country, and therefore the income they will yield may be taxed and provide resources to be transferred abroad. The fiscal reform makes economic sense, and so does the need to lower the domestic interest rates.

As in so many instances of Brazilian recent history, however, the option in favour of orthodox demand policies is the most important risk for the removal of domestic constraints. Since existing capital has to be put to use so that resulting income may be taxed, the level of economic activity has to be maintained at a high level. Orthodox interpretation of high interest rates, however, leads to cutting of public spending so as to diminish "crowding-out" of private investment. This will lead to further recession and to a fall in taxable income, aggravating the burden of accumulated public debt. For non-orthodox adjustment the financial mix of the public sector borrowing requirements has to be reversed in favour of more base money and less debt so as to lower interest rates and prevent recession from increasing the public deficit. The mid-1985 debate concerning the ways to lower domestic interest rates, and the resulting policies are crucial to determine the role of domestic constraints to future growth prospects of the Brazilian economy.

Table 1

BRAZIL : GROWTH OF MANUFACTURING INDUSTRY  
AND STRUCTURE OF PRODUCTION (%)

SECTORS	* 75/80	* 81/83	* 84	* 1975	* 1980	* 1984
NONMETALLIC MINERALS	18.13	-9.0	1.0	3.9	4.1	3.5
FUNDRY/METAL PROCESSING	8.45	-6.9	13.3	13.1	13.8	14.3
ENGINEERING	5.01	-15.3	14.5	8.7	7.8	6.2
ELECTRONS/COMMUNICATIONS	10.8	-9.2	3.5	4.5	5.3	4.7
TRANSPORTATION GOODS	5.93	-13.2	3.4	8.2	7.7	6.2
PAPER/CARDBOARD	11.64	0.4	5.4	2.3	2.8	3.4
GLASS	6.54	-7.0	12.6	1.6	1.5	1.5
CHEMICAL	8.64	-1.2	3.7	17.9	19.1	22.8
PHARMACEUTICAL	2.44	-1.7	8.8	1.4	1.1	1.3
PERUIMERY	9.26	0.4	-0.7	0.7	0.8	0.9
PLASTIC GOODS	10.05	-8.9	1.3	1.8	2.1	1.8
TEXTILE	5.67	-7.0	-8.3	7.4	6.9	6.1
CLOTHING/FOOTWEAR	6.59	-2.5	3.1	3.6	3.5	3.8
FOOD	5.21	2.5	-0.9	15.1	13.8	15.7
BEVERAGES	7.97	-7.5	0.1	0.9	1.0	0.9
TABACCO	5.26	0.8	0.6	0.7	0.6	0.7
OTHERS	...	...	...	8.2	8.0	5.2
TOTAL	7.24	-5.0	5.9	100.0	100.0	100.0

SOURCES:

REPRODUCED FROM CNI(1984), PG.15.

UPDATED BY THE AUTHOR TO 1984, BASED ON SURGE(1985)

Table 2

BRAZIL : EMPLOYMENT IN MANUFACTURING INDUSTRY (1)  
AND STRUCTURE OF EMPLOYMENT

SECTORS	* 75/80	* 81/83	* 84	* 1975	* 1980	* 1984
	***** AVERAGE GROWTH ***** STRUCTURE OF EMPLOYMENT *****					
NONMETALLIC MINERALS	* 6.37	* -8.90	* -8.8	* 7.6	* 9.0	* 6.9
FUNDRY/METAL PROCESSING	* 4.14	* -9.75	* 3.6	* 11.9	* 11.3	* 11.0
ENGINEERING	* 5.89	* -13.82	* 3.3	* 10.7	* 11.1	* 9.4
ELEC.GOODS/COMMUNICATIONS	* 6.71	* -11.25	* -8.3	* 4.9	* 5.2	* 4.3
TRANSPORTATION GOODS	* 3.99	* -9.10	* -2.0	* 6.0	* 5.7	* 5.4
PAPER/CARDBOARD	* 4.84	* -5.44	* -3.3	* 2.4	* 2.3	* 2.4
RUBBER	* 4.10	* -9.02	* 10.2	* 1.3	* 1.2	* 1.2
CHEMICAL	* 5.81	* -5.72	* 1.2	* 3.5	* 3.5	* 3.8
PHARMACEUTICAL	* 0.60	* -8.74	* -8.7	* 0.7	* 0.7	* 0.7
REFRIMERY	* 2.93	* -8.27	* -9.5	* 0.6	* 0.5	* 0.6
PLASTIC GOODS	* 3.33	* -8.15	* -0.9	* 2.2	* 2.5	* 2.4
TEXTILE	* 3.72	* -9.35	* -8.0	* 9.1	* 8.5	* 7.4
CLOTHING/FUWWEAR	* 7.92	* -1.66	* -2.2	* 6.1	* 9.2	* 11.0
FOOD	* 5.44	* -0.54	* -2.6	* 12.1	* 12.2	* 14.9
BEVERAGES	* 1.40	* -4.24	* -6.5	* 1.4	* 1.2	* 1.2
TORACCT	* -2.67	* -5.31	* -5.1	* 0.6	* 0.4	* 0.4
OTHERS	* . . . .	* . . . .	* . . . .	* 15.3	* 15.4	* 17.0
TOTAL	* 5.23	* -7.25	* -2.1	* 100.0	* 100.0	* 100.0

\*\*\*\*\*  
 \* 5.23 \* -7.25 \* -2.1 \* 100.0 \* 100.0 \* 100.0 \*\*\*\*\*  
 SOURCES:  
 REPRODUCED FROM CNI(1984) 06.19,  
 UPDATED BY THE AUTHOR TO 1984, BASED ON FIBGE (1985)

Table 3

Brazil: Selected Economic Indicators 1970-1984  
(as a percentage of GDP (\*))

Anc	GDP Real Growth	Investment		Domestic Sources for Investment	Import of Goods/ Services	Private Consumption	Government Disposable Income	Net Factor Income Paid Abroad
		(1)	(2)					
1970	9.5	23.8	23.8	24.2	7.4	63.7	16.6	0.8
1971	12.0	24.7	24.7	23.3	8.1	64.7	16.8	0.8
1972	11.1	24.9	25.2	23.5	8.9	64.7	16.6	0.9
1973	13.6	25.8	25.6	25.3	9.5	63.2	16.8	0.8
1974	9.7	27.3	27.9	23.7	14.0	65.6	14.3	0.8
1975	5.4	29.2	29.6	26.7	11.4	61.3	14.4	1.3
1976	9.7	29.0	26.7	23.4	9.5	64.5	14.9	1.4
1977	5.7	26.8	25.1	23.5	7.9	65.3	13.4	1.4
1978	5.0	27.0	24.4	21.7	7.5	66.7	11.5	1.5
1979	6.4	26.4	22.3	17.5	8.8	70.5	11.6	2.0
1980	7.2	26.3	21.8	17.3	10.6	70.8	10.0	2.6
1981	-1.6	23.5	21.2	17.0	9.4	70.2	10.0	3.4
1982	0.9	22.3	21.2	15.6	8.2	69.5	10.3	4.2
1983	-3.2	19.0	17.0	13.6	8.8	71.2	8.7	4.9
1984	4.5	(N.A)	(N.A)	(N.A)	7.4	(N.A)	(N.A)	5.1

Sources: Boletim do Banco Central do Brasil and National Accounting Tables (FGV)

(\*) Except First Column

(N.A) Not Available

(1) At Constant Prices of 1970

(2) At Current Prices

Table 4

		BRAZILIAN IMPORTS *****				US\$ MILLIONS	
		CONSUMER GOODS	INTERMEDIATE GOODS(1)	OIL	CAPITAL GOODS	TOTAL	
1979		1786	12311	5254	3975	18072	
(%)		(9.9)	(68.1)	(34.7)	(22.0)	(100.0)	
1980		1887	16937	3372	4619	22943	
(%)		(6.1)	(73.8)	(40.9)	(20.1)	(100.0)	
1981		1106	16698	10604	4257	22061	
(%)		(4.9)	(75.8)	(48.1)	(19.3)	(100.0)	
1982		1014	14862	9566	3519	19395	
(%)		(5.3)	(76.6)	(49.3)	(18.1)	(100.0)	
1983		793	12130	7822	2505	15428	
(%)		(5.2)	(78.6)	(50.1)	(16.2)	(100.0)	
1984		695	11063	6736	2169	13927	
(%)		(5.0)	(79.4)	(48.4)	(15.6)	(100.0)	
SOURCES:							
RELATRIIT CASEX AND FUNDACAO CENTRO DE ESTUDOS DO COMERCIO EXTERIOR							
(1) INCLUDING OIL							

Table 5

CURRENT ACCOUNT DEFICIT AND ITS MAIN COMPONENTS  
\*\*\*\*\*

US\$ MILLIONS

	TRADE BALANCE	RESOURCE BALANCE <sup>1</sup>	NET INTEREST PAYMENTS	CURRENT ACCOUNT DEFICIT
1979	-2827.3	5205	4185.0	10741.6
1980	-2810.4	5931	8311.1	12807.0
1981	1232.1	1631	9161.0	11734.3
1982	780.40	2808	11353.3	16310.5
1983	6470.4	-4063	9555.4	6897.4
1984	13077.8	-11364	10076.0	-165.6

STATISTICAL BULLETIM DO BANCO CENTRAL DO BRASIL

(1) Excess of absorption over GDP

Table 6

BRAZIL: FOREIGN TRADE INDICES  
\*\*\*\*\*

	EXPORTS		IMPORTS		OIL IMPORTS		TERMS OF TRADE	
	(P)	(Q)	(P)	(Q)	(P)	(Q)	(1)	(2)
1979	101	124	128	115	135	124	79	81
1980	107	152	164	115	226	107	65	74
1981	101	143	182	99	270	104	55	71
1982	95	167	176	91	260	98	54	69
1983	89	191	167	76	235	90	53	54
1984	94	229	160	72	230	79	59	73

1977=100

SOURCE: BOLETIM DO BANCO CENTRAL DO BRASIL

(1) TOTAL  
(2) EXCLUDING OIL  
(3) PRICE  
(Q) QUANTITY

Table 7

CURRENT ACCOUNT DEFICIT AND ITS MAIN COMPONENTS  
AS A PERCENTAGE OF GDP  
\*\*\*\*\*  
(%)

	TRADE BALANCE	RESOURCE BALANCE(1)	NET INTEREST PAYMENTS	CURRENT ACCOUNT DEFICIT
1979	1.2	2.2	1.8	4.5
1980	1.1	2.4	2.5	5.1
1981	0.4	0.6	3.3	4.3
1982	0.3	1.0	4.0	5.8
1983	3.1	1.9	4.5	3.3
1984(2)	5.9	5.2	4.6	0.1

SOURCE: BOLETIM DO BANCO CENTRAL DO BRASIL

(1) EXCESS DE ABSORÇÃO OVER GDP

(2) GDP DE 1984 ESTIMATED BY THE AUTHORISED GDP TABLE

Table 8

BRAZIL:GDP, SELECTED FINANCIAL ASSETS AND CREDIT AGGREGATES, 1970-1984, REAL GROWTH RATES(%)									
*****									
	GDP	MONETARY BASE	MONEY SUPPLY	FINANCIAL ASSETS	NONMONETARY FINANCIAL ASSETS	FINANCIAL SYSTEM LOANS	MONETARY AUTHORITIES LOANS		
1971	12.0	5.6	8.4	18.4	32.0	24.9	17.0		
1972	11.1	10.3	11.7	28.1	46.4	30.2	19.3		
1973	13.6	15.7	27.9	37.0	44.9	36.3	31.8		
1974	9.7	9.4	7.5	7.5	7.8	20.5	46.8		
1975	5.4	-3.9	4.0	14.4	21.3	22.4	40.2		
1976	9.7	2.6	-0.3	9.5	14.8	12.7	13.2		
1977	5.7	13.0	-3.5	3.6	7.4	7.6	7.4		
1978	5.0	5.2	1.2	7.5	19.8	8.3	2.8		
1979	6.4	2.9	-0.8	1.9	3.4	2.1	-4.5		
1980	7.2	-15.0	-12.2	-13.2	-13.6	-12.5	-11.8		
1981	-1.6	-22.9	-21.0	-2.2	6.3	-11.3	-24.2		
1982	0.9	-5.4	-6.5	24.3	34.5	7.7	-15.3		
1983	-3.2	-23.0	-27.7	0.1	5.5	-6.5	-26.2		
1984	4.5	-20.4	-24.4	1.3	5.2	-12.8	-37.4		

SOURCES:  
BULETIN DO BANCO CENTRAL DO BRASIL AND NATIONAL ACCOUNTING TABLES (EGV)

Table 9

EXTERNAL SECTOR : MAIN INDICATORS  
 \*\*\*\*\*

	1979	1980	1981	1982	1983	1984
EXPORTS/GDP	6.4	8.0	8.5	7.1	10.4	12.3
IMPORTS/GDP	7.6	9.2	8.0	6.8	7.3	5.3
NET DEBT/EXPORTS	264.0	233.0	231.0	325.0	351.0	304.0
NET SERVICES/EXPORTS (1)	70.0	65.0	72.0	97.0	91.0	71.0
INTEREST/EXPORTS	27.5	31.3	39.3	56.3	43.6	37.3
RESERVES/IMPORTS	53.6	30.1	34.0	20.5	29.6	85.1

(%)

SOURCES: SEE OTHER TABLES  
 (1) (AMORTIZATION+INTEREST)/EXPORTS

Table 10

	GROSS DOMESTIC PRODUCT (GDP)				CR\$ MILLIONS	
	GDp(1)	GDp(2)	GDp(3)	GDp(4)	GDp(4)	GDp(4)
1979	6311762.0	415597.2	236617.1	91059.9	91059.9	91059.9
1980	13163817.8	445523.6	250238.9	97616.9	97616.9	97616.9
1981	25631771.9	438581.3	275610.5	96095.8	96095.8	96095.8
1982	50815295.2	442660.4	283267.2	96989.5	96989.5	96989.5
1983	121055448.4	428658.1	210092.6	93921.5	93921.5	93921.5
1984(5)	405593737.7	447947.7	219798.3	98148.0	98148.0	98148.0

SOURCES: JUNTA ECONOMICA AND NATIONAL ACCOUNTING TABLES (EGV)

(1) CURRENT CRUZEIROS

(2) CONSTANT CRUZEIROS OF 1970

(3) GDP(1) DIVIDED BY THE AVERAGE EXCHANGE RATE, MILLIONS OF DOLLARS

(4) GDP(2) DIVIDED BY THE AVERAGE EXCHANGE RATE (1970), MILLIONS OF DOLLARS

(5) ESTIMATED BY THE AUTHOR (REAL GROWTH OF 4.5%)

Table 11

	BRAZILIAN FOREIGN DEBT AND INTERNATIONAL RESERVES			US\$ MILLIONS	
	INTERNATIONAL RESERVES(2)	NOT FOREIGN DEBT(3)	NON-REGISTERED DEBT		
1979	9688.7	40215.5	(N.A)		
1980	5912.5	45934.9	(N.A)		
1981	7505.8	53904.0	(N.A)		
1982	3994.4	65659.1	13675.2		
1983	4563.0	76756.2	10319.0		
1984	11995.0	16655.0	8920.0		
SOURCE: BULLETIM DO BANCO CENTRAL DO BRASIL					
(1) MEDIUM AND LONG-TERM DEBT					
(2) GROSS					
(3) GROSS DEBT MINUS GROSS INTERNATIONAL RESERVES					
(N.A.) NOT AVAILABLE					

Table 12

		BRAZILIAN EXPORTS *****				US\$ MILLIONS	
		SEMI MANUFACTURED	MANUFACTURED	MANUFACTURED	OTHERS	TOTAL	
1979	7078	1864	6143	169	15245		
(%)	(45.4)	(12.2)	(40.3)	(1.1)	(100.0)		
1980	9438	2031	8395	268	20132		
(%)	(46.9)	(10.1)	(41.7)	(1.3)	(100.0)		
1981	9647	2029	11244	373	23293		
(%)	(41.4)	(8.7)	(48.3)	(1.6)	(100.0)		
1982	8238	1433	10253	251	20175		
(%)	(40.8)	(7.2)	(50.8)	(1.2)	(100.0)		
1983	8535	1781	11275	307	21398		
(%)	(39.0)	(8.1)	(51.4)	(1.5)	(100.0)		
1984	8978	2824	14894	309	27005		
(%)	(33.2)	(10.5)	(55.2)	(1.1)	(100.0)		

SOURCE: REPORTEM DO BANCO CENTRAL DO BRASIL

Table 13

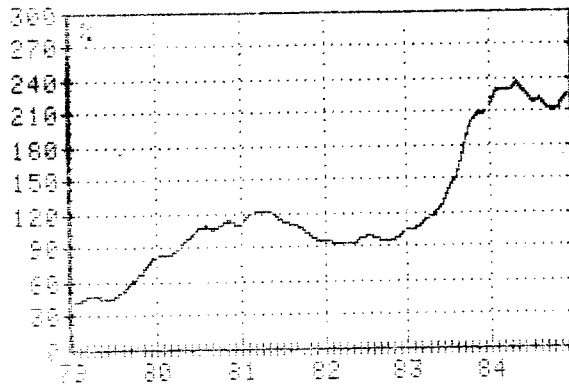
BRAZIL: PRICE AND INDUSTRIAL OUTPUT INDICES,  
 1979-1984, QUARTERLY EVALUATION, REAL GROWTH RATES (%)  
 \*\*\*\*\*

	GENERAL PRICE INDEX	AGRICULTURAL WHOLESALE PRICE INDEX	INDUSTRIAL WHOLESALE PRICE INDEX	INDUSTRIAL OUTPUT
1979.2	12.0	16.1	11.2	7.1
1979.3	14.6	15.2	15.8	5.7
1979.4	19.6	19.9	20.2	-0.2
1980.1	19.0	19.3	19.0	-2.8
1980.2	18.8	20.4	20.1	5.6
1980.3	22.3	25.0	23.5	9.2
1980.4	21.9	30.1	20.4	-4.5
1981.1	22.7	18.3	21.9	-11.0
1981.2	19.9	19.6	19.7	-3.3
1981.3	17.2	9.4	18.2	3.6
1981.4	15.5	14.2	17.0	-6.1
1982.1	18.7	13.9	18.9	-5.1
1982.2	20.4	21.7	20.3	10.0
1982.3	19.6	11.9	21.2	8.2
1982.4	15.3	14.8	15.8	-9.4
1983.1	24.3	34.8	20.5	-11.6
1983.2	29.1	43.5	27.8	6.2
1983.3	39.0	55.7	38.0	7.8
1983.4	36.8	52.9	35.4	-2.4
1984.1	32.3	30.6	32.2	-7.0
1984.2	31.3	39.4	29.8	8.1
1984.3	33.2	21.7	38.8	9.0
1984.4	37.0	41.3	39.0	-0.2

STURCES: CONJUNTURA ECONOMICA AND FIRGE

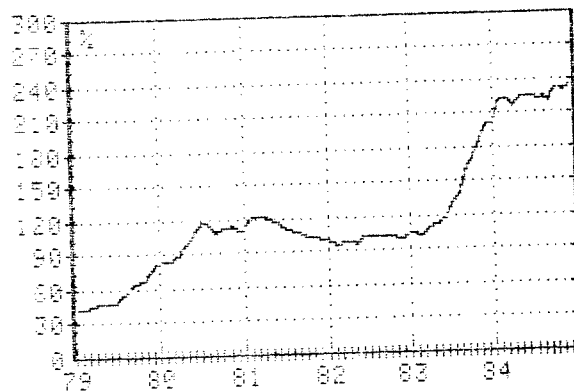
Graph 1

General Price Index  
(% Change in 12 Months)



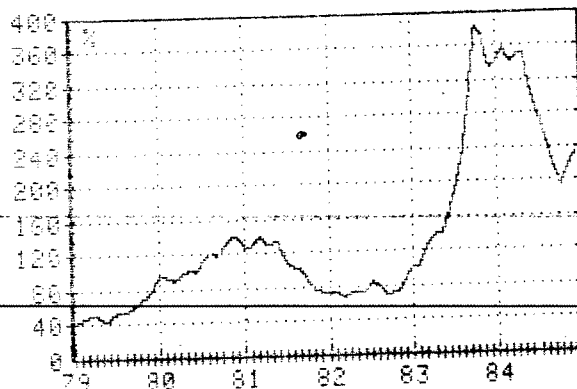
Graph 2

Industrial Wholesale Price Index  
(% Change in 12 Months)



Graph 3

Agricultural Wholesale Price Index  
(% Change in 12 Months)



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